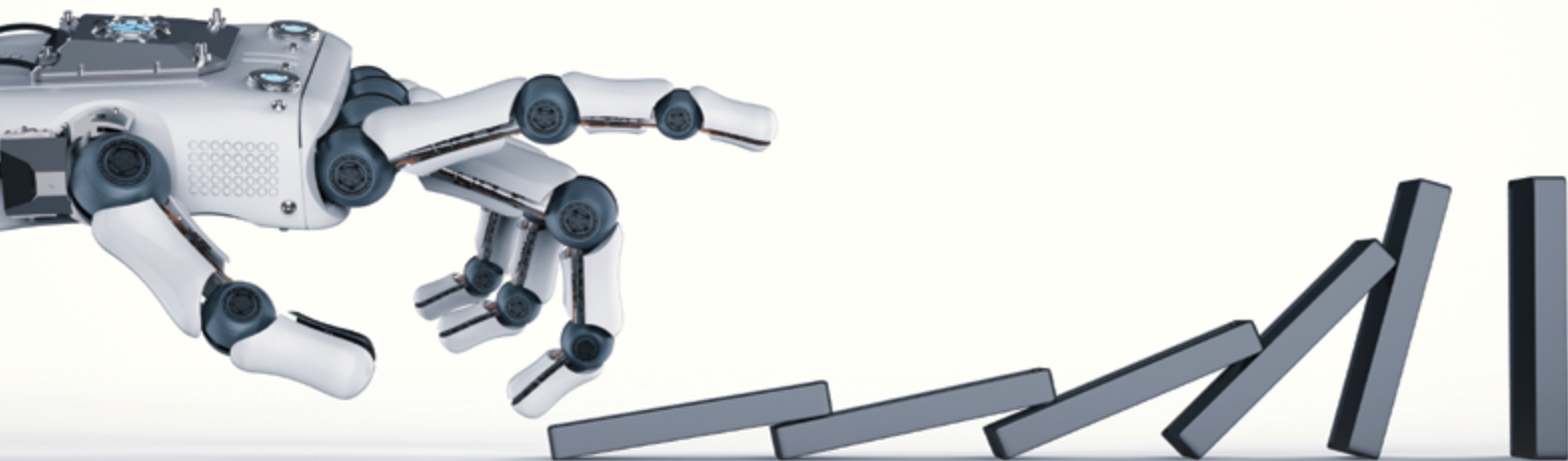




A game changer

for business operations



Intelligent Automation
Special Edition



Adam Bujak

Global Head of the Intelligent Automation Practice, Capgemini's Business Services

Predictions for 2019 and beyond all point in the same direction – putting the client at the heart of all activities is likely to further stimulate the erosion of organizational silos around the front, middle, and back office. In turn, this will lead to the emergence of new, borderless, client-centric organizations that optimize the way value creation is executed.

It, therefore, won't come as any surprise that embracing intelligent automation (IA) powered by the automation "golden triangle" of robotic process automation (RPA), artificial intelligence (AI), and smart analytics – combined and aligned with a deep understanding of processes – is paramount for any organization wishing to reach the goal of a single, aligned office.

Converging organizational silos will plug into broader ecosystems – driven by blockchain and the Internet of Things (IoT) – resulting in a hyper-connected enterprise that creates new sources of value through collaboration of multiple organizations.

We will witness a greater emergence of digital talent in the coming years (currently in a short supply across the world). The most ambitious individuals are already investing into their future by signing up to nanodegrees (e.g., Udacity) and attending intelligent automation academies offered by some of the world's top employers. This will help organizations embrace the technology-related complexity on their journey towards a client-focused, aligned office able to successfully operate and compete in the hyper-connected B2B world.

I also agree with Phil Fersht from HFS* that while we have successfully managed to define the why (enhanced client experience, revenue growth, and operational optimization), addressing the how will continue to gain further traction to close the gap between

aspirations and reality. Change management refreshed by intelligent automation is already helping to drive adoption and mitigate the risk of exponential expectations hampered by linear execution.

IA execution requires a combination of modern consulting driven by design thinking and strong transformation methodologies such as our ESOAR (Eliminate, Standardize, Optimize, Automate, Robotize), the industry and domain expertise we embed in our Digital Global Enterprise Model®, and the combination of process and technology that has resulted in our "Five Senses of Intelligent Automation" (see the Methodology section).

As a strategic partner of choice for leaders on their transformation journey in the digital era, Capgemini truly differentiates itself through:

- An end-to-end IA approach – from ideation to production.
- Focus on business outcomes, taking human impact into account – from "lights-out" autonomous factories to empowered employees.
- Realistic, pragmatic, and aligned with where most clients are with IA today.
- Focus on trust and ethics, with a strong reputation as a trusted partner with focus on transparency, privacy, and security.
- Walk the talk – adopting IA across our own business.

"By 2021, our vision is to shape the future of business operations with intelligent automation, creating outstanding value" – what a remarkable vision for Capgemini's Business Services!

I invite you to read on to learn more about how we're making this vision a reality.

**https://www.horsesforsources.com/2019-predictions-HFS_122418*

Introduction

Intelligent
automation
in finance

Intelligent automation in
HR, supply chain,
customer service, risk
and compliance, and
contract management

Technology

Methodology

Success



Introduction



Organizations are only scratching at the surface of automation

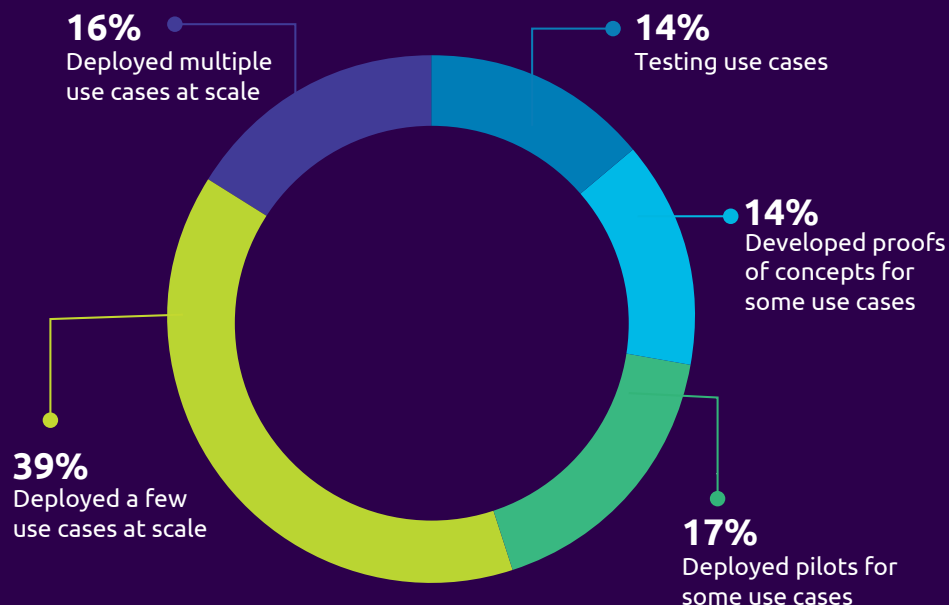
Automation technologies are transforming operational efficiency and productivity to create new revenue and customer experience opportunities. However, scaled adoption is rare, most organizations are focused on operational benefits rather than new revenue opportunities, and few have progressed to artificial intelligence automation.

Scaled adoption is rare

Only a minority of organizations (16%) are deploying multiple use cases at scale, by which we mean implementations that go beyond pilot and test projects and are adopted at a larger scale across business units, functions, or geographies. Most are not operating at scale:

- 14% are at proof-of-concept stage, with 17% in the pilot phase.
- 39% have deployed a few use cases at scale.

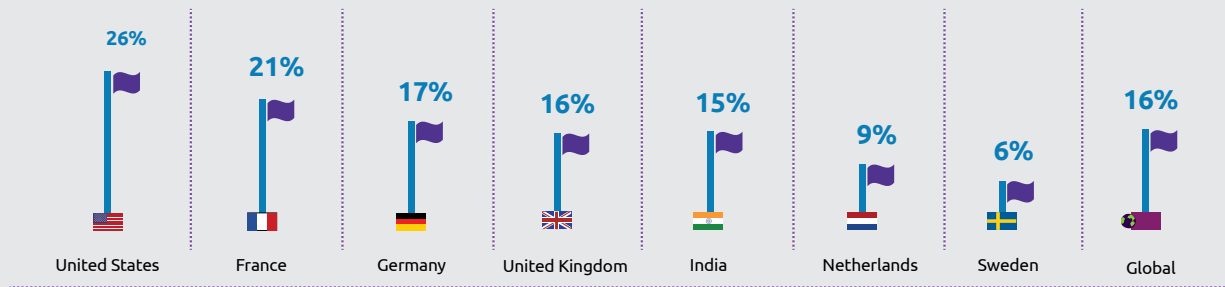
Current level of automation deployment among organizations experimenting with or implementing automation



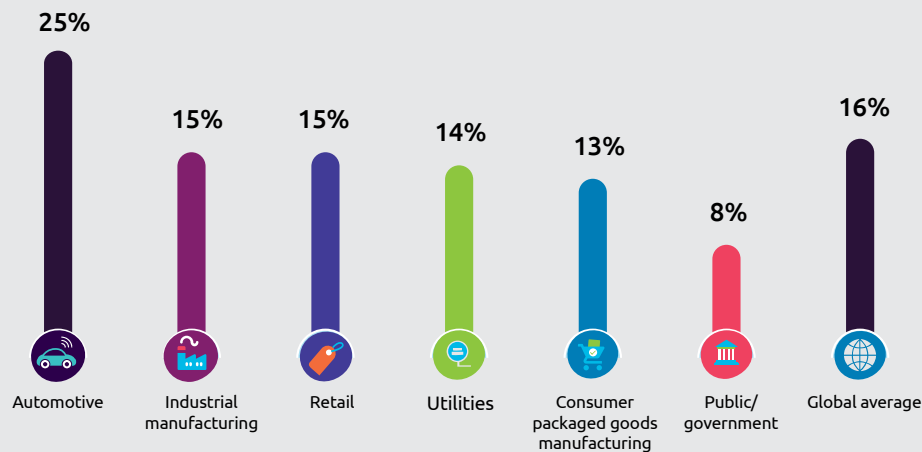
Source: Capgemini Research Institute, Automation Use Case Survey; July 2018, N=705 organizations that are experimenting with or implementing automation initiatives.

Automation maturity – a national and sector perspective of scale

Proportion of organizations implementing automation at scale by country
(as a percent of organizations experimenting with or implementing automation)



Proportion of organizations implementing automation at scale by sector
(as a percent of organizations experimenting with or implementing automation)



Source: Capgemini Research Institute, Automation Use Case Survey; July 2018, N=705 organizations that are experimenting with or implementing automation initiatives.

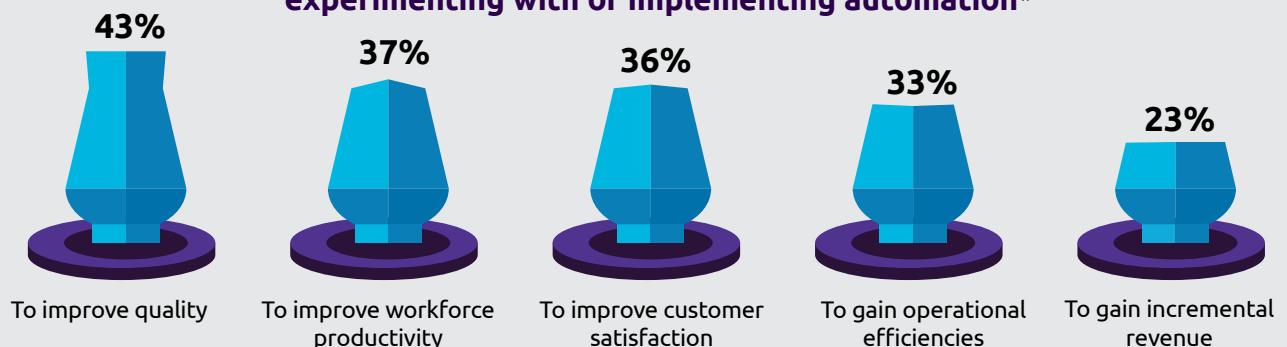
*At scale represents deployment of multiple automation use cases at scale, i.e., across multiple processes and across the breadth of the countries the company operates in.

**The financial services sector is not included in the scope of this study owing to our recent research on automation in financial services, "Growth in the machine, how financial services can move intelligent automation from a cost play to a growth strategy."

Most are focused on operational benefits over topline opportunities

Most organizations are focusing their automation efforts on operational gains or customer satisfaction. In contrast, fewer than a quarter (23%) say their main objective is revenue-focused.

Main objective behind automation initiatives among organizations experimenting with or implementing automation*



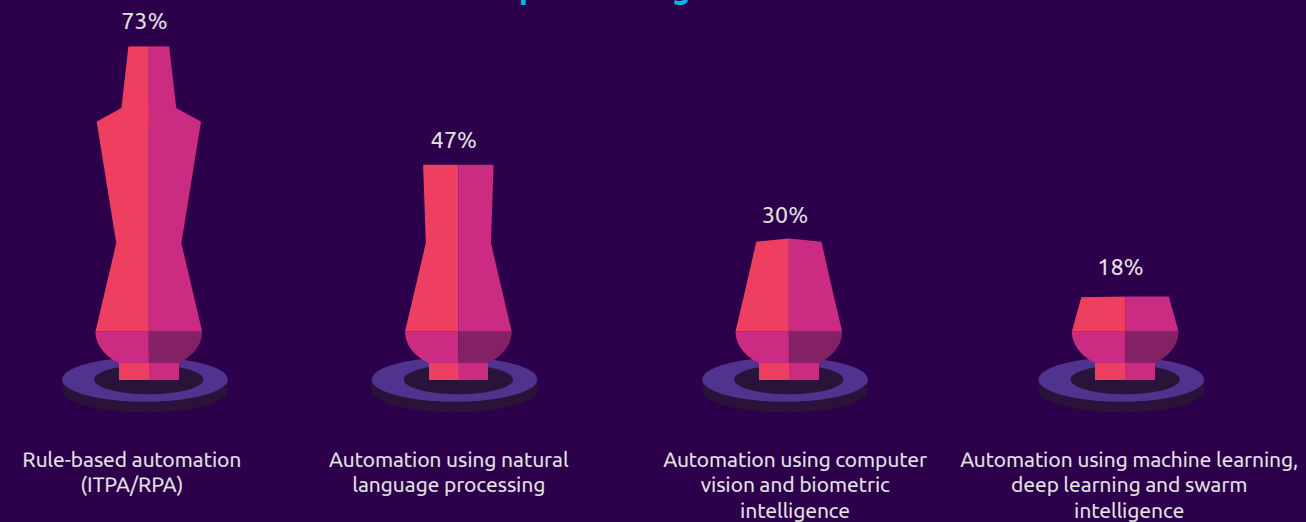
Source: Capgemini Research Institute, Automation Use Case Survey; July 2018, N=705 organizations that are experimenting with or implementing automation initiatives.

*Top two objectives behind launching automation initiatives ranked.

Rule-based technologies dominate over cognitive ones

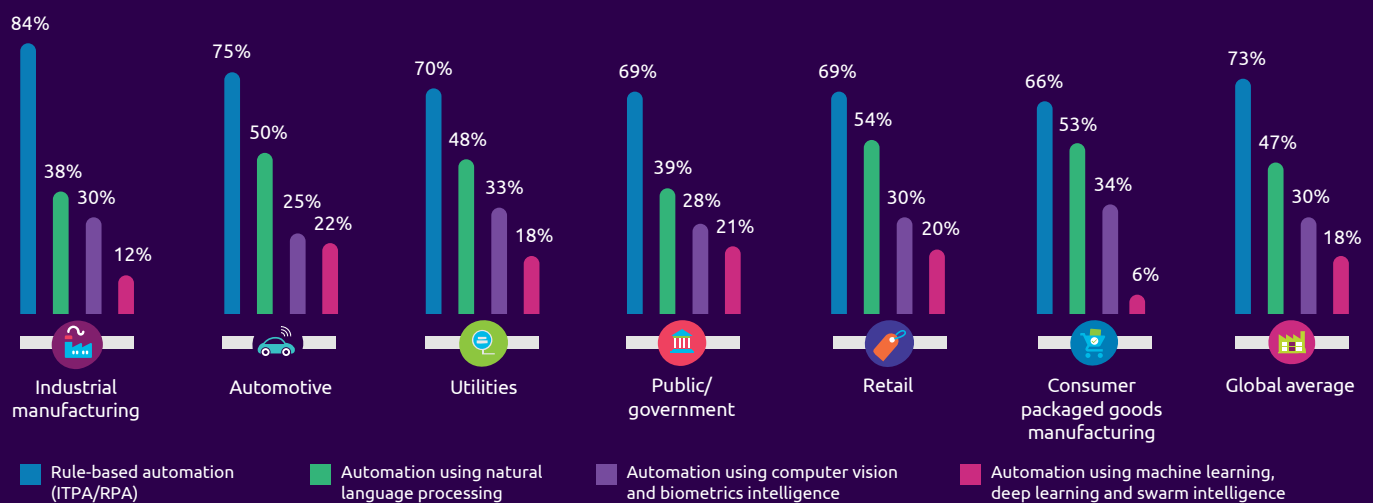
Today, automation is primarily driven by cost savings and improving operational efficiencies, with a focus on rule-based technologies like ITPA or RPA. We found that 73% of organizations are adopting ITPA or RPA solutions, but only 18% have adopted machine-learning technologies.

Current focus on automation technology among organizations experimenting with or implementing automation**



Source: Capgemini Research Institute, Automation Use Case Survey; July 2018, N=705 organizations that are experimenting with or implementing automation initiatives.*Percentage denotes the percent of organizations in the sector that deploy the specific automation technology.

Rule-based technologies are also largely the norm across sectors. As the figure shows, 84% of organizations in the industrial manufacturing sector and 75% in automotive deploy rule-based technologies. In terms of AI technologies, retail is making strong progress, with over 50% using natural language processing. This reflects the sector's focus on AI-driven innovation.



Source: Capgemini Research Institute, Automation Use Case Survey; July 2018, N=705 organizations that are experimenting with or implementing automation initiatives.

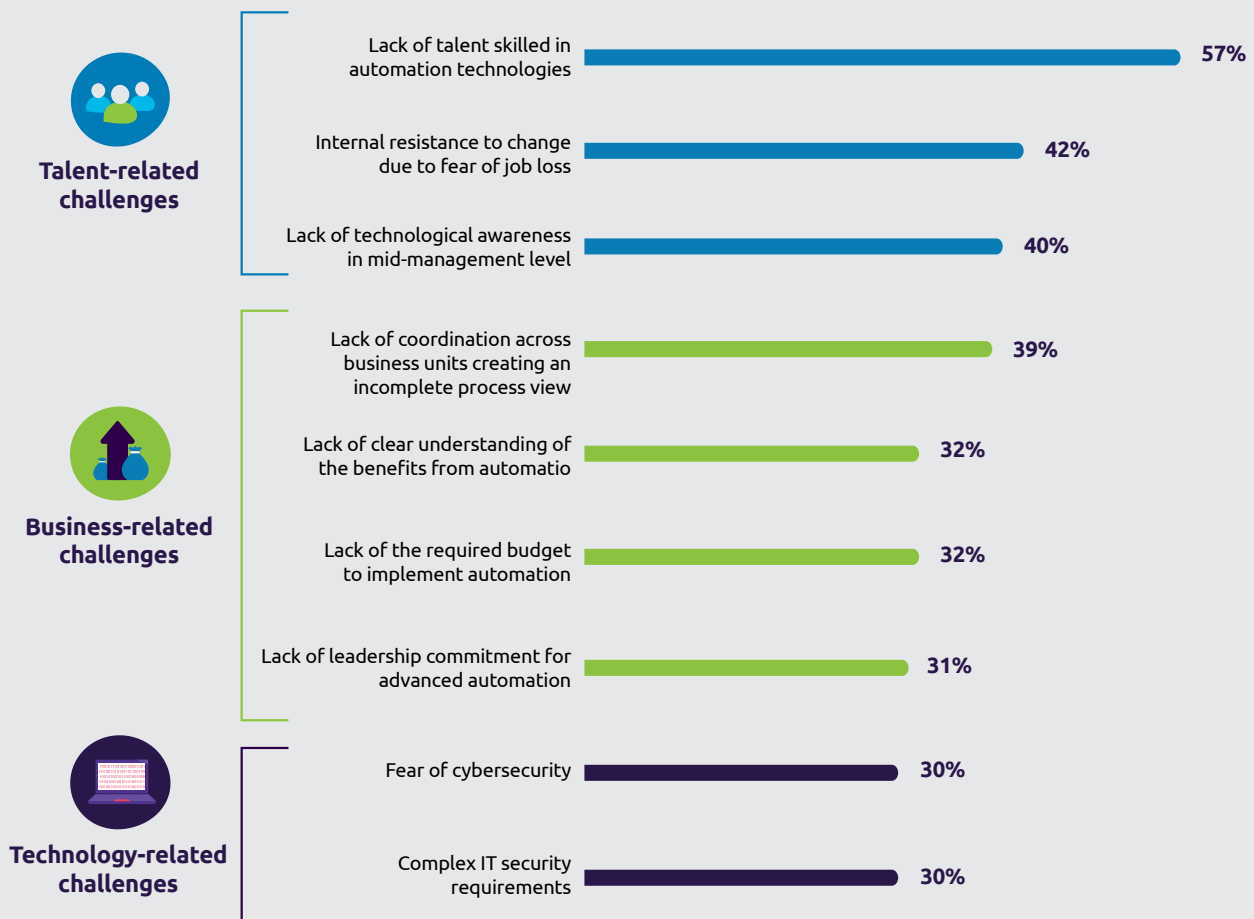
*Question asked was a select all that apply: "Which of the following best describes the technologies your organization uses in its automation initiatives?"

What are the key challenges that stand in the way of automation progress?

To drive automation at scale, organizations need to overcome a range of business, technology, and talent-related challenges. As the figure shows, talent challenges are a major concern, with the majority (57%) saying that they struggle to find talent with a deep understanding of automation technologies.

Organizations also face internal resistance, with 42% saying that their employees are hesitant to embrace automation because of fear of potential job losses. Furthermore, well over a third (39%) pointed to the challenge of lack of coordination between business units, which makes gaining a complete view of the process and roles particularly challenging.

Talent challenges are a major concern, with the majority of organizations saying that they struggle to find talent skilled in automation technologies



Source: Capgemini Research Institute, Automation Use Case Survey; July 2018, N=705 organizations that are experimenting with or implementing automation initiatives.*Challenges ranked by top three.



Intelligent automation in finance



Reimagining finance for the digital age



How the application of intelligent automation is transforming the finance function.

What is the state of automation in the finance function? Is the finance professional stepping up to provide insights that deliver business value? And is the function itself ready to take on a more central role in their organization's overall digital transformation?

We surveyed 500 senior finance executives in Europe and North America, across five industry sectors. Key findings include:

- Automation of the finance function is advancing.
- An elite group of automation "Masters" is leading the way.
- Bottom-line benefits are the priority today, but anticipated gains – if realized – could be transformative.

- A joined-up approach to automation is more likely to be effective.
- For the most advanced, legacy technologies are the main impediment.
- Finance's digital role is enhanced in the most advanced organizations.

The unequivocal need for automation

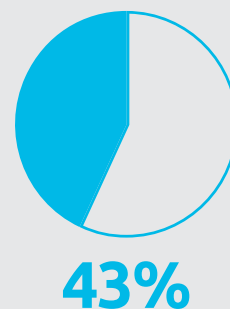
Out of finance executives we surveyed



Have fully or nearly fully automated a range of finance processes



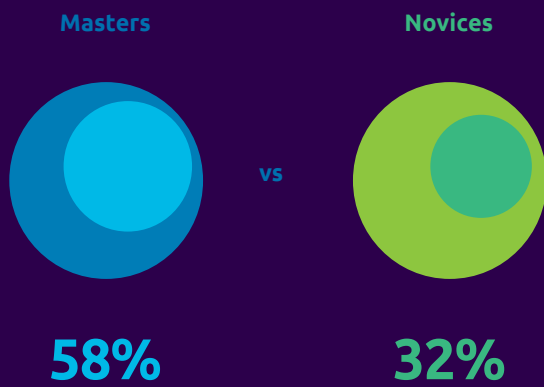
Expect these processes to be fully automated in 3 years



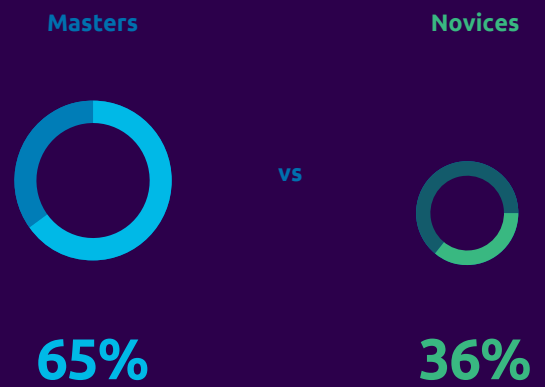
Expect automation to transfer the finance function into a strategic business partner

“Masters” vs. “Novices” – which organizations are best in class?

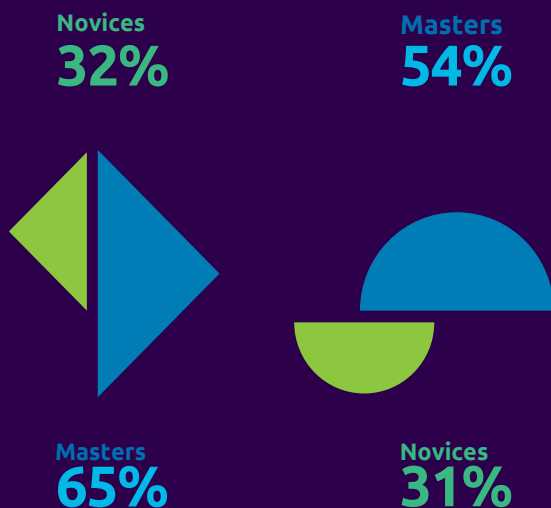
Out of finance executives we surveyed



Expect automation to generate benefits within 3 years



Consider automation to be a strategic priority for Finance



Agree that Finance is ahead of other business functions in implementing automation

Agree that Finance needs to play a leading role in driving automation

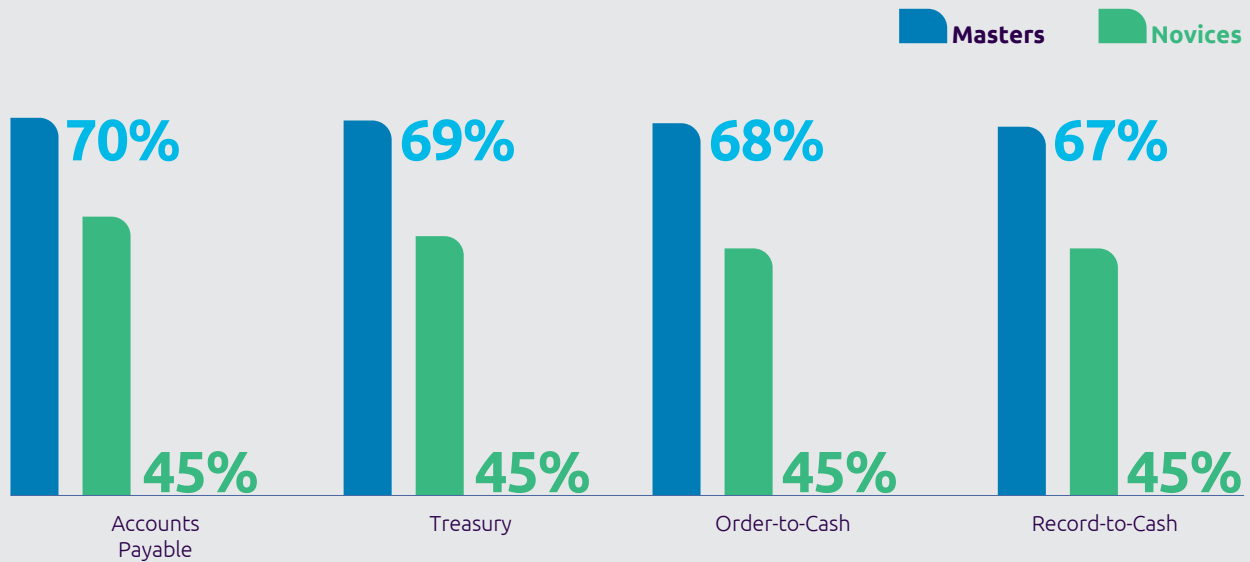


Have an agreed strategy for automation

Consider automation to be a strategic priority for Finance

What is being automated?

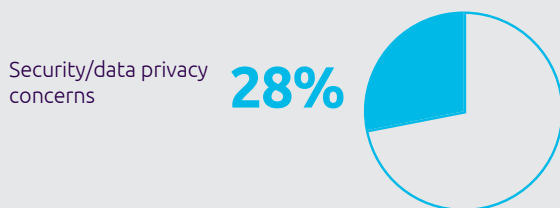
Finance processes that we have fully or nearly fully automated by finance executives we surveyed



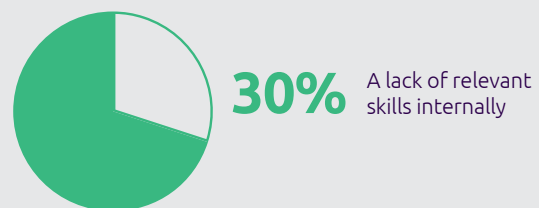
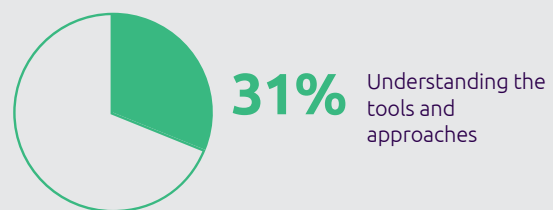
Meeting challenges, reducing risks

The primary challenges of adopting automation technologies for finance executives we surveyed

Masters



Novices



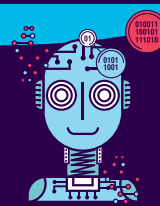
Eyes on the bigger prize: lessons from the Masters

Capgemini's "Reimagining finance for the digital age" study finds that Masters are building a foundation for automation one step at a time, rather than in a "big bang."

They fully expect automation to help them improve their customer experience and unlock new insights for the benefit of the business within a short period of time.

Their experience offers a number of lessons for organizations starting out on their own finance automation journey:

Generate knowledge from the data. The most effective robots are underpinned by intelligent knowledge management. Data storage and retrieval are key and should be centralized. Applying AI techniques to knowledge management will give robots more powerful capabilities.



Think automation first. If it is worth changing the process, it is worth thinking about how to change it sustainably and how automation can help improve outcomes.



Standardize to the hilt. Organizations need to review their processes before automating to remove any differences that have crept in over time. They should not see automation as a solution to areas where they have failed to standardize.



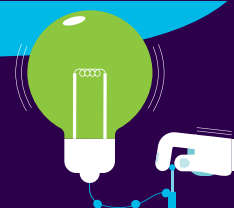
Automate at your own pace, but not in isolation. Keep other departments (beyond IT) updated on finance's progress with automation.



Communicate and educate. Teams can be paralyzed by fear of automation if they don't understand it. Senior finance leaders need to communicate clearly. They should not minimize redeployment prospects, but they should emphasize opportunities for higher-value, more rewarding work.



Be iterative, but think big. Firms with globalized finance may find it useful to roll out pilots across every region from the start. Plan for AI and machine learning to eventually drive many processes.









Reimagine your F&A

through leveraging Intelligent Automation

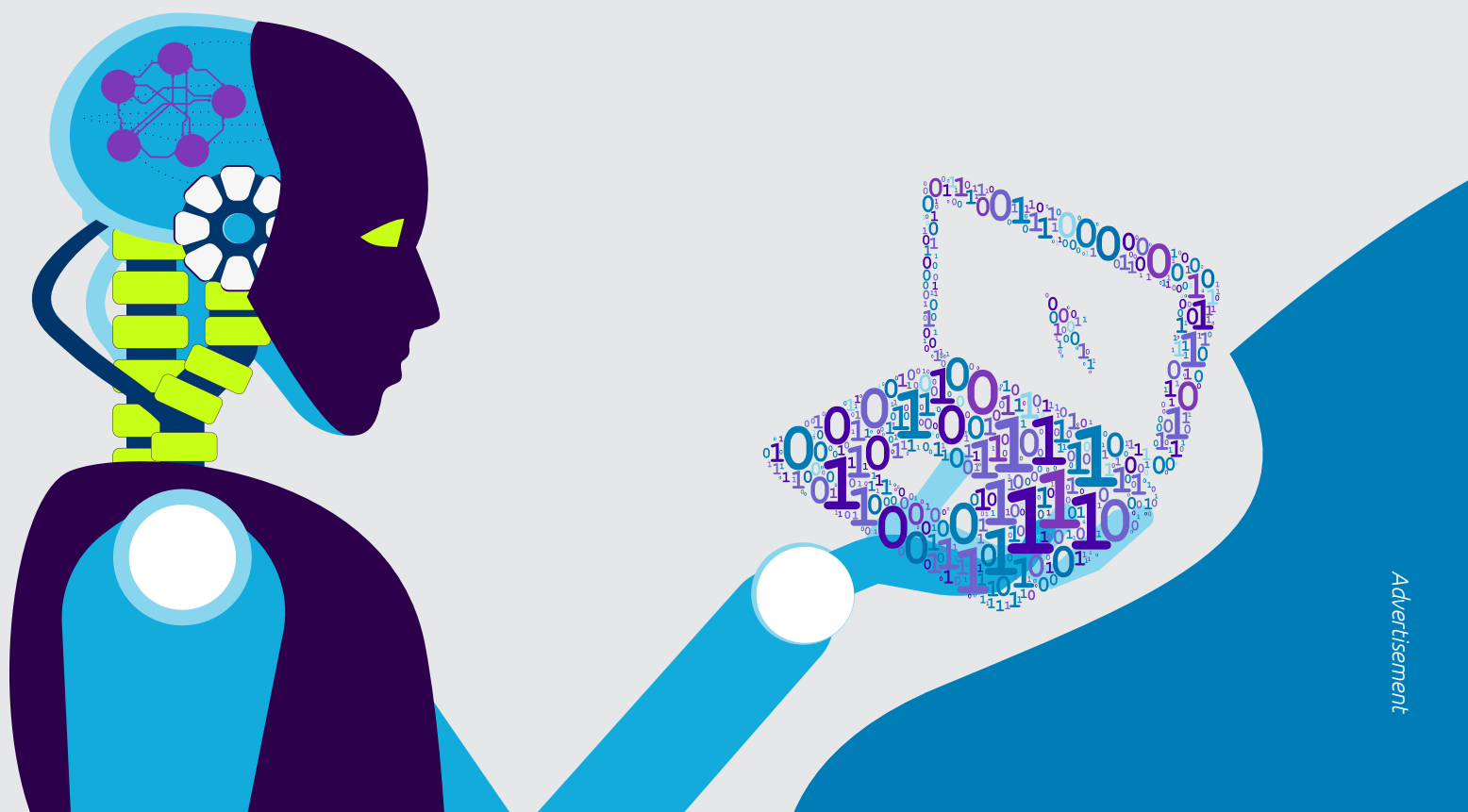
There has never been a more exciting time to be a finance professional. "Data is the new oil," and accounting professionals are at the forefront of capturing and managing this valuable resource. Automation technology is enabling us to fundamentally re-think how we deliver service and value. Capgemini's Finance Powered by Intelligent Automation solution reimagines your finance operations to deliver:



-  **Enhanced customer experience**
-  **Better finance operations at a lower cost**
-  **Improved data and reporting**
-  **Enhanced controls**

For more information, visit us at:

<https://www.capgemini.com/service/business-services/transform-your-finance-operations/finance-powered-by-intelligent-automation/>





CFOs are getting excited!

Carole Murphy

*Global Head of the Finance Powered
by Intelligent Automation Practice,
Capgemini's Business Services*

Digital transformation of the finance function can improve transactional performance and deliver insights that create and sustain value across the entire enterprise.

Think of CFOs, and who do you picture? Typically, you might see them as prudent people. Measured. Cautious. Rather skeptical. They're not the category of board members you might traditionally regard as the first adopters of technology.

But times have changed, and it's time to look again. Recent developments in the automation of processes are firing people's imaginations – and who's taking the lead? CFOs and other senior finance executives, that's who.

It's not that they've lost a sense of proportion. On the contrary: they seem to be taking a balanced view of the technology, which they're assessing against their own corporate practices and culture – and they can see real possibilities. No wonder they're excited.

How do I know?

How can I be certain? Not just because of my day job, but because here at Capgemini, we recently commissioned a study of 500 senior finance executives in Europe and North America. It was conducted for us by Longitude, a Financial Times company. The report found that robotic process automation (RPA) in finance is well under way, and that as part of this, some organizations are also exploring artificial intelligence (AI) and machine learning.

They're looking at procurement, client billing, order management, reporting, and more – all activities in which

systems are in place – and they're exploring digital transformation, and the extent to which it might usefully be applied.

Why are CFOs excited?

Why are finance leaders so keen on digital transformation? At the most basic level, they see it can improve transactional performance. For example, a better accounts receivable function is a desirable end in itself, because it's efficient, and because it consolidates relationships with suppliers.

At the next level, they see it can transform the entire finance function, streamlining its operations, improving its cost-effectiveness, and generating attractive returns within the next three years.

And at the third and final level, digitally transforming finance can generate benefits beyond its own remit: it can mean finance delivers insights that create and sustain value across the entire enterprise. It can play a major part in putting their customers at the heart of what they do – as these figures from responses to our report demonstrate:

- 60% expect that in three years' time, automation will be helping them to improve their customers' experience.
- 55% say it will be helping to unlock new insights that drive value for the business.

Our study also identified an elite group that is leading the way in enterprise automation and AI. We termed them "Masters," and found that:

- 58% of Masters believe benefits will be delivered within three years.
- 65% of them are leading the way for automation in their organization, delivering benefits and enhancing the role of finance as a trendsetter.

These are fascinating and fast-moving times, and it's not just CFOs who are getting excited. Here at Capgemini, we are too!

Carole Murphy leads leads Capgemini's Finance Powered by Intelligent Automation Practice, a global team of transformation professionals and is responsible for developing and delivering transformational solutions for our clients. Drawing on over 20 years of experience across operations, consulting, and transformation, Carole helps large global organizations achieve their business objectives and operational excellence through BPO-led transformation and alignment of Capgemini's Business Services and Group assets to deliver efficiency, value, and improved control in their operations.



Why are finance leaders so keen on digital transformation? At the most basic level, they see it can improve transactional performance."



Getting started in implanting full-scale finance automation

Adam Bujak

*Global Head of the Intelligent Automation
Practice, Capgemini's Business Services*

Intelligent automation can transform the finance function. But how do organizations set the wheels in motion?

In the context of our recent **“Reimagining Finance for the Digital Age”** report, I’ve been receiving loads of emails with questions about how to get started on full-scale finance automation.

It comes as no surprise that what you need is a comprehensive plan. Just like when synapses are formed in the human brain to create new neural networks as a child (or adult) learns to perform a new task or activity, so automation implementation requires the input of every part of the organization. Enterprise-wide digital intelligence in finance creates new connections, with new consequences – consequences that can only be addressed and exploited if everyone has the chance to anticipate them and execute successfully.

Planning for intelligent automation of the finance function goes beyond what’s needed for RPA. While robotic process automation is predicated on

applying simple rules to structured data, intelligent automation requires us to address unstructured data processing and, for example, decision-making, as well as training the machines to comprehend, decide, and remember. This gives rise to functions such as predictive modeling, probability analysis, and data discovery through self-learning, as well as natural language processing and insight-driven knowledge.

To do this, we’ve developed the **“Five Senses of Intelligent Automation,”** which focuses on outcomes for the finance function rather than pure robotics-driven automation.

It is at this point that RPA meets cognitive computing. I’ll return to this later.

Meeting the “Masters”

The plan needs not only to address the above AI-related considerations, but also tactical implementation issues and human factors. In short, it needs to cover everything; it has to be staged and managed (here we apply our ESOAR methodology – Eliminate, Standardize, Optimize, Automate and Robotize – to re-engineer processes); and it must be communicated to all affected stakeholders and team members, to ensure that everyone understands and is on board for the ride.

This kind of joined-up thinking was borne out by our study. In it, we identified organizations that are setting the pace in intelligent automation implementations in finance. We called them “Masters” – and we found that as many as 85% of this group said the business as a whole was pursuing an automation strategy, while more than half said automation was being led at enterprise level by a dedicated team.





While robotic process automation is predicated on applying simple rules to structured data, intelligent automation requires us to address unstructured data processing as well as training the machines to comprehend, decide, and remember.”

Getting started – a checklist

If we were to have got this far, with a plan in place, and we were now embarking on a large-scale finance intelligent automation project, what ought to be on our to-do list?

An intelligent automation target operating model is probably a good place to start, which to-date has been defined by the seven levers of our Global Enterprise Model© (GEM) see [Christopher Stancombe's article](#) on “Seven Laws of Workplace Robotics). This has now evolved into the Digital Global Enterprise Model© (D-GEM), which comprises aspects such as:

- **Grade Mix** – defining the right team structure consisting of both a virtual and human workforce.
- **Location Mix** – locating a virtual workforce that doesn't need office space, but still has a need to define where it resides and operates – for example, due to legal and regulatory reasons.
- **Competency Model** – clarifying the sophistication of the virtual workforce. Does it just copy and paste, classify incoming information, and participate in the decision-making process using proven algorithms?
- **Processes** – defining the new normal when it comes to technology-driven best-in-class process execution.
- **Technology** – taking advantage of APIs, selecting the right mix of applications, and embedding software architecture into the IT ecosystem.
- **Pricing strategy** – defining the right pricing approach to optimize total cost of operations.
- **Governance** – organizational structure, roles, and responsibilities, including Center of Excellence integration into the overall organization, policies, approval levels, governance bodies and escalation paths, compliance, and relevant KPIs, etc.



Just like when synapses are formed in the human brain to create new neural networks as a child (or adult) learns to perform a new task or activity, so automation implementation requires the input of every part of the organization.”

There are some other key organizational elements that are required to move fast:

- **Design authority** – to oversee and establish design principles, to provide project management, and to ensure consistency with the main thrust of our plan.
- **Automation academy** – to train not just those implementing the program, but end-users too – because in our experience, the more users learn about the potential of automation, the more great ideas they have about how it might best be utilized. This training can be a mix of classroom-based and online sessions, overseen by knowledgeable service providers, software vendors and the enterprise itself.
- **Automation factory** – to automate the processes we've qualified as opportunities.

- **Transitions model** – to manage the transition from human to a virtual workforce and establish a new way of collaboration between the two.

- **Operations and apps hub** – to ensure the stable and scalable delivery and deployment of all technology components.

When all these foundations are in place, it's then that we can start to build. It's then that we can start pipelining day-to-day transactions into our model as it develops, so that we can start to realize benefits long before completion.

And it's only then, perhaps, that we would be on the right track to join the Masters. Good luck!

***Dr. Adam Bujak** is an expert in strategic management, business process automation and transformation. He heads Capgemini's Business Services' Intelligent Automation Practice, helping multinational clients to optimize operations by deploying RPA, AI, and analytics solutions.*





Finance automation – back to basics

Lee Beardmore

*Vice President and Chief Innovation
Officer, Capgemini Business Services*

When you're embarking on digital transformation, how can you accommodate your legacy processes?

Another day, another dollar. You arrive at work one morning with a to-do list. But you're called in unexpectedly to present at a meeting; replying to one of your mails means you have to do some historical transaction research; one of your team needs a private one-on-one; a client calls, needing help on an issue; and you hear rumors of a new business opportunity that needs checking out.

You handle it all, but as the day ends, you realize you didn't get too far with that to-do list. It's not the case that you didn't work hard; it's not the case, either, that all those unforeseen demands on your time were unimportant. It's simply that circumstances can sometimes sidetrack us from our purpose.

Legacies and layers

What's true for you is true also for entire organizations. They can lose sight of their core processes beneath those many, many other layers of tasks and issues.

I mention this because in our recent study, **"Reimagining Finance for the Digital Age,"** we look at finance automation, at the progress many enterprises are making, and at the benefits they are experiencing. Many organizations are taking the lead of the "Masters" we identified – but one of the first and most pressing issues they need to address is that of their legacy technologies supporting legacy processes. When you're embarking on digital transformation, no one starts with a greenfield site. Not even Masters.

Every enterprise has gradually accrued layer upon layer of technology and processes in its finance function, all of them serving a purpose, but tending to obscure the engine – the to-do list – at their core. These technology layers have created silos and disconnects, and most of them were and are people-driven.

Core processes

Moving towards finance automation demands a rethink – where we reimagine process fundamentals optimized for automation. It's almost a philosophical point: "We do many things – but what is it that defines us? What do we do that makes us who we are?" It's only when we move through the legacy technology layers to our core systems that we can start to remove the obstacles on our path to digital transformation.

So, the first step to finance in the Digital Age is reimagine. The second is to think strategically about change, recognizing there is significant opportunity to operate differently. Digitally transforming finance enables you to interact with core systems without intruding upon them. The processes you're adding don't detract from them, but automate them, and instead of people-driven layers, we have an enhanced core function, with people acting as exception-handlers. The binding agent is the new process – without this as the driving force, automation efforts are likely to be piecemeal that will quickly hit a benefits ceiling.

Thinking about benefits

The third stage is to think about desirable outcomes, and to say: "We know the essence of what we do. How can automation deliver improvements?"

Capgemini's **"Five Senses of Intelligent Automation"** analogy provides a robust framework in this regard, because the automation and cognitive solutions we are looking to introduce can enhance process execution while optimizing processes to maximize benefits.

"Watching," or monitoring, is about making best use of the increased amounts of data you gather as a result of digital transformation, for example picking up on signals that trigger an exception in month end close. "Talking and listening," or interacting, is about engaging with customers and internal audiences in a crisper fashion. "Acting," or servicing, means channeling work to automated engines for processing. "Thinking," or analyzing, is about applying artificial intelligence techniques to identify inefficiencies, trends, and exceptions requiring human intervention. Finally, "remembering," or knowledge, is about building a corporate memory of process and transaction data from which the system can learn, identify potential improvements as well as answering questions from employees, customers and suppliers alike.

Unity of purpose

By stepping back and considering these steps before taking action on automation, senior finance executives can approach their legacy technology and process hurdles with much more optimism about their ability to overcome them. They can remove layers to reveal the essence of their function, and then create a new, holistic, process-driven model that isn't patched and obscured.

It's a reimagined model in which everything works towards finance's principal purpose – and in which the focus is firmly (and finally!) on the to-do list.

***Lee Beardmore** has spent over two decades advising clients on best strategies for technology adoption. More recently, he has been leading the push in AI and intelligent automation for Capgemini's Business Services. Lee is a computer scientist by education, a technologist at heart, and has a wealth of cross-industry experience*



Finance automation – getting organized

David Lumley

*Head of Finance Transformation,
Capgemini's Business Services*

How can organizations align themselves to achieve success in finance automation?

In the previous article, my colleague **Lee Beardmore** looked at the legacy hurdles organizations typically have to overcome on the path to finance automation.

It's a good place for me to start. Let's assume those legacy technology and process obstacles are either behind us, or that they are being addressed. We're looking forwards now, and we're looking especially at the benefits that finance automation can deliver, as discussed in Capgemini's recent study, **"Reimagining Finance for the Digital Age."**

So, then: how can enterprises organize themselves for this transformation, and set themselves up for success?

Fixing misconceptions

I'd say there's one big answer to this question. It's an answer that entails approaching transformation in a completely different way. Rather than one big wave of the automation wand that transfigures the entire finance function in a great flash of light, automation-led transformation encompasses a holistic vision (enabled by our **"Five Senses of Intelligent Automation"**) that is implemented in agile sprints.

Instead of a classic, large ERP transformation where everything must change – comprehensively and simultaneously – and often suffers a time delay between design and build, automation-led transformation consists of a number of smaller transformation projects that lead to long-term sustainable change and increased value.

Not only does it not need to be approached in this way: it's genuinely better if it isn't. Incremental steps will get you to the same destination, and the results will be more rewarding.

"Jam today"

At Capgemini, we find the best route to success has a number of stops along the way. One mammoth trek can be exhausting, and there's a long wait before an end-point is reached and a benefit is felt.

In the UK, there's an expression for this: if a reward is delayed to a point at which it may seem unlikely, it's known as "jam tomorrow."

But if instead, organizations set themselves intermediate targets, the attainment of each one delivers a prompter sense of achievement. It's "jam today" – and what's more, because each target is part of a sequence, in a sense it's "jam every day."

Continuous improvement

The modular approach also brings opportunities for assessment and calibration that aren't possible with "one big push." "How did we do? Did we meet our objectives? What improvements did we bring to our internal processes, to our customers, to our suppliers? What needs fine-tuning?" The lessons learned can improve immediate outcomes – and can also be applied to subsequent elements of the program.

Accentuating the positive

The arrival at each milestone brings not only a sense of satisfaction, but an opportunity to communicate the news – not just to the relevant team, but to the wider finance function; to the enterprise as a whole; and even out to the supply chain and the customer base.

All these audiences stand to gain from the improvements each small step-change brings. It's important to engage external audiences in particular: people like to feel included and involved, and ensuring customers and suppliers are made aware of the benefits of each stage of the program will help to consolidate relationships and deliver more value for everyone. As the whole initiative rolls out, it proves to them and also to internal audiences that this is working – it's "jam today" – and that when the end-stage is reached and the transformation is complete, the whole will be greater than the sum of all the parts they've seen so far.

Momentum of success

By realizing that transformation need not and should not be monolithic, organizations can create and sustain a momentum of success. They can focus on the things that matter – ensuring that they have the right processes, and the right people with the right skills to keep things moving. The mantra needs to be "control, effectiveness, efficiency and value" – and in our experience, that's what the incremental approach delivers.

***David Lumley** leads a global team passionate about finance and accounting (F&A) that delivers global finance and automation transformation projects for large organizations across a range of industries including CPRD, FS, Utilities, and Telecom.*



By realizing that transformation need not and should not be monolithic, organizations can create and sustain a momentum of success."



The soft benefits of finance automation

Catherine M Munge

*Senior Intelligent Automation Manager, Business
Transformation Services, Capgemini's Business
Services*

Digitally transforming finance doesn't just improve productivity and process. There can be advantages for people, too

In previous articles, we've been looking the business advantages finance automation can deliver, such as the improvements to customer experience that can accrue, and the new insights it can unlock that drive value for the business.

Obstacles

These and other benefits were all identified in Capgemini's recent study, **"Reimagining Finance for the Digital Age."** But the report also highlighted some obstacles to progress encountered not just by "Novices" – enterprises starting out in finance automation – but by those we termed "Masters," too.

As you might expect, for Novices the leading challenge was getting to grips with concepts, and in particular, the difficulty in understanding the large number of potential tools and approaches.

Masters of course didn't have this issue. For them, the main difficulty was dealing with the **burden of legacy infrastructure** – an issue covered previously by my colleague Lee Beardmore.

However, there was one obstacle the two groups shared. Novices and Masters alike mentioned a lack of relevant skills internally – 30% and 27% respectively. For Masters, a related issue was the difficulty in recruiting people with the right skills (24% of respondents), while Novices also cited the need to allay employees' concerns about potential job losses

(29%). It strikes me that all these "people angle" issues have three factors in common.

The importance of communication...

The first is communication. Staff concerns can be allayed if the advantages of finance automation are adequately explained. They can be told, for instance, that the repetitive tasks they currently do – the required non-value adding activities – are best handled by robotic process automation (RPA), and that, far from this being a threat to their jobs, it can actually free them to focus on more fulfilling core activities, and create more time in the business to develop constructive new processes.

... and training...

Communication overlaps into the second factor – and that's training. If enterprises recognize training as part of the digital transformation of their finance functions, they will need to put formal development programs in place that will not only address their internal skills shortages – but also make it easier to hire people, knowing they will be able to fill gaps in their new hires' knowledge.

Formal training programs developed and run either by experienced service providers or by the businesses themselves can cover a number of different areas, including core finance and accounting skills; RPA skills;

broader finance automation skills; and analytical skills that enable people to stand back from day-to-day activities and identify new areas for potential improvement.

... and the opportunity they bring

Which brings me to the third and final factor – and that's opportunity. Far from being a challenge, the "people issues" implicit in finance automation represent a prospect of improvement – not just for the enterprise but for individual employees. For instance, a team member who until recently filled a repetitive role in accounts receivable may now have the analytical skills and technological tools to identify trends in all those numbers he or she used to crunch. Yesterday, they were in accounts – today, their insights have made them key players in the market development team, or in customer experience.

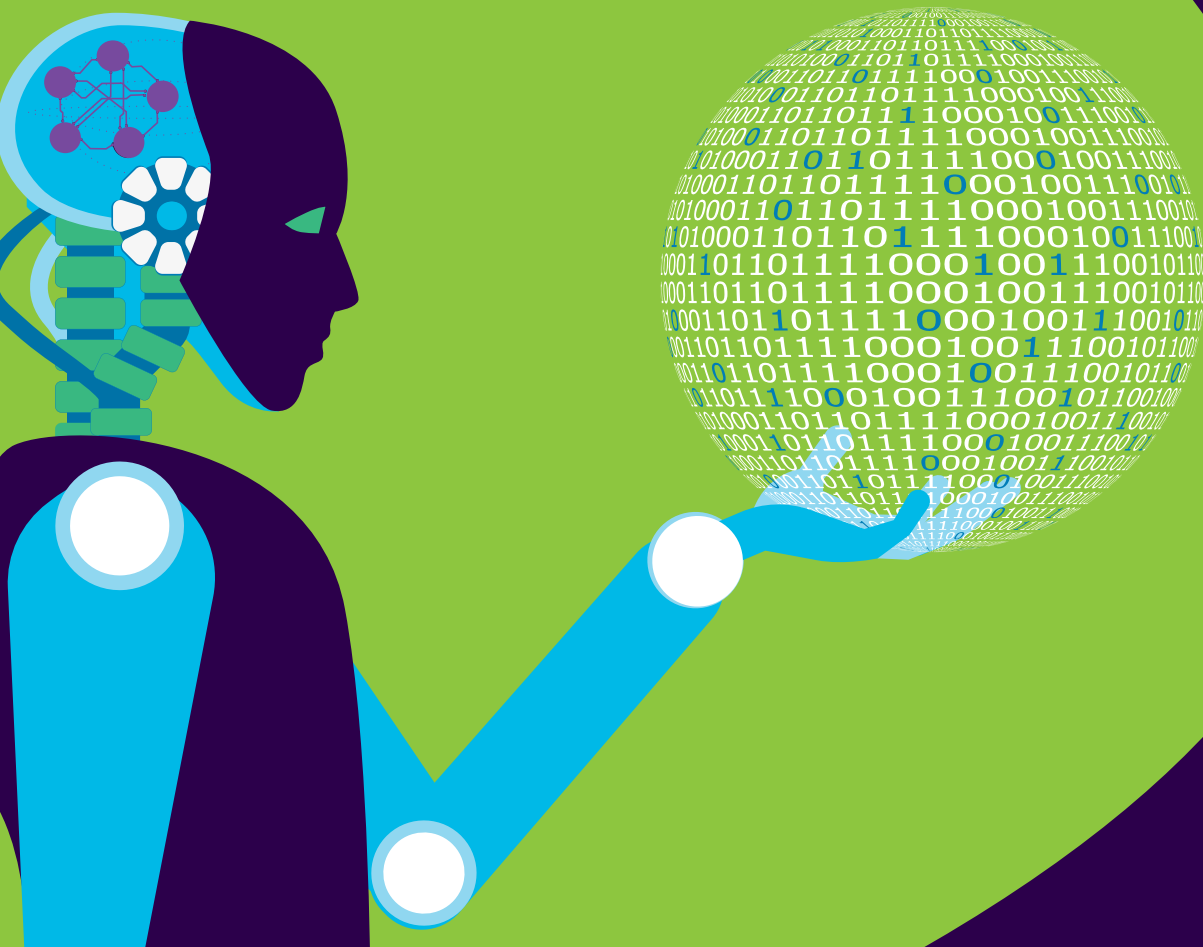
As time passes, these opportunities and these new roles will continue to evolve. I believe we're barely beginning. Think, for instance, of unstructured data – all that information contained in scanned documents, books, video clips, voice, and many other loose file types. It's all being digitized, and it's huge. Once it's all stored and organized, that's when RPA will really take off – and that's when not just enterprises, but the smart finance analysts they employ, will really come into their own.

Catherine M Munge is responsible for intelligent automation and robotic process automation solutions in Canada, helping Capgemini's clients to increase process quality and efficiency, and reduce cost by deploying leading automation technologies.



Far from being a challenge, the 'people issues' implicit in finance automation represent a prospect of improvement – not just for the enterprise but for individual employees."

Opportunities and challenges of intelligent automation for the finance community



Executive summary

This paper summarizes discussions from roundtable client events hosted by Capgemini in London and New York on the transformative effect intelligent automation could have on the finance functions of our clients' businesses.

It showcases our clients' views about where technologies such as robotic process automation (RPA) and artificial intelligence (AI) might be deployed to best effect in the finance function of their businesses – charting the progress they have already made, the benefits they are accruing and the barriers to adoption they must now overcome.

The paper also provides our vision of how intelligent automation transformation has evolved, and how it will continue to evolve to exploit the benefits and overcome the challenges highlighted by our clients.

Naturally, finance practitioners are at different stages of implementing intelligent automation – some have made significant progress, while others are still evaluating their options or assessing the business case for change. While many practitioners are excited about the range and reach of potential benefits on offer, they are also conscious of the barriers they will need to overcome in order to secure these advantages.

Key opportunities of intelligent automation

For some, the biggest benefit of intelligent automation lies in the potential for finance to offer greater value to the rest of the business, particularly over the medium to longer term. They are focused on the continuing drive to provide their internal business partnerships with tools that deliver real-time insight into current performance and granular analysis of future value opportunities. As one UK practitioner summed it up: "We're really talking about a cultural shift here – we've got to take this opportunity to show how we can add value."

In other cases, our clients are building the initial case for transformation through an analysis of the efficiency savings that intelligent automation may drive. "Ultimately, at the moment at least, this is all about driving complexity out of the transaction in order to reduce cost," stated one US-based client. This doesn't necessarily mean eliminating posts within finance, but automation does offer the potential to accelerate manual processes and to strip out exceptions and errors, freeing up resources for deployment elsewhere.

Another of our US clients puts it this way: "There is so much process in finance that still needs to be fixed, and intelligent automation can do that for

us." The potential here is to deploy tools that integrate the systems and workflows required to capture and process data from across our clients' businesses in the most meaningful and rapid ways possible – and then to generate actionable insight that can be pushed back out to their partners across the enterprise.

For many businesses, the need to improve the customer experience lies at the heart of the imperative for finance transformation. While the concept of business partnership is engrained in many finance departments, building structures that enable finance professionals to offer outward-looking support and insight has not proved straightforward. "We've worked hard to standardize process but we're still not there," says one UK finance practitioner. "We know we still have issues with the customer experience and these tools could help with that."

Many businesses are now thinking in visionary terms. Finance transformation represents an opportunity to reimagine the work of finance – rather than simply perform the same tasks more quickly – and to address long-standing problems. "We also see this as an opportunity to think about the nature of our processes," says a UK client. "Otherwise, you're just putting a sticking plaster on top of something that doesn't work well. There's a danger there of industrializing bad process."



This paper showcases our clients' views about where technologies such as RPA and AI might be deployed to best effect in the finance function of their businesses."



Finance is the guardian of corporate knowledge – we make sure the right people have the right information to make the best decisions.

Carole Murphy,

Global Head of the Finance Powered by Intelligent Automation Practice, Capgemini's Business Services

In part, this will be a cultural shift, but by moving the focus of finance professionals away from manual processing and towards value-added reporting and analysis, intelligent automation can help to change mindsets. “We are beginning to change behaviors here that have built up over many years – it’s a fundamentally new way of working,” says one US practitioner that has already begun to deploy automation technologies.

Moreover, a key benefit of intelligent automation tools for many in finance is the opportunity to embrace transformation in a more iterative fashion. While replacing large legacy technology solutions wholesale requires substantial investment that can only be justified periodically, the cost of individual automation tools is much lower. This, in turn, enables finance to continually experiment with new solutions, optimizing the mix of tools over time according to results. “We’re considering limiting our investments in our ERP so that it becomes a basic database,” says one UK client of this approach. “If we can get integration right, we’ll do everything else outside of ERP, switching in tools in and out at will.”

Challenges of implementing automation

For some organizations, the first challenge is simply knowing where to begin. “The theory is good, but every company is burdened by its own people, processes and systems, and it’s hard to push through this legacy,” said one US client.

Certainly, there will be organizational issues to overcome – for example, are the business’s procurement processes fit for purpose in the context of regular smallscale investments rather than large but occasional capital spending projects? Finance will also need to think about how much support it needs from IT as it moves towards intelligent automation and who should control the adoption of new technologies. One UK client asked: “How do we work with IT to introduce these tools? Our experience is that IT can be conservative; for example, they worry about maintenance.”

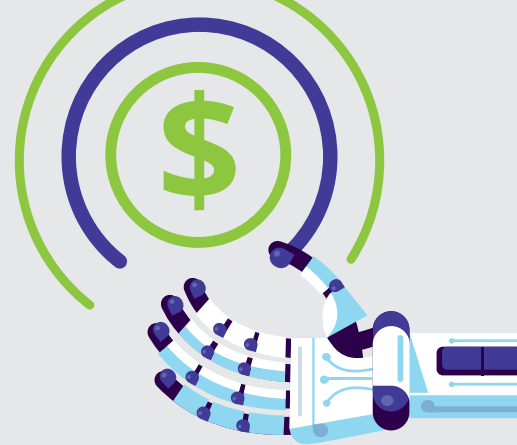
Addressing these governance questions will be important, but finance will also need to be prepared to experiment – to spend some time understanding where intelligent automation tools are most easily

integrated into their organizations in order to begin building the wider business case. Quick wins will provide the base for an incremental change process. It may simply be a question of identifying an existing problem that the organization already acknowledges and looking at how intelligent automation might deliver improvements.

Some finance professionals worry about becoming guinea pigs for the rest of the business, given the potential for automation in so many enterprise applications. For example, one UK practitioner said: “We struggle with the idea of being a test pilot for automation for the rest of the organization; is that what we want?” It’s a reasonable concern, but this wave of transformation offers finance an opportunity to take a central role. By contrast, finance has often been treated as a back-end function in previous transformation exercises, unable to take a leading role in shaping the change process.

As implementation progresses, the challenges may become more pressing. “How do we get up the maturity chain, incorporating more robots in our workforce and managing our cyber security exposure?” asked one US client. While a finance If we want to be true business partners, we need to be able to explain what’s going on in the business much more quickly.” Lee Beardmore Chief Technology Officer, Capgemini’s Business Services practitioner in the UK flagged up the need to improve data quality in order to make good use of emerging technologies: “While people talk about the opportunities of RPA, they don’t tend to mention the need for standard datasets across business units.”





These questions will have to be addressed – what start out as proofs of concept or individual deployments will need to be developed into scalable solutions. Equally, the imperative for the enterprise to build better datasets comprising structured and unstructured information will be even greater as finance adopts new tools, strong though it already is.

More broadly, the value of freeing up resources by applying robotics tools to manual processes will not be realized unless finance is able to use those resources effectively. “Our accountants right now don’t have the skills to control the process,” stated one US client. “We’ve got to move them to exception-based work rather than repetitive work.” It’s an important point: if intelligent automation changes the nature of finance work, finance workers will need to be equipped with the necessary skills to adapt accordingly.

Ultimately, the most pressing question of all will be whether finance is generating tangible returns on investment in these new tools. “The challenge for you guys is to show us how this will impact on the bottom line,” said one of our US clients. This will require finance to develop robust performance indicators and measurement tools that identify key outputs on an ongoing basis – both in terms of cost savings generated by the move to automation, but also focused on value creation.

Drivers of change

The challenges and opportunities picked out by our clients underline the broader imperative for intelligent automation: these tools represent a means to move finance from its historical role as an auditor of information in the business to a position where it ensures the business has the right information with which to make decisions.

In the past, the debate about automation in the workplace – both in finance and beyond – has often been couched in negativity, focusing on the threat robots pose to employment, for example, or the elimination of human intervention. However, the opportunity that intelligent automation tools represent does not lie in stripping evermore people (and therefore cost) out of the business. For finance, these tools offer a means to step up to the challenge it is being set by its peers across the enterprise to:

- **Deliver bottom-line effectiveness** – cost is a narrow prism through which to consider the bottom-line. While automation can deliver savings, the bigger picture is about value: outward-looking cost-effectiveness and competitiveness.
- **Drive top-line value** – intelligent automation gives finance access to ever-richer pools of data and frees up resources previously deployed in repetitive processing to report on and analyzes that data. In this way, finance can meet its responsibility to monitor performance across the business and identify how to drive improvement.
- **Enhance and accelerate decision-making across the business** – armed with enhanced business intelligence and visualization tools that automate reporting and

analytics, finance is better placed than ever to ensure every other function can innovate and accelerate growth.

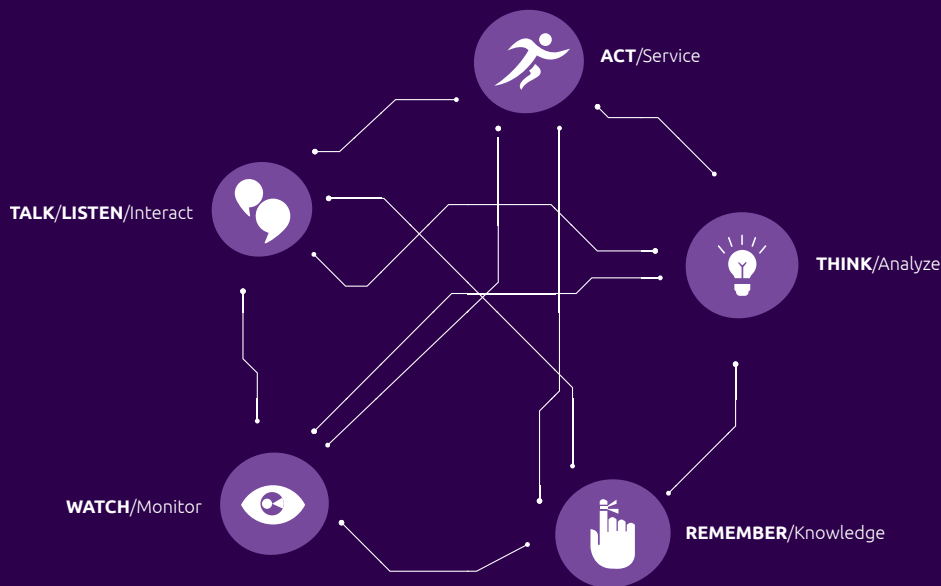
Moreover, intelligent automation offers a route to new ways of working that is iterative rather than “big bang”. Unlike previous waves of transformation, it does not require finance to make large-scale investments in IT or to replace legacy technology with more modern systems. Instead, businesses will move forward with a series of small projects and experiments, stitching together best-of-breed tools and technologies to offer constantly evolving services and processes that deliver ever more.

Transformation in practice

Our vision of intelligent automation is built on three pillars or principles:

- **Automation first** – the need to move people away from work processes that can be automated into areas where they can add greater value.
- **Technology arbitrage** – the idea that no single tool or provider will offer everything that finance needs. Rather, the imperative is to create an architecture in which the best tool for each process or task can be plugged in and connected to other tools also being employed.
- **Knowledge arbitrage** – the need to build a corporate knowledge center that grows over time as staff from finance and beyond add their expertise and search for new answers.

The “Five Senses of Intelligent Automation”



But what does such a framework look like in practice? What specific tools can finance apply to begin to reap the benefits of intelligent automation? Capgemini’s “Five Senses of Intelligent Automation” approach to intelligent automation imagines a wide range of applications employed by finance to meet the need to:

- **WATCH/Monitor** – conduct continuous monitoring of business performance through real-time financial reporting and exception flagging. Example technologies include a broad range of configurable KPI dashboards.
- **TALK/LISTEN/Interact** – communicate with the business, receiving and processing diverse forms of structured and unstructured data, and responding intelligently. Example technologies include chatbots and voicebots.
- **ACT/Service** – automate processes and complete tasks with no or limited human intervention. Example technologies include RPA tools that can process orders and invoices, with AI that is extending the reach and scope of such tools.
- **THINK/Analyze** – detect patterns and recognize trends in order to determine or recommend appropriate actions. Example technologies include dashboards that offer insights of value across the business.
- **REMEMBER/Knowledge** – build a user-driven bank of knowledge appropriate for the needs of the business. Example technologies include AI tools that can identify fraud.



If we want to be true business partners, we need to be able to explain what’s going on in the business much more quickly.”

Lee Beardmore

Vice President and Chief Innovation Officer,
Capgemini Business Services

It’s important to recognize that no organization will acquire and implement all these intelligent automation capabilities in one stroke. Rather the challenge is to build and connect tools over time, swapping in new solutions as superior applications become available.

Building an automation-led transformation program is not just about process and technology. Capgemini also reviews the impact changing technologies can have on your grade mix and capabilities, which drives change and supports your business in the future. Knowledge can be hardcoded into your processes using automation that enables your finance teams to augment their abilities, as we shift from record to report, analyze, and action.

In conclusion

Intelligent automation:

- Offers a more comprehensive and real-time view of business performance, to the benefit of both finance and every other part of the organization.
- Brings new and more immediate levels of measurability to finance, enabling it to secure or drive both bottom-line and top-line benefits.
- Supports compliance with automated processing and reporting.

- Enables finance to focus on delivering a better customer experience for both internal and external audiences.

Moreover, the iterative and granular nature of implementing intelligent automation tools means a modest upfront investment can deliver significant return, which can fund further transformation.

The transformative benefits of intelligent automation can be achieved to their fullest extent when technology and tools are matched by deep understanding and experience not only of their implementation, but of the processes to which they apply inside global operations. When this happens the finance function will be recognized as the nerve center of the enterprise, enabling the entire organization to reimagine its own future.



The theory is good, but every company is burdened by its own people, processes and systems, and it's hard to push through this legacy.
US-based client



There is so much process in finance that still needs to be fixed, and intelligent automation can do that for us.
US-based client



We're really talking about a cultural shift here – we've got to take this opportunity to show how we can add value.
UK-based client

**Intelligent
automation in HR,
supply chain,
customer service,
risk and compliance,
and contract
management**





Digital Learning Operations – feeding the curiosities of the mind

Anjali Pendlebury-Green

Global Head of the Digital Employee Operations Practice, Capgemini's Business Services

The more you invest in digital learning, the higher the uptake of reskilling programs, leading to a more switched-on, curious workforce, and real employee delight.

These days there is a real dichotomy about what we expect as consumers. We love Uber, and unmanned check-in gates at the airport, ordering and paying for things with ease online, but each of these technologies is impacting the workforces of the sectors they are emanating from.

For organizations it's necessary to ask:

- What is the impact new technologies such as AI and automation are having on our organization?
- What are the opportunities for the people that are being impacted by these technologies?
- How do we reskill our people for new roles and new technologies?

It's imperative to grab opportunities that come from new technologies and to battle apprehension and the fear of change.

Technology is taking over, we are adopting it at an incredible pace. It's likely that our children will have jobs that we've never even heard of. Reskilling workforces has become critical for organizations, for people, and for the world at large.

The more you invest in digital learning, the higher the uptake of reskilling programs, which leads to a more switched-on, curious workforce the long term. What is the experience organizations want to deliver to their employees?

At Capgemini our approach is not just to deliver an efficient and effective HR service, but one that delivers delight, real employee delight. Capgemini's **Digital Learning Operations** delivers extraordinary value, and our clients have enjoyed 50% efficiencies in learning operations and process optimizations, and 40% savings in cost-to-serve through our vendor management frameworks.

But it's also about the enhancement of employer brand and reputation. We all want to be in workplaces in which we feel invested in, in which we can explore different opportunities. We want to feel free to feed the curiosities of the mind and be ready for the digital change that is all around us.

Digital Learning Operations brings this consumer interface to learners and instills a culture of curiosity and playfulness, raising people's awareness of the digital tools that are available to them. It's all about a human-centered

approach to technology – something we call The Capgemini Effect. We invite organizations to embark on their journey to digital transformation. We invite them to experience The Capgemini Effect.

We finally decided on Concur, which, as well as being a truly global T&E solution, is flexible enough to allow for local nuances. Concur enabled us to implement a global standard T&E policy that resulted in a common process, digital enablement, improved controllership, and enhanced governance. Once the platform was in place, we rolled out our "MyExpense" tool – which was no mean feat for a company that boasts 200,000 employees across 40 countries.

Anjali Pendlebury-Green is an expert in the field of HR outsourcing and transformation, specializing in delivering HR solutions that leverage global outsourcing platforms, leading edge technology, stack offers, and process standardization. Anjali has led award-winning HRO teams for large multinational companies with a special focus on the manufacturing sector.



Reskilling workforces has become critical for organizations, for people, and for the world at large."





Digitally transforming the Capgemini Group's Travel and Expenses function

Atul Kulshreshtha

Vice President, Capgemini's Business Services

Our people can now submit, upload, and even approve documents on their mobile phones, eliminating the need for voluminous paper-based receipts.

As a technology and consulting company, we're always suggesting the latest new tools, technologies, and processes to our clients. But do we use these tools and technologies ourselves? In other words, do we practice what we preach?

It has to be said. Our T&E process was in a bit of a mess. It would take 4–6 weeks to get hold of the paper invoice from the credit card company, after which it would go to an approver for a number of weeks before the credit card company was finally paid.

Our people almost always ended up having to apply for higher cash advances or card spending limits – purely as a precautionary measure against exhausting their spending limits and their cards getting blocked. They would also spend hours tracking invoices and filing claims, often at the cost of more value-added work. It wasn't just inefficient and slow, but it also made the cash cycle longer and tracking expenses tedious. Sounds familiar?

Implementing a global T&E solution

As part of a company-wide move towards globalization and cost rationalization, Capgemini took the decision to simplify, automate, and standardize T&E across geographies. A central project team was set up to create a target operating model and a global template was created for our "MyExpense" tool. Critical success factors included unique travel policies for several countries, the availability of key people at the required time, and empowering the right decision-makers.

The other major factor was the choice of platform on which Capgemini's T&E tool would be based. We wanted a cost effective global tool from an

independent vendor, already in use by a number of large corporations, which would minimize our implementation change management effort.

We finally decided on Concur, which, as well as being a truly global T&E solution, is flexible enough to allow for local nuances. Concur enabled us to implement a global standard T&E policy that resulted in a common process, digital enablement, improved controllership, and enhanced governance. Once the platform was in place, we rolled out our "MyExpense" tool – which was no mean feat for a company that boasts 200,000 employees across 40 countries.

Reduced cycle time, reduced cost

Implementing this solution has simplified our T&E process, while standardizing and improving the user experience. Our people can now submit, upload, and even approve documents on their mobile phones, eliminating the need for voluminous paper-based receipts. Cycle times have been reduced, as have the associated costs.

The tool has also given us much greater visibility into expenses across the organization and enabled us to put a very robust governance mechanism around the entire process in place. All our implementation milestones were met and the team even won an award from Concur France for our deployment effort.

The lessons learned

In short, the project has been a great success. So what exactly did we learn from this transformation? Here are my key takeaways from the transformation:

- **Sponsorship** – backing from top leadership is crucial for the success of any technology transformation. Driving change management to mobilize, utilize, and train your human resources needs championing from the top.
- **Right team** – successful Concur implementation requires you to enable the right people with the authority to make quick decisions. It requires detailed planning to ensure the availability of the required experts from across your organization, including Finance, HR, Taxes, and Communications.
- **Standardized processes and policies** – another key aspect is standardization of travel policies before starting on the technological implementation.

With these things in place, any implementation of Concur will flow smoothly and deliver a range of business outcomes. These include immense convenience to employees through providing a digital solution in their hand, simplified processes, enhanced governance, reduced cycle time, and most importantly, increased savings due to scale efficiencies.

***Atul Kulshreshtha** is a tech savvy business leader with 30 years' experience in BPO and shared services transformation. He is passionate about operational excellence, talent development, and exploring new disruptive technologies that can enhance the efficiency of business operations. He has successfully designed and implemented value-adding solutions for clients across a range of businesses.*



Automating the supply chain – tangible benefits

Dharmendra Patwardhan

*Global Head of the Digital Supply Chain Practice,
Capgemini's Business Services*

Supply chain automation needs to be approached with focus, commitment to achieve scale, and with a long-term and enterprise-wide strategy.

In a way, automation is a little like an organization's culture – you can't touch it or point at it, but it can nonetheless have a profound bearing on developments.

For something so intangible, it's interesting that automation technologies make their largest impact on what is probably the most physical part of any business – the supply chain. They generate greater quantifiable benefits here than in any other area.

In our global digital supply chain survey, we found that automation initiatives in procurement and supply chain functions deliver the highest returns as compared to any other function. Automation delivers a ROI in the supply chain of 18%, three percentage points more than for HR and four percentage points more than for IT. For other functions, including finance and accounting, research and development, and customer service, the difference was even greater.

The importance of focus...

Needless to say, these headline figures conceal a fair degree of variance – some organizations have seen greater success than others in digital transformation via supply chain automation. Our survey shows that more progress and better results are achieved by those who can identify their areas of greatest strategic importance, and who are then able to focus on those. The downsides to embarking on too many projects at once aren't just wasted time and budget, but the consequent inability to implement a winning project at scale.

Indeed, our survey found that only 14% of organizations are currently able to scale at least one of their

supply chain digital initiatives to multi-site deployment or full-scale deployment. The vast majority – 86% – are stuck at either proof of concept (POC) or pilot stage. The survey also noted that those organizations that were able to scale up their digital supply chain initiatives have, on average, six POCs running at any one time. By contrast, those organizations who have failed to scale are running an average of 11 POCs.

... and of vision

How do successful organizations identify winners on which to focus? Answer – they have a framework in place, enabling them to evaluate the outcomes of individual pilot projects and map them against a clearly defined roadmap for where the enterprise would like to see its supply chain three to five years hence. In addition, they have ensured that the budget is ringfenced year on year.

The advantage of conducting a survey at scale – in this case, more than 1,000 organizations – is that broad trends can be identified. For instance, we were able to see the points in the value chain where strategic wins were most prevalent, in terms of ease of implementation and the benefits realized.

We were also able to identify some general principles of supply chain digitization. For instance, our survey explores the importance of:

- Obtaining buy-in from senior management
- Aligning the supply chain vision to that of the business
- Engaging supply chain partners in the process
- Driving a customer-centric mindset
- Building the required talent base

Does it work?

If automation is intangible, so are business theories. What's needed is something of substance. "Does it work?" is a fair question.

What's needed, in fact, is proof.

Suppose I told you that next-generation supply chain management (SCM) practices are typically delivering order delivery cycle time reductions of 15–20% and improvements in forecast accuracy of 10–30%?

Suppose, too, I said that a blue-chip FMCG customer of ours, with around 400 brands, is seeing improvements in forecast accuracy of the order of 10–20% across its product lines?

And suppose I also told you of another client – a multinational medical device, pharmaceutical, and CPG company with an annual revenue of around \$70 billion – that is achieving close to \$7 million in external manufacturing operational savings over five years?

So yes, supply chain automation works. As I said in my introduction, it's rather like organizational culture – you can't see it, but you can see its effects.

To take full advantage of it, it needs to be approached with focus, with a commitment to achieve scale, and with a long-term and enterprise-wide strategy. Do this, and you too will be the envy of your peers in HR, IT and finance.

***Dharmendra Patwardhan** is responsible for developing offers and capabilities for transforming supply chain operations that drive tangible business outcomes for Capgemini's clients.*



Interconnectedness – the solution to its own problem

Erwan Le Duff

CEO, Odigo

Joined-up thinking in an increasingly joined-up world.

Until only a few years ago, most businesses knew little about their customers, and what they did know would be in departmental silos.

The sales team would perhaps know customer order history, and business-to-business (B2B) salespeople would probably know the key people in procurement roles by name, but that would be about it. The accounts team would know late payers from good customers, and the marketing department would have a general sense of customer profiles segmented by product line. What's more, the kind of interactions to obtain this knowledge was limited – they'd be face-to-face, over the phone or, in more recent years, via the web.

The bad news ...

But now? Now it's much more complicated. Any customer, commercial or retailer can use several channels of communication to engage with the business: voice via landline or mobile, online via laptop, tablet or smartphone, text messaging via these same different device options, and of

course straightforward, old-fashioned, face-to-face conversations.

Online interactions are themselves further segmented via the organization's website, its social media feeds and via third parties. So for every one of its thousands or possibly millions of customers, an organization will need to stay on top of multiple individual interactions. In short, customer service just became massive.

... and the good!

The very technology and its associated interconnectedness that has led to this proliferation of contact has also produced a realistic means of addressing it, even at scale.

First, let's look at internal processes. Integrated systems using cloud-based models break down these silos, making it much easier to share information between different organizational disciplines. For instance, people in marketing can now get to know their customers in far more detail, and as a result can furnish their sales colleagues with tailored and compelling propositions.

Then there's the external process, the customer experience. An interconnected organization is much better at handling high-volume, multi-channel interactions, making the process easier and smoother for customers. It can do this partly because the technology makes it possible to introduce a "triage" approach, prioritizing cases and handling each of them in the most appropriate manner, leveraging a complete vision of the customer's contact history.

Therefore, in an era where simpler and more efficient communication between organizations and their individual customers are fuelling an increased number of interactions, if it's impossible to deal with each customer query personally, why not use smart technology to take care of low-complexity cases?



In an era where simpler and more efficient communication between organizations and their individual customers are fuelling an increased number of interactions, why not use smart technology to take care of low-complexity cases?"



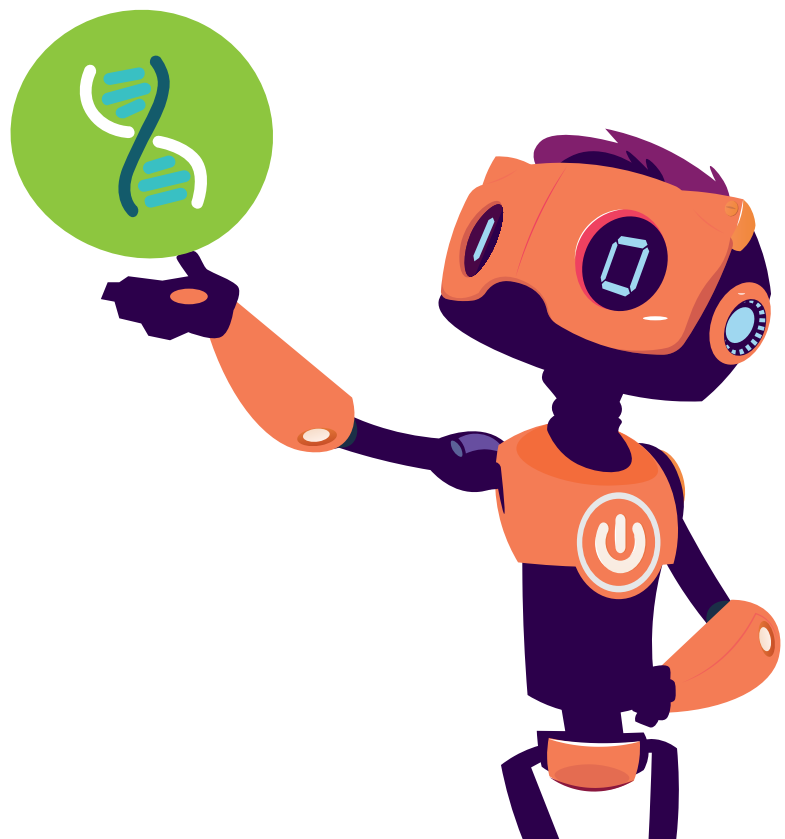
In an era where communication between organizations and their individual customers are fuelling an increased number of interactions, why not use smart technology to take care of your low-complexity cases?"

Enter the "bot"

Systems are now able to develop knowledge about individual customers and their typical communication paths. For most interactions, automated processes or "bots" can be employed, sourcing responses to an individual customer's written requests or queries, and replying in the manner of a regular online chat. These technologies are increasing in sophistication to accommodate voice, so calls can be received and answered using natural language, as though the customer were speaking to a live agent.

What's more, the system learns. For example, if a person doesn't at first understand the automated response given, the technology finds a solution and then logs the instance so that next time it will express itself in a different way. And if stress is detected in a caller's voice, the bot recognizes that this is no longer be a low-complexity case and switches the call to a live agent for resolution.

Another example. At Capgemini we've developed a multi-channel chatbot for one of France's biggest healthcare insurers. Operating in text mode as a mobile app but also in voice mode by phone, the technology can identify the customer, understand his or her query via a machine learning engine, narrow down the need using detailed questions and answers, and then deliver a personalized response. In more tangible terms, if the customer has a new prescription from an eye test, the chatbot can advise what the cost of a new pair of glasses will be within the caller's healthcare plan and the location of the opticians closest to the customer's home.





The technological evolution that has created customer bases of millions ... has also made it possible to ensure that everything acts as one, increasingly sophisticated, automated and highly manageable channel."

Everyone's a winner!

What's important about these developments is that they're holistic. The technological evolution that has created customer bases of millions – engaging with the organization in four, five, six or more different ways – has also made it possible to ensure that everything acts as one, increasingly sophisticated, automated and highly manageable channel.

It's good for everyone:

- First and foremost, the needs of the customer are met.
- The organization can handle every interaction in a way that delivers the greatest satisfaction to the customer.
- And the call center handling personal voice responses is transformed, adding more value to the customer experience than ever before, and enabling customer service agents to focus on more value added tasks.

At Capgemini, we've contributed to this evolution by introducing an enhanced bot element to our **Odigo Concierge** solution. Not only is it backed by high-level consultancy to help define your organization's needs, but it can be delivered on a BPO basis and boasts dedicated assets such as a sectorial and functional language corpus.

It's joined-up thinking in an increasingly joined-up world.

***Erwan Le Duff** is the CEO of Odigo, providing end-to-end, cloud-based customer interaction solutions that help our clients enhance the digital experience of their consumers.*





Voice-based chatbots – a revolution in customer relations

Thomas Saint-Hilaire

*Vice President, Digital Platforms, Odigo,
Capgemini's Business Services*

Chatbots are on the verge of an unprecedented disruption to customer relations.

After transforming games such as chess, Jeopardy and Go, artificial intelligence (AI) is set to radically transform customer services. Fast in exchanges and self-learning, providing precise answers to customer requests and offering a personalized business transaction service, chatbots are set to replace contact center agents, mobile apps and websites.

Machine learning changes

everything. Put simply, machine learning recognizes a pattern after first learning it. Specifically in customer relations, machine learning can identify a customer's need, and a well-trained intelligence chatbot can deliver truly impressive results that can be compared to those obtained through human intelligence.

Learning consists of giving examples of sentences to the learning machine and detailing the corresponding intention. To be efficient, this learning has to happen before a chatbot is launched and continue throughout the first few weeks after launch. If the chatbot doesn't recognize the

intention with enough reliability, human intervention becomes necessary. Beyond machine learning, **some providers are offering an ensemble of mature and accessible technologies** that are enabling the construction of chatbots – speech to text, text to speech and API management – which can:

- Strike up an anytime, anywhere, any device conversation with a customer.
- Understand and process the customer's need.
- Chat "just like a real person," providing an appropriate answer to each request, and if appropriate, forward the request to a real agent.

And with social networks having already paved the way for mainstream use of written conversations as a method of expression and communication, chatbots are all set to enhance customer experience to the latest digital standards, providing seamless customer authentication,

emotion analysis to monitor the conversation and synthetic voice adapted to the customer's profile. While phone is still the most important channel for customer service, and because call center costs remain high, voice-based chatbots powered by AI represents the holy grail of customer service automation – delivering a rapid return on investment, including an increase in self-service utilization rate and increased customer satisfaction. All this amounts to **a complete revolution in customer experience.**

Thomas Saint Hilaire *helps clients transform their customer experience using digital technologies such as chatbots and analytics.*



While phone is still the most important channel for customer service, voice-based chatbots represent the holy grail of customer service automation, enhancing customer experience to the latest digital standards and delivering a rapid return on investment."





How to leverage RPA in the source code review process

Gopichand Patibandla

*Operations Manager, GRC Practice,
Capgemini's Business Services*

RPA increases the speed and efficiency in identifying vulnerabilities in your web application source code.

Do you remember when source code reviews of web applications were carried out manually? Without proper understanding of the nuances and logic built into the source code, this was not always a straightforward task. But a lack of systematic examination of the flaws and vulnerabilities within your application source code could have a major security impact on your web applications and systems.

Life before automation

Your source code review team needed a full understanding of the design and standards used in developing the applications. They would then have to select a catalogue of appropriate tools to scan the application code and identify vulnerabilities such as SQL injection, remote code execution, cross-site scripting, header injection, HTTP response splitting and possible flow control.

Hundreds of thousands of lines of source code would be transferred to a secure standalone system to carry out the code review, generating multiple reports containing thousands of items in various formats, including XML, HTML, PDF and CSV. These reports would then have to be consolidated into a single format by manually copying the required fields from the various report files into a Microsoft Excel file before analysis could begin.

In one project for a leading manufacturing sector client, we carried out a review to identify the flaws in their application source code. We scanned around 600,000 lines of source code and generated a total of 12 reports containing around 56,000 items across formats. It took four people each working for five days (a total of 20 days) to manually complete the consolidation work, remove false positives and provide recommendations to mitigate the resultant vulnerabilities present in the code. Just thinking about it makes me sweat!

The impact of RPA

With the advent of robotic process automation (RPA), we now automate most manual and repetitive report conversion, consolidation and analysis processes to minimize human effort, delivering increased efficiency and reduced project duration for our clients.

I recently returned to the raw and consolidated reports created for our manufacturing client's source code review project to assess how RPA would impact the speed and efficiency of the consolidation. Through leveraging RPA, only a single resource

would be needed to complete the source code review, as opposed to the four resources previously used in the manual review process. This represents a reduction in manual effort of around 75% and a significant reduction in cost, while delivering the output faster and more accurately.

Gopichand Patibandla is an experienced GRC and Audit Assurance professional. Prior to joining Capgemini, Gopichand held a variety of roles, including implementation of large ERP projects and management of various IT processes in a large financial organization. He has extensive experience in performing gap analysis, compliance assessments in the areas of IT risk, IT governance, privacy, and security.



Through leveraging RPA, only a single resource would be needed to complete the source code review, as opposed to the four resources previously used in the manual review process."





Don't expect
your machines
to walk before
they can crawl

Mani Agarwal

*Director, Head of Contract Compliance and
Optimization, Capgemini's Business Services*

Are you struggling to teach your machine learning tools and becoming impatient with the results?

It takes months for a newborn baby to develop the muscles to crawl – even longer before they eventually learn to walk. Similarly, it can take years to train a person to draft, negotiate and understand a written contract, and we shouldn't expect machines to do it from the outset.

After using Apple/iOS for the last few years, I recently switched to Samsung/Android. It's not that I don't like Apple, but I wanted a change, and I'd like the look of Samsung's virtual assistant Bixby – which is similar to Siri and Google Assistant.

Based on machine learning, Bixby takes a while to recognize your voice, but when it does, it can put on your alarm and check your emails and messages. If it doesn't understand you, it says, "teach me," which is where you need to be patient and give it a written command. But like all machine learning tools, the more time you spend with Bixby, the more your phone gets smarter, and the more accurate are the outcomes of your requests.

Reap what you sow

When it comes to contract management, most people expect machine learning to solve all their problems overnight. But given the complexities and length of contracts, the variety of templates and language used, and the similarity in the documents, the output is bound to vary at the beginning. Only by having patience in the machine learning capabilities of your robots will you obtain the desired results.

Although this might sound familiar, using machine learning tools requires a dedicated investment of time and money. To give an example, one of my clients was looking for specific information from a repository of contracts. After delivering a proposal

and configuring the tool, we understood that we only had a few hundred contracts from which to extract data, which wasn't enough for machine learning to be successful.

Machine learning only happens when thousands of documents with a huge amount of data are fed into the system, and any machine learning tool is bound to fail if you don't give it enough data to process. In this case, we had to extract the data manually using traditional optical character recognition (OCR) and other methods. But given sufficient data, we could have used it to teach the machine, which would have enabled us to deliver the desired results down the line.

If you're looking for some advice...

Before you get frustrated and feel your machine learning tools are unable to drive the results you're looking for, here are a few points to consider when implementing artificial intelligence (AI) and machine learning solutions across your contract management function:

- Identify the outcomes you require from your machine learning tool. This is the basis on which the tool will be set up.
- Set up your machine learning tool based on the data available to you. Access to sufficient data or number of documents is the key for a successful outcome from any machine learning/AI tool.
- AI tools are equipped to separate your contract documents if they are mixed with other documents in order to maximize the amount of data that can be extracted.
- Standardize the templates or file types you use to ensure machine learning happens faster and with higher accuracy.

- Don't invest in machine learning tools unless you have thousands of contracts to feed into the tool. Traditional tools, such as OCR, are sufficient for smaller set of documents.

With AI quickly becoming the norm and the introduction of chatbots into contract lifecycle management, having access to sufficient data can drive excellent AI-based results. Machine learning is a set of algorithms that your implementation partner will customize to your needs, but don't expect your machines to walk before they can crawl!

***Mani Agarwal** advises clients on commercial and contract management transformation initiatives. He helps organizations to transform their contract lifecycle and contracts portfolio by implementing the right machine learning/AI tools. He also uses his expertise in optimizing the performance of contracts to ensure maximum value through all contractual opportunities and avoid any revenue leakage. Mani is a qualified lawyer and prior to his role he worked in various large legal and technology companies managing their contracts and risk.*



Only by having patience in the machine learning capabilities of your robots will you obtain the desired results."



From stereotypes to machine learning – AI in contract management

Mani Agarwal

*Director, Head of Contract Compliance and
Optimization, Capgemini's Business Services*

Time has become the world's most valuable commodity, and a little help from a friendly robot can go a very long way.

Growing up in India, I've witnessed, read and worked on all sorts of different contracts. Still fresh in my mind are the verbal agreements people in my town would make with standard "net 30" payment terms while buying their groceries from the little shops near our house. While practicing law, I would review contracts on paper, often dictating the changes onto my stenographer. Thankfully the world has moved on, and we increasingly use computers to draft contracts, emails and even negotiations, thereby minimizing dependency on stenographers.

The rise of metadata

Historically, once a contract is signed after weeks and sometimes months of hard work, it's left unattended for years on end in a musty cupboard, until some poor person has to spend half a day locating and dusting it down for use in a dispute. To counter this and keep track of their contracts, organizations began storing documents electronically using the different tools available to them at the time.

The industry innovated further and developed the technology to extract metadata from the contracts before uploading them onto the repository. Metadata is key for accurate searching, reporting and building a workflow around your contract management process, and can be used to generate reports and analytics. Some examples of metadata in a contract process are the customer name, contract type and the expiration date.

Machine learning and AI to the rescue!

But what if you need information from the contract that isn't in the metadata? An organization's operational teams – the people that really live by every word of the contract – often ask for more information from the contract and expect it to be available at the click of a button. For example, during the infamous ransomware attack in 2017, I had to look for patching/anti-virus update obligations in over 500 contracts in two days! If only I'd had the AI enable contract management tools to help, my life would have been made much easier!

While well-trained, conscientious people can still achieve a great deal, time has become the world's most valuable commodity, and a little help from a friendly robot can go a very long way. AI in contract management continues to develop at a mind-boggling pace, and any organization with a voluminous contract portfolio can increase the efficiency of their contract management process through embracing AI-enabled contract management tools. These tools can help organizations to:

- Automatically organize, classify and extract key information at the click of a button.
- Locate key information from documents through leveraging machine learning.
- Minimize human intervention without compromising on quality.

- Provide a summary of the information that enables informed decision-making to drive enhanced results.

What are you waiting for?

In 2018, organizations should invest in the technology to modernize their contract management function and get their contracts in order. Putting them on SharePoint isn't enough and contracts can become untraceable and even lost. AI is now the reality in contract management and is working well in this function. We're not that far away from being able to use Siri and Google Talk in contract management!

Ultimately, with advances in technology driving an increased level of customer engagement and satisfaction, there's nothing more embarrassing than having to ask for a copy of the contract from your client!

***Mani Agarwal** advises clients on commercial and contract management transformation initiatives. He helps organizations to transform their contract lifecycle and contracts portfolio by implementing the right machine learning/AI tools. He also uses his expertise in optimizing the performance of contracts to ensure maximum value through all contractual opportunities and avoid any revenue leakage. Mani is a qualified lawyer and prior to his role he worked in various large legal and technology companies managing their contracts and risk.*



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Technology





RPA and AI across the intelligent automation spectrum

Lee Beardmore

*Vice President and Chief Innovation Officer,
Capgemini Business Services*

RPA and its expansion into AI is helping to drive a new era of business and IT alignment.

It's true to say that RPA has taken us a long way towards unlocking productivity benefits tied up in manual processes. It has galvanized a mindset that things can change without a need for massive systems reengineering.

Although wholesale change isn't always a realistic option for most organization, RPA acts as a catalyst to help businesses progress and add value, enabling them to build strategic plans around investments they've already made into their legacy systems. It doesn't preclude big change – it simply supports a faster release of benefits alongside greater change initiatives, so that everyone's a winner!

The expansion into artificial intelligence (AI) is the next step of this more granular, faster form of transformation, with more and more business activities either wholly or partially automated by increasingly sophisticated means.

Classifying solution components

At Capgemini, we use a framework called the **"Five Senses of Intelligent Automation"** to help classify and structure solution components on the intelligent automation spectrum.

This framework takes an "automation first" approach to understanding technology, and is based on the observation that almost every solution in which AI is involved consists of five senses. Combinations of these senses deliver automation systems that offer dramatic improvements over their manual counterparts.

Naturally, this must come with some process restructuring – it's not possible to generate significant benefits if you automate the current "as is" process state. Processes must be optimized with an automation-first mindset.

Practical uses

With all of this in mind, here are some real-world use cases that combine RPA and AI into broader intelligent automation solutions:

- **Process discovery** – often the biggest question for RPA is: "Where do I build the robots and what benefit will I achieve?" Analytics, machine learning, and AI provides an evidence-based, bottom-up view of what is actually happening in an organization's operational processes that helps understand how to change processes, where to deploy robots, and assesses the benefits once they've been deployed. This can be compared and contrasted with the traditional top-down view provided by process leaders and operators.
- **Managing unstructured data** – RPA is a transport mechanism for getting raw data such as documents, forms, correspondence, contracts, and other free text content to AI components. RPA is surrounded by these AI modules – such as computer vision, pattern matching, classifiers, and natural language processing – which deliver specific capabilities to carry out subjective processing tasks that have traditionally been done by people. RPA is then used, alongside APIs, to input the answers into the target systems.
- **Corporate memory** – one area that AI can really help in is knowledge management. Leveraging cognitive search engines and knowledge bases to inform customers and employees quickly can have a huge impact on their satisfaction. Although not directly related to RPA, corporate memory is an essential ingredient in the AI mix offering an automation capability that can divert interactions towards viable self-service and away from asking an agent or colleague.

- **The conversational interface** – my children are constantly talking to their devices. It's a natural (and sometimes amusing) activity, and this style of conversation, whether voice or textual, is increasing dramatically. As chatbots and voicebots continue to offer a new user experience, RPA can open up access to an organization's application estate – particularly those that are difficult to integrate with – enabling them to participate in the new world of conversational interfaces.

- **Speed to insight** – RPA can be leveraged to improve productivity of corporate reporting and support the generation of insight and interpretation of data. RPA supports the "last mile" of supplementary analysis needed to hone in on a key piece of insight. AI can be used to model and predict through a traditional machine learning approach, or through natural language generation techniques to create a grammatically correct, narrative summary of the findings within a block of raw data.

As new AI techniques and solutions come on to market, the spectrum of intelligent automation continues to expand – and it's already changing the future of work in a radical but positive way.

The ability to introduce these connected, yet granular solutions is helping drive a dual-speed transformation and a new era of business and IT alignment.

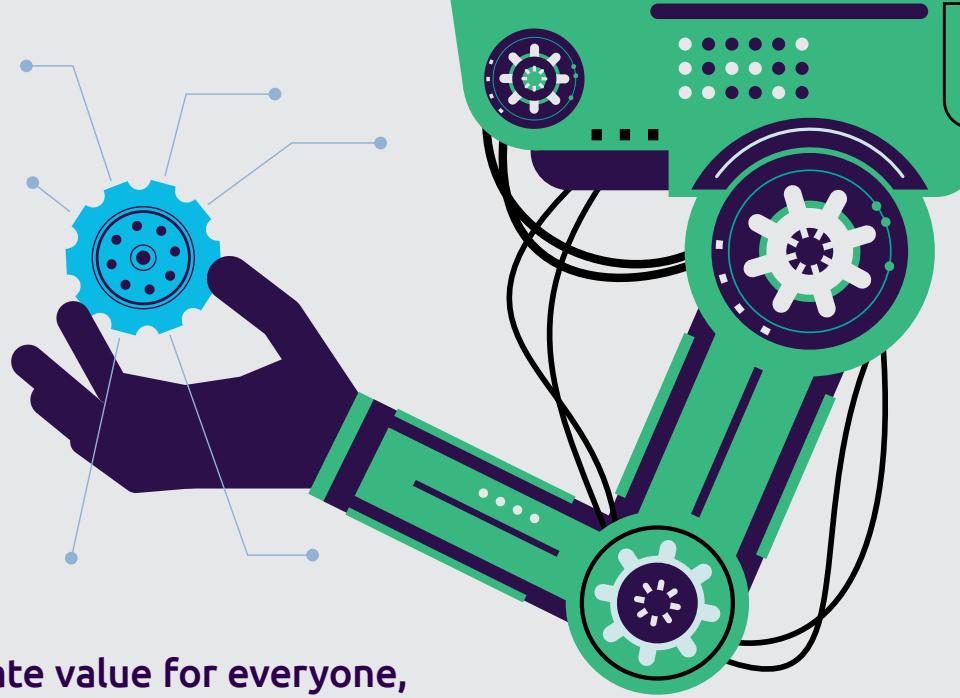
***Lee Beardmore** has spent over two decades advising clients on best strategies for technology adoption. More recently, he has been leading the push in AI and intelligent automation for Capgemini's Business Services. Lee is a computer scientist by education, a technologist at heart, and has a wealth of cross-industry experience.*



Robotic automation – a bunch of benefits

Marty Borcharding

*Engagement Executive,
Capgemini's Business Services*



Robotic automation can create value for everyone, but it's at its best when it's part of a bigger story of intelligent automation transformation.

Here in California we love our wine and grow a lot of grapes. Now, let's suppose for a moment you and I are in the wine business, and we've heard about a fabulous new grape varietal. It gives a high yield, it's robust, the sugar content is perfect and test crops indicate it has all the makings of a great vintage.

Do we go straight out, buy this new varietal and plant as much as we can? It's a winner, right? So why wait? What's stopping us?

No. Of course we don't. Producing a fine wine requires a lot more planning and work than just planting grapes. We need to analyze soil samples to make sure they're suitable. We should see if the irrigation and the run-off are

going to work for this new varietal. We must satisfy ourselves that there aren't any crop pests in the neighborhood that need addressing. We also need to assess whether our harvesting, fermentation and storage is optimal, and we need to consider sales, distribution and marketing. Making such a fundamental business change requires us to do our homework and consider the entire end-to-end process of growing and harvesting new grapes, through to selling the wine we produce.

Part of a wider process

Robotic automation is a bit like deciding to produce a new wine using a brand new and better varietal of grape. However, in the midst of all the technological excitement surrounding robotic process automation (RPA) and artificial intelligence (AI), it's easy to forget the same rules apply.

Just because robotic automation can deliver significant benefits to an organization (and it can!), it doesn't mean you should rush headlong into implementing it. The less effort you've put in up-front to checking and optimizing current processes, the more likely it is your foray into automation will be at best, piecemeal, and at worst, costly, ineffective and, possibly even counter-productive.



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Robotic automation is a bit like deciding to produce a new wine using a brand new and better varietal of grape.”

In short, robotic automation isn't just a technological proposition. It should be seen as part of comprehensive intelligent automation transformation program. It ought to be the last step in a chain of processes that includes analyzing current operations, eliminating non-value steps, standardizing processes and then optimizing them. Only then does it make sense to apply robotic automation.

Failure to do this often results in businesses automating inefficient processes that amplify their negative results, resulting in disappointment with the robotic automation. The good news is that a broader transformation approach doesn't add a lot of time, and with the right approach to intelligent automation you can (to continue the analogy) greatly increase the quantity and quality of the “wine” you produce.

New boardroom partnerships

In terms of the strategic management of the business, there's something implicit in all this, which is really quite interesting.

In my experience, intelligent automation, RPA and the like are often seen in binary terms. The buck stops either with the business unit and its decision-makers, or with the IT function.

In fact, neither of these approaches delivers the best answer. Just as a great vintage needs more than a fabulous grape varietal, so RPA needs more than either great technology or great strategic direction. It needs both. Business should be the driver, but IT can make the technology work in a specific environment. Business makes the decision and IT makes it happen.

Joint business and IT involvement is vital. Together, they know what intelligent automation can achieve, and they can see what the enterprise needs to do to prepare for its implementation and take full advantage of it.

Coming to our senses

It's not only your finance and accounting (F&A) function that stands to benefit from these developments. Sales and marketing, HR, production and IT operations will all see positive outcomes if the groundwork for intelligent automation has been done. The quality of work improves, efficiency increases and your user experience also improves – not just for the enterprise, but for your customers and other stakeholders alike.

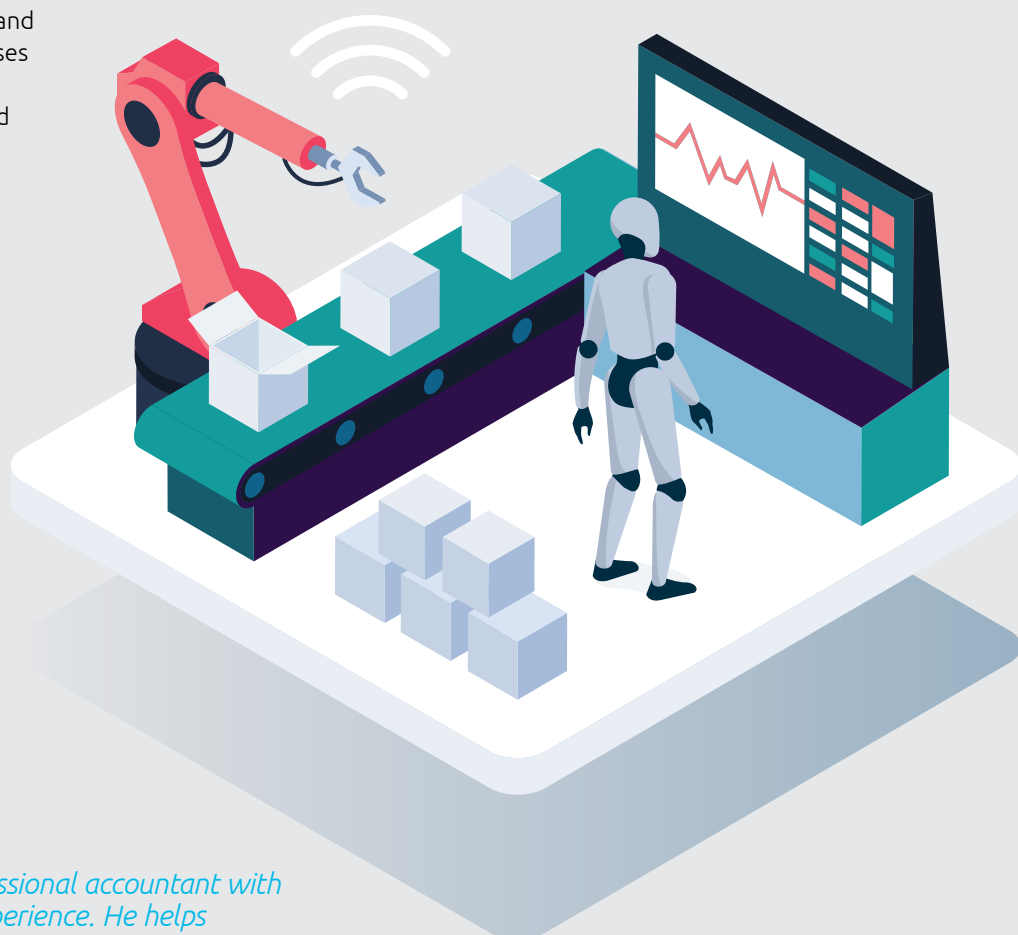


Sales and marketing, HR, production and IT operations will all see positive outcomes if the groundwork for intelligent automation has been done.”

At Capgemini, we've characterized the business roles that intelligent automation can play as a combination of senses, similar to the five human senses. The **"Five Senses of Intelligent Automation"** work together to create automation solutions that deliver a responsive, relevant and intuitive user experience. These attributes are a fusion of smart processes and intelligent automation, and they each have a corresponding human sense: Watch, Listen/Talk, Act, Think, Remember.

We also recognize that not all business processes are ripe for automation, and help our clients identify the processes that, if automated, will be just as ineffective and may even compound

an existing problem. To address this eventuality, we have developed our ESOAR (Eliminate, Standardize, Optimize, Automate, Robotize) methodology – a powerful means to ensure that only those processes that can be effectively automated are automated.



Marty Borcharding is a professional accountant with over 30 years of operations experience. He helps organizations in the Media and Entertainment sector transform their F&A business through leveraging Capgemini's Digital Global Enterprise Model (D-GEM), our offerings and services.



The point about silver bullets – RPA and change management

Adam Bujak

Global Head of the Intelligent Automation Practice, Capgemini's Business Services

The benefits of robotic process automation don't just happen. What's needed is the right kind of plan.

Senior executives like what they hear about robotic process automation (RPA). The results are impressive, the margins attractive, the savings significant. It's a silver bullet.

So they're very keen to see it implemented in their own enterprises, rapidly and at scale. They push for it to be executed in the area of operations most likely to generate a return. Do they involve IT in the implementation? Not necessarily. They're keen to progress, and they tend to think the IT team will be too slow, too fragmented, or tech-oriented, not sufficiently business-driven.

Their middle managers are less keen. They're the ones who will have to make RPA happen. They foresee implementation problems; they think board-level expectations are unrealistic; and they are concerned about resistance from their employees, for whom RPA may seem a threat.

On the face of it, this seems to be a classic case of theory versus practice, of foolhardy optimism versus wise caution. I'd say, though, that there's merit in both viewpoints. Robotic process automation really can deliver significant business benefits – but only if the change it brings about is anticipated and managed.

Planning is everything

What's needed is a plan. It may take a little while, but the days spent surveying the territory and charting a course through it will save a great deal of time and money later on.

This plan needs to be comprehensive, with a target operating model as its starting point. It needs to be developed and taken forward by a team that brings together different skills, perhaps from both inside and outside the organization: for instance, some may have detailed knowledge of current processes, while others can

offer previous experience of RPA implementation and managing a virtual workforce.

A team like this will be able to identify and accommodate the complexity the change program is likely to encounter. For example, an alteration to working practice that previously would have been unremarkable might now debilitate an important bot. And here's another: the lapse by oversight of a software license that might once have caused only a local problem might now disrupt the whole virtual workforce. Identifying all such factors up front will obviate these issues. It's better than finding out the hard way.



Robotic process automation really can deliver significant business benefits – but only if the change it brings about is anticipated and managed.”



If RPA is to be implemented successfully, it needs to be part of a broader change management process, built around a plan developed by a team with insight and experience.”

Strategic, tactical, and human

The plan also needs to address three key areas – the strategic, tactical and human outcomes the enterprise would like to achieve. These areas respectively meet the needs of the senior executives, middle managers and frontline staff involved:

- **Strategic** – what is the digital strategy? What is the broader intelligent automation agenda focusing on process execution, interaction, monitoring, knowledge management, and analysis? What are the business benefits we would most like to achieve? What will its effects be on the organization as a whole? What levels of cost efficiency

and productivity improvements should be our target? And how should the introduction of RPA as part of the intelligent automation drive help us shape our overall business model to make us more competitive and more agile in facing future challenges?

- **Tactical** – shall we automate in stages, task by task, or do it all in one go, across the entire department or function? At what pace should it happen? (Fast execution tends to increase resistance.) How might it affect third parties, and how should we accommodate their needs? How will we measure success? And how might we be able to adjust our implementation once the program has begun, in order to fine-tune our processes?

- **Human** – how can we create a positive climate for the introduction of RPA? For example, how might RPA reduce dull, repetitive workloads and replace them with more fulfilling tasks of greater value? How might it lessen the need for overtime and hence improve work-life balance? And how can we best articulate these messages in an internal comms strategy to support our plan?



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Let your aim be true

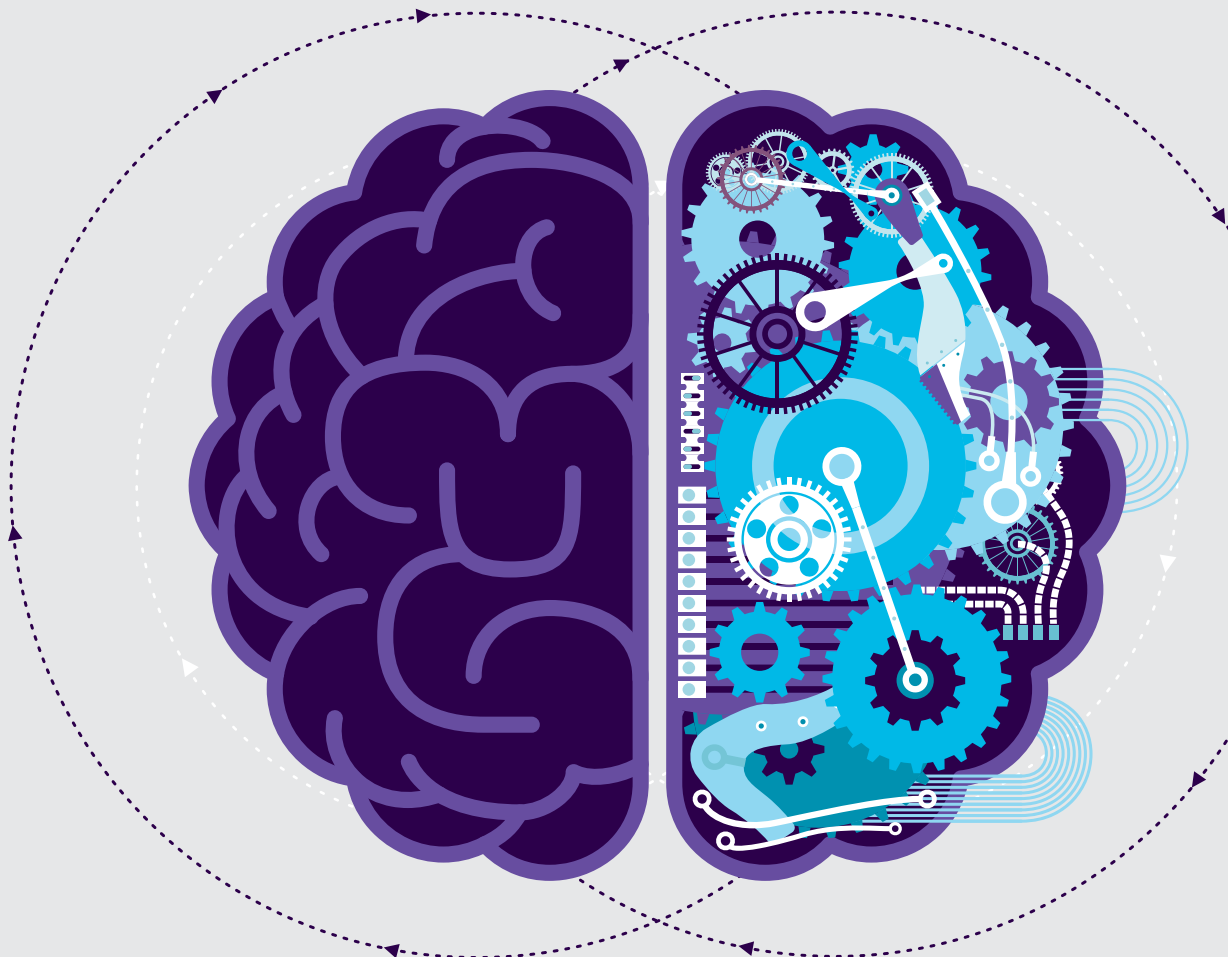
Everything needs a context, and RPA is no exception. If it is to be implemented successfully, it needs to be part of a broader change management process, built around a plan developed by a team with insight and experience.

It's perhaps odd, then, that the "silver bullet" term is often used with no context at all. It's used instead simply as a way of describing a magical instant fix. But extend the analogy, and let's see its real point.

A bullet, silver or otherwise, needs to be fired. Which means the weapon that delivers it needs to be in full working order, and of the right caliber. That bullet also needs to be aimed. Again, silver or otherwise, if it misses its target, it will achieve nothing.

Let your plan be your weapon. Let your aim be true, and your sharpshooters be smart and experienced. And then, perhaps, RPA really will be a silver bullet – not just for senior executives, but for middle managers and employees too.

Dr. Adam Bujak is an expert in strategic management, business process automation and transformation. He heads Capgemini's Business Services' Intelligent Automation Practice, helping multinational clients to optimize operations by deploying RPA, AI, and analytics solutions.





Virtual delivery centers, intelligent automation and ... kindergartens

Tim Ulrich

*Director, Technology Transformation – AI & RPA,
Capgemini's Business Services*

Having a robotic workforce at your command is all well and good, but how do you get it to perform the way you want it to?

I was recently explaining to my mother the job I do everyday at Capgemini and the impact of the automation revolution. After 20 years of repeating “I do something with computers,” I felt I should be slightly more explicit – especially as my mother has always harbored a secret desire for me to follow in her footsteps and become a kindergarten teacher.

Do you want to rule “Robontinent”?

I started by explaining that business leaders have always dreamt of increasing profit margins by getting work done cheaper, quicker, and at better quality. This dream was behind the Industrial Revolution that took place over 200 years ago, but has also been the trigger for the more recent outsourcing and offshoring waves we have seen in the last 25 years.

I went on to ask her what she would do if she became the ruler of a new continent of “robotic workers” willing to work long hours of repetitive work for a really low salary that suddenly appeared in the middle of the ocean –

for argument’s sake, let’s call it “Robontinent.” While declaring that she was no dictator, she did agree that it would be logical to move the monotonous and repetitive work from the existing human workforce to our new robotic colleagues.

I then pointed out the similarities and differences between employees vs. robots in carrying out certain business tasks, including getting work done according to requirements, ensuring transparency, and having strategies for hard-to predict events such as changing work loads due to fluctuating demand/market share. While technically different to address for each scenario, these tasks were quite similar in structure and importance for the company.

Mothers know best

As we discussed in more detail how to instruct a robot to do certain activities, and what the boundaries are (exceptions, unclear/non-existing rules, etc.), my mother appeared to understand the situation quite quickly and said: “So this is like explaining to a four-year old child what to do and then watching closely as the child does it, except the robot really listens to you, doesn’t get creative in performing the task, and doesn’t walk away after a few seconds when something more interesting becomes available!”

Mothers always know best, and this explanation is often closer to the corporate reality than any of us should probably admit!

But now that I had her full attention, I couldn’t resist pointing out a few more complex and challenging business tasks that need to be managed, which I hoped would differentiate my “really important business job” from all the other important jobs in the world – kindergarten teachers, for example:

Business task	Managing a human workforce	Managing a robotic workforce
Manage fluctuating or patterned work demand	Keep staff available for “worst case” high-demand scenarios (expensive) or use external contractors for peaks (possibly inducing additional risks).	Dynamically assign robotic artifacts (workflows) to available robots (which need to be made available on demand, but can be used for other use off peaks).
Allow for work 24/7 across time zones around the globe	Have central workforce work in shifts or use different teams per geography (work needs to be managed and synchronized).	Have existing robotic artifacts run 24/7 without any further impact due to central management and monitoring.
Get new work types completed at short notice	Find, onboard, and train new employees to carry out the new work (might be challenging to achieve this quickly and at scale).	Clearly document requirements and develop and test robotic artifacts on new work types, then move rapidly to production.
Leverage workforce across different clients to make best use of resources	Difficult in usual business model, partially possible in outsourcing model.	Using a secure, multi-tenant environment on multiple layers, some key components can be shared (dependent on client approval).

Although the advantages of a robotic workforce in carrying out these tasks are clearly higher than a human workforce doing it – especially if the use cases/business areas in focus qualify for robotics – in reality, these two delivery options aren't mutually exclusive. A mixed human and robotic workforce is likely to be around for a number of years, although it's not clear how quickly the artificial intelligence (AI) aspect of automation will prove or disprove this prediction.

Living the industrialization dream

I then asked my mother to imagine that she didn't need to acquire, train, manage, organize, and support her "Robontinent" workforce herself, but that someone else (a service provider) with the experience and ability could do this for her based on jointly agreed success criteria. Wouldn't it be a relief to enjoy all the benefits without the having to deal with the nightmare of micro-managing this "robot army"?

And this is exactly what differentiates Capgemini's Virtual Delivery Center approach from organizations' own internal automation projects. In the "Managing a robotic workforce" column of the table are some of the main areas where leveraging a Virtual Delivery Center approach can make a huge difference in contrast to managing robotics in scale internally.

My mother nodded in wise apprehension and beamed at me: "I always thought you didn't want to work in a kindergarten, but this is exactly the service you offer to your clients!"

I hadn't really looked at it like this before, and I wasn't going to try to correct her new vision of my job ... at least, not in the next 20 years!

Tim Ulrich manages intelligent automation and RPA solutions across Europe, helping clients to increase process quality and efficiency, and reduce cost by deploying leading automation technologies.



A mixed human and robotic workforce is likely to be around for a number of years, although it's not clear how quickly the AI aspect of automation will prove or disprove this prediction."



Digital Learning Operations

Personalized learning that drives value across your business

With automation making reskilling and the war for talent front and center to business success, organizations recognize the need for intelligent, focused, and flexible training and re-training that maintain a workforce in sync with new business paradigms.

Capgemini's Digital Learning Operations offers a comprehensive learning suite of small, quick-to-activate learning platforms and integrated service management that puts your individual employee at the center of your learning operations to deliver extraordinary value to your business, including:

- **Increased efficiency of learning operations**
- **Reduced costs**
- **Improved employee satisfaction**
- **Enhanced employer brand reputation**
- **A more competitive workforce**



For more information, visit us at:

[https://www.capgemini.com/
service/business-services/
retain-and-engage-employees/
digital-learning-operations/](https://www.capgemini.com/service/business-services/retain-and-engage-employees/digital-learning-operations/)





RPA deployment will fail without a strong operating model

Fabrice Perrier

*Intelligent Automation Director,
Capgemini Invent*

Best practices in the successful deployment of robotization programs

Following initial experimentation, organizations that wish to scale with RPA technology need to define and set up a robust and industrial operating model for the end-to-end journey from identification of processes and delivery of robots, to the management of a live bot portfolio to ensure both stability and sustainable benefits.

The fundamentals of the RPA operating model

In simple terms, the RPA operating model is an organization's "blueprint" which often revolves around setting up a center of excellence, and which consists of five dimensions:



The framework presenting the five dimensions of an operating model ... are a good starting point to define the foundations of your RPA model."

While there are many challenges that need to be defined and addressed when implementing an effective operating model, the main questions are as follows:

- Will the robots be developed and managed by a central team or a decentralized organization?
- What are the main roles and responsibilities in an RPA organization (business analyst, developer, robot controller, etc.)?
- Will RPA teams for development and maintenance be positioned as close as possible to the business or to the IT department?
- What are the different phases of an RPA project and the steps of go/no go?

- How is the demand management process organized to prioritize the portfolio of opportunities and define the roadmap?
- How best to manage communication and change management when putting robots into production?

An uncontrolled RPA operating model inevitably leads to inefficient and unstable robots

Companies that haven't defined their operating model quickly face challenges in the management and maintenance of robots in production. Although the RPA development phase often works well, organizations sometimes realize that RPA is not necessarily the best solution to apply or that a particular process should have been optimized before being robotized.

The operating model needs to establish clear eligibility criteria for RPA, implement qualification

processes to identify potential prerequisites, and validate the relevance of using RPA from an architectural point of view to avoid such situations.

Maintenance of robots can also become a challenge when the code of each robot is not based on shared development standards, but depends on the habits of each developer.

The key to lasting success

Robot management is like running a shared service center. The definition of roles and methodologies across the RPA lifecycle is essential to steer activities and coordinate stakeholders from business to transversal functions – such as risk, compliance, and security – and to IT teams. An adapted operating model also guarantees the stability of the robots by anticipating maintenance needs related to, in particular, the evolution of an



Companies that haven't defined their operating model quickly face challenges in the management and maintenance of robots in production."

organization's legacy systems. RPA operations should also establish indicators to measure the benefits, and the actual costs of robots. These parameters must be appreciated from the upstream phases of opportunity qualification and shared with the business lines. Indicators must also be set up for the live phase of robots to enable their monitoring and supervision, including tracking of volumes handled by robots vs. exceptions managed by humans, and processing times, etc.

Where to start?

The operating model design is strongly linked to an organization's ambition in terms of process automation. The complexity of the organization – number of entities, homogeneity of their business model, geographical coverage – and the degree of centralization in the IT organization, are also key factors to take into account.

The framework presenting the five dimensions of an operating model and the questions above are a good starting point to define the foundations of your RPA model.

Fabrice Perrier focuses on the impact of intelligent automation in banking and insurance. He supports clients in positioning and deploying such transformations, leveraging the potential of robotics and AI as well as more traditional levers, and ensures conditions for sustainable results by engaging business and IT in new and industrialized operating models.

Thank you to Adrien Vignes, Senior Manager, Capgemini Invent, for his input to this article.

“

In simple terms, the RPA operating model is an organization's 'blueprint' which often revolves around setting up a center of excellence.”



Pushing the limits of RPA with AI

Fabrice Perrier

*Intelligent Automation Director,
Capgemini Invent*

Artificial intelligence (AI) can provide answers to the limits of robotic process automation (RPA) technologies and help reach higher levels of automation.

Robots are here to stay, and are now firmly entrenched in organizations. However, once an organization has leveraged RPA bots to reduce the manual and repetitive workload of multiple functions and processes, limits usually appear when they try to deploy RPA more widely across the organization.

AI at the service of process automation

The first constraint of RPA concerns the data format for feeding a robot. Robots can't directly handle heterogeneous input or unstructured formats (scanned documents, etc.). This usually leads to exclusion of certain processes from the automation field, and users must be tasked to manually reprocess the input data in order to feed the robot with structured data. This is not an ideal set up as it maintains low-value tasks for human employees.

The other common limit is the "cognitive" tasks that exist in many processes and which cannot be automated with RPA technology. These are tasks where the rules can't be modeled and where experience of operational staff is required. Examples include interpretation of a request expressed in a mail, judgment on its priority, and decision-making on the continuation to give to a particular case.

RPA and AI – the possibilities of cognitive automation

To break the wall of complexity and automate cognitive tasks, it is necessary to mobilize AI technologies. Solutions available on the market provide ready-to-use AI services, such as optical character recognition (to transform a scanned printed document into a text document), transformation of voice in text ("speech to text"), and sentiment analysis, etc.

These solutions can be helpful for many processes, but are not always sufficient and sometimes need to be combined with more advanced solutions. For example, when the input documents of a process are of various natures and formats, it makes sense to apply machine learning solutions. Such solutions can automatically learn from examples given by users, drastically improving the time to market of automation compared to the classic development approach where all rules need to be coded.

AI hence offers new possibilities for automation by pushing the limits of RPA, delegating even more tasks to

the machine, and generating greater gains. The RPA solution landscape is evolving quickly either to better integrate with third-party AI solutions, or to directly embed these new capabilities. Organizations need to embrace this new opportunity in order to upscale their automation ambition and program by leveraging the potential of AI.

***Fabrice Perrier** focuses on the impact of intelligent automation in banking and insurance. He supports clients in positioning and deploying such transformations, leveraging the potential of robotics and AI as well as more traditional levers, and ensures conditions for sustainable results by engaging business and IT in new and industrialized operating models.*

Thank you to Alexis Jarroir, Artificial Intelligent Expert, Capgemini Invent, for his input to this article.



AI offers new possibilities for automation by pushing the limits of RPA, delegating even more tasks to the machine, and generating greater gains."



Just what the doctor ordered – artificial intelligence and medical diagnosis compared

Andrew Anderson

CEO, Celaton

A parallel between the way you would diagnose and cure a medical ailment and the complexities of automation and AI.

When I talk to organizations about artificial intelligence (AI), they often assume it can solve all of their problems – a bit like going to the doctor when you're sick and asking for medicine to make you better. But with so much "noise" being generated about AI it's understandable that organizations have such misconceptions and are unclear about what problems can be solved and with which solutions.

When you're starting to look for AI solutions for your business, it is first important to identify the business problem or pain-point you would like to solve. You may also wish to ask yourself:

- How are you going to use the AI solution to improve your processes, innovate and grow?
- How will you integrate the solution with your workforce, processes and IT architecture?
- What data sets will you use for a proof of concept or machine learning?

- What staff training can you initiate to enhance and adapt skill sets?
- What are the risks to your business and customers?

So to take our doctor analogy further, we could draw a parallel between the way you would go about diagnosing and curing a medical ailment and the different forms and complexities of automation and AI.

In medicine	In technology
If you have a headache, sore throat or if you cut your finger, you can self-administer a tablet or sticking plaster from your first aid kit.	If you want to automate some of the tasks on your computer, you can create macros, templates and rules using the tools available on your computer.
If you're suffering from an ailment or sickness you can't self-administer medicine for, you can go to your family doctor or physician, who should be able to prescribe specific medicine providing your ailment is not too serious.	If you want to automate simple processes such as manipulating applications or handling structured data, the tools on your computer won't be up to the job and you'll need a robotic process automation (RPA) solution from an outsourcing provider.
If your ailment is beyond the capability of your family doctor or physician, he or she will refer you to a consultant doctor that specializes in your particular complaint.	If your challenge is more complex or unstructured, then you'll need AI and machine learning specifically designed to solve the particular problems within your organization

When you're starting to look for AI solutions for your business, it is first important to identify the business problem or pain-point you would like to solve. You may also wish to ask yourself:

- How are you going to use the AI solution to improve your processes, innovate and grow?
- How will you integrate the solution with your workforce, processes and IT architecture?

- What data sets will you use for a proof of concept or machine learning?
- What staff training can you initiate to enhance and adapt skill sets?
- What are the risks to your business and customers?

The reality is that AI is not a single all-purpose capability, but a collection of specialist AIs, each designed to carry

out an individual task really well. At Celaton, we refer to them as "skills," and they're designed to deal with specific tasks such as enquiries, claims, invoices and complaints. There are a dozen different AIs involved in each of these tasks alone.



When you're starting to look for AI solutions for your business, it is first important to identify the business problem or pain-point you would like to solve."

Below is a guide to some of the most common AI “skills” and their application:

- **Machine learning** – most AIs encompass machine learning to some degree, whether it is a taught data set model or a self-learning model. Machine learning makes technology truly artificially intelligent.
- **Natural language processing (NLP)** – Natural Language is particularly relevant to technologies that need to process and make sense of incoming human generated language, such as social media, emails and live chat.
- **Cognitive analytics** – AI is applied to extract meaning and insights from data, present it to the user and make future predictions based on trends.

- **Image recognition** – largely used by machine-based visual tasks through creating meta-tags and recognizing images. This is a mixture of offline and live data.

Celaton’s inSTREAM™ platform utilizes all of the above skills to process the plethora of content and information that flows into organizations every day from customers, suppliers and employees, across channels including email, social media, fax, post paper and other electronic data streams. inSTREAM™ learns from historical data that organizations have already processed (often called training data), but has the unique ability to continuously learn through the natural consequence of processing and monitoring the actions and decisions of people who are involved in the process.

Andrew Anderson is CEO of Celaton and considered a pioneer in the commercial application of intelligent automation, artificial intelligence, and machine learning. An international speaker, he has over 25 years experience building software companies and is recognised as one of a few of the worlds automation CEO’s shaping the future of operations.

“

The reality is that AI is not a single all-purpose capability, but a collection of specialist AIs, each designed to carry out an individual task really well.”



Keeping knowledge out of the landfill

Heather Richards

CEO, Transversal

A well-deployed and up-to-date knowledgebase can provide return on investment far in excess of its setup costs.

A knowledgebase works in a similar way to our own memories, surfacing information when recall is needed. However, a knowledgebase is more reliable than human memory – every piece of knowledge can be looked up and verified, enabling customer service agents to avoid depending on their own memories. With the knowledgebase as an extension of their own memories, agents train faster, answer questions more confidently and consistently, and are able to free up time for higher-value activities.

But what determines whether a knowledgebase becomes a valuable corporate memory or a neglected landfill? On the surface, there's no difference between a "corporate memory" and a

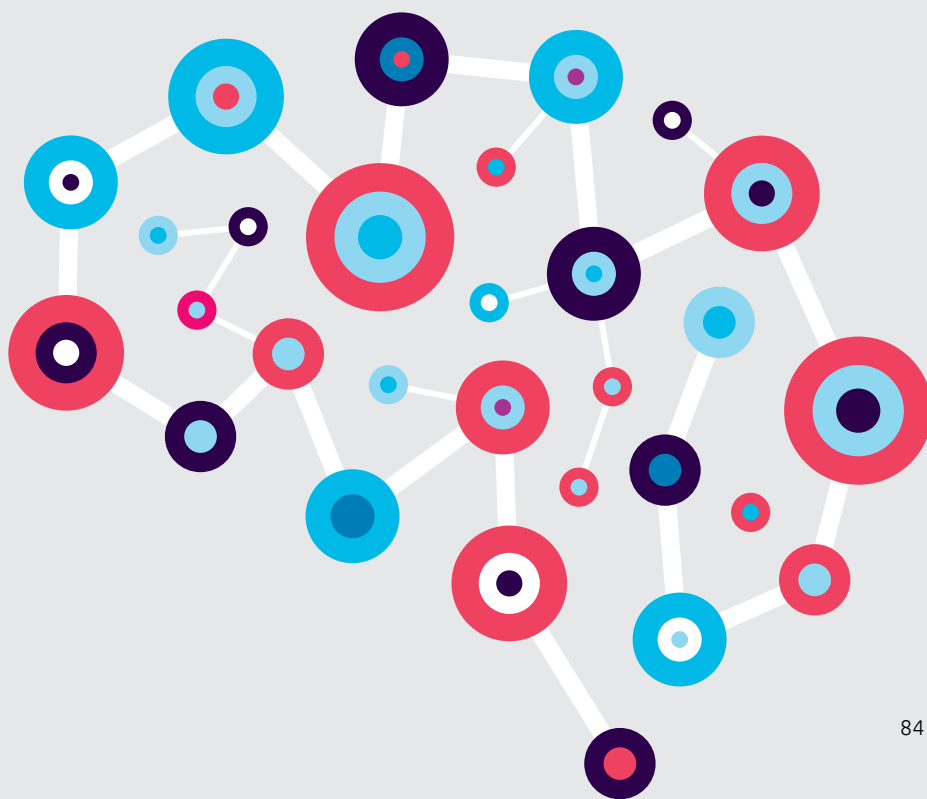
"corporate landfill." Both are collections of organizational knowledge – the first, an automated, self-service knowledgebase that provides information users need, when they need it, in an intuitive way. While in the second, content is entered and then left to decay.

Memory vs. landfill

The difference between them lies in how they are used, the technology enabling this use, and the organizational culture in which they exist. "Corporate memory" is actively supported at all levels of the organization and is used in real situations by real people whose needs shape it and keep it relevant. "Corporate landfill", on the other hand, is never fully

integrated into the organization's culture or business processes, which means that people never get into the habit of consulting and maintaining it. It remains a silo of knowledge, rarely consulted or maintained, and gradually becomes outdated.

A well-functioning corporate memory not only achieves return on investment (ROI), but can also deliver additional profit. More than just a repository of information, corporate memory can be part of an overall project of business transformation in which information of all kinds is digitized, centralized, and simplified. Such projects can have significant financial benefit through increasing efficiency and enabling staff to respond more nimbly to opportunities. They also give non-material benefits such as increasing CSAT and net promoter scores.



Powering the corporate memory

So how do we ensure our knowledgebase becomes an extension of our memory, not an extension of our waste bin? There are three main principles to consider:

- **Planning** – buying great knowledge automation software and creating content isn't enough for success. Success requires clear goals and the active participation of end users. This means strategizing how to maintain the knowledgebase, how to foster adoption among staff, and how to publicize it to users. It also means planning KPIs by which progress and performance will be measured.

- **Knowledge-centered culture** – a corporate memory requires a shift in corporate culture that is supported at all levels of the organization. The knowledgebase needs to become the single source of truth for customers, agents, and internal staff across every touchpoint. This means actively encouraging use and gradually retiring legacy repositories of information. Regular use in real situations encourages knowledgebase content to remain fresh and relevant, which becomes a self-perpetuating cycle of improvement. Over time, users develop new habits and the knowledgebase becomes their first port of call.
- **Regular review** – to stay relevant, a knowledgebase must be reviewed and updated. If the knowledgebase fails to change in response to users' feedback, if it fails to cover new issues or remove obsolete information, then it becomes stagnant. Content gets more and more outdated and users sense the neglect. To prevent stagnation:

- o Ensure users' feedback is taken into consideration and doesn't pile up unread.
- o Schedule time for reading through content and checking for errors.
- o Keep on top of issues that pop up on social media, making sure there's content to cover them.
- o Check external links still work.
- o Remove obsolete content or articles that are never read.
- o Regularly monitor statistics of knowledgebase traffic, which provide irreplaceable insight into what users are asking and how far your content meets their needs.
- o Automate as much of the knowledge cycle as possible to save time, increase user adoption, and increase overall the ROI.



A well-functioning corporate memory not only achieves return on investment, but can also deliver additional profit.”

Zero-waste knowledge

Like many objects sent to real landfill, your knowledgebase is a valuable resource that should be used to its full potential. Well-deployed and kept continually up to date, it can provide return on investment far in excess of its setup costs. Neglected, however, it becomes just another silo, a repository of stale content that allows management to tick a box but doesn't play any real part in the life of the organization.

The time and creativity that go into a knowledgebase deserve better. Make your knowledgebase a living resource and it will stay out of landfill for a long, long time.

Heather Richards has over 20 years' experience in the IT industry, having worked in both the US and UK. As part of Transversal's original team, she has been with the company for more than a decade, and has been instrumental in the company's growth from a Cambridge technology start-up into the successful business it is today.



The time and creativity that go into a knowledgebase deserve better. Make your knowledgebase a living resource and it will stay out of landfill for a long, long time."

A large, vibrant green abstract shape, resembling a stylized leaf or a modern logo element, is positioned on the left side of a light gray background. The shape has a smooth, curved edge that tapers towards the bottom right. The word "Methodology" is written in a bold, white, sans-serif font, centered within the green area.

Methodology



The Five Senses of Intelligent Automation

There's nothing new about automation. It started during the Industrial Revolution, of course. But what is indeed new is intelligent automation – harnessing digital technology to replicate cognitive processes, adapt to new circumstances and intuit appropriate responses. It's a development that's set to change the way the world works.

Global enterprises already have IT platforms, and few organizations are unaware of the benefits AI can bring. But taking advantage of it isn't simply a question of layering it on top of existing infrastructure or a current business process. AI is not an add-on. Like human intelligence, it's a combination of senses, experiences, and knowledge.

It's essential to recognize that harnessing AI's potential involves not just thinking about technology toolkits, but the processes to which it is applied as well, along with the human purposes you are aiming to serve. Properly implemented, AI should play a core role in the functioning of your organization.



AI spans a wide range of cognitive technologies to enable situational reasoning, planning and, learning, aping the natural intelligence that humans and other animal species possess.”²

IDG Connect Ltd.



I think for every job that is lost, there will be many more jobs that are gained. The role of AI is not to replace humans, it is to augment humans. It is about helping us do what we do better.”¹

Rob High
CTO of IBM Watson

¹ “Turning AI into concrete value: The successful implementers’ toolkit,” Digital Transformation Institute, Capgemini Consulting, September 7, 2017

² “Turning AI into concrete value: The successful implementers’ toolkit,” Digital Transformation Institute, Capgemini Consulting, September 7, 2017

Bridging humanity and AI to completely transform your business

We view AI as a combination of senses – and it's paramount that you seek out an automation provider who understands this and how it applies to your operations.

The “Five Senses of Intelligent Automation” combine to create a solution that’s similar to our perception of human intelligence.

The five senses – Watch, Listen/Talk, Act, Think, Remember

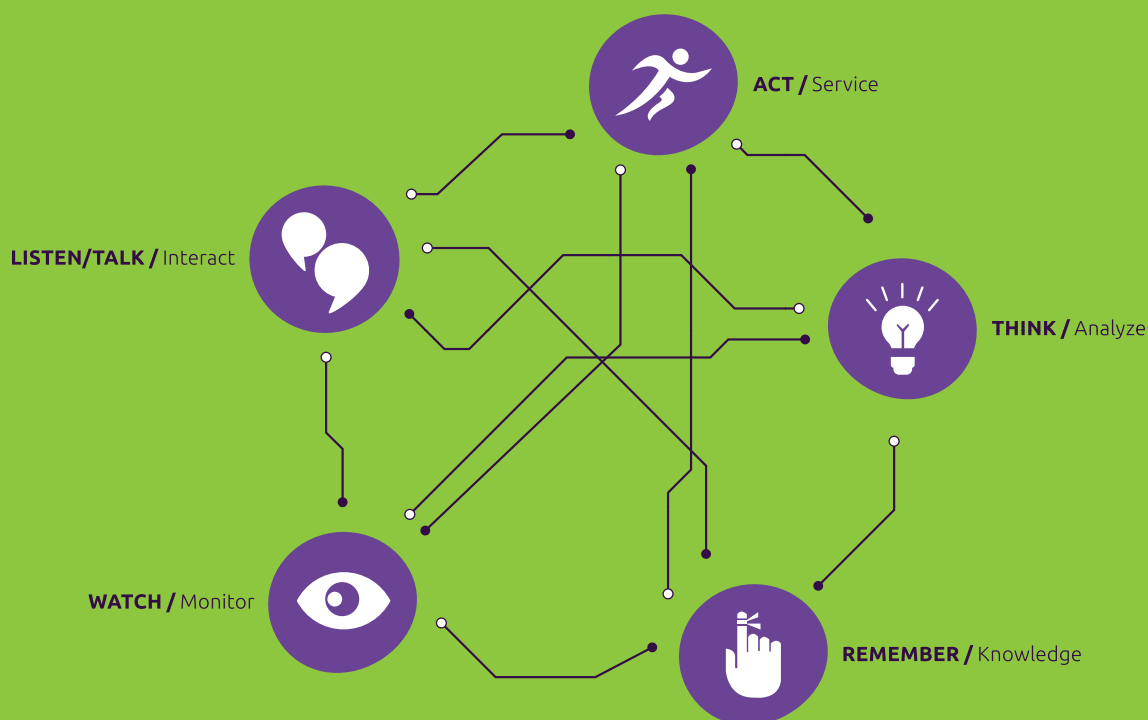
The “Five Senses of Intelligent Automation” work together to form automation solutions that deliver responsive, relevant, and intuitive user experiences. These attributes are a fusion of smart processes and intelligent automation, and they each have a corresponding human sense.



There are human issues that have nothing to do with the capabilities of the technology and everything to do with the culture of the organization and the quality of its leadership.”³

Professor Michael Schrage
MIT Sloan

FIVE SENSES OF INTELLIGENT AUTOMATION



3 “Turning AI into concrete value: The successful implementers’ toolkit,” Digital Transformation Institute, Capgemini Consulting, September 7, 2017



More than 1 in 2 organizations (59%) agree that AI is supporting customer intimacy. And AI initiatives have helped more than 6 in 10 organizations increase customer satisfaction and reduce churn.”⁴

Digital Transformation Institute,
Capgemini Consulting



AI-powered mobile visual search tools are helping consumers quickly take a picture of something they want to buy and suggest similar items.”⁵

Digital Transformation
Institute, Capgemini
Consulting

Watch – Monitor

Technology has been used to keep track of and record data for some time, so people can watch over it and take appropriate action.

But what’s new is the extent to which monitoring can now happen, and the manner in which data is captured. Standard metering and telemetry are being joined by CCTV, IoT sensors, and other forms of digital data capture. Organizations can assess the health of

their IT systems, customer experiences and expectations, market trends, and more.

What’s also new about monitoring is the application of AI. Self-healing routines are being built into processes to automate remediation, and AI techniques will make them completely self-adjustable and self-manageable.

Before, monitoring captured data – now, it generates knowledge.

Watch

What we can do now

- Self-healing elements employing RPA tools
- Human intervention in 25–40% of cases for remediation purposes

Where it’s heading

- Pre-emptive monitoring and full self-healing employing predictive analytics, Deep Learning, and image and video analysis
- Human intervention in managing configurations, monitoring performance, and supporting continuous learning

4 TechRadar™: Artificial Intelligence Technologies And Solutions, Q1 2017,” Forrester Research Inc., April 18, 2017

5 TechRadar™: Artificial Intelligence Technologies And Solutions, Q1 2017,” Forrester Research Inc., April 18, 2017



At Swedbank, a leading Nordic-Baltic banking group, Nina, a virtual assistant, managed to resolve 78% of the queries put to her at the first attempt. The bot sees an average of 30,000 conversations per month and she answers eight out of every ten customer questions.”⁶

Digital Transformation
Institute, Capgemini
Consulting

Listen/Talk – Interact

Interactivity is the most human-like part of AI, because it’s the area in which technology engages with people most—listening to them, reading what they say, and responding – either aloud or in writing. Chatbots and voicebots are common examples replacing staff-run service desks, or managed-service call centers. It’s technology that needs to feel natural. It’s integral to customer experience, so it needs to keep people happy.

Currently, technology focuses principally on the way people communicate with machines. As the table below shows, we’re moving towards the reverse scenario – the use of natural language generation (NLG) to enable a machine to converse with people. For instance, technology could convert data into forms people can understand. It can interpret and present information and even summarize it to assist people with decision-making.

Listen/Talk

What we can do now

- Voicebot/chatbot service desk using natural language processing (NLP), intelligent character recognition (ICR) and rule-based responses
- Human intervention in 20%–25% of cases for exception handling

Where it’s heading

- Intelligent Virtual Agents with human empathy, employing Deep Learning-based knowledge, NLG, biometrics, image and video analysis
- Human intervention in managing configurations, monitoring performance and supporting continuous learning



Image recognition and facial scanning mimic humans’ sense of sight, while speech recognition mimics humans’ sense of hearing.”⁷

Forrester Research

6 “Turning AI into concrete value: The successful implementers’ toolkit,” Digital Transformation Institute, Capgemini Consulting, September 7, 2017

7 TechRadar™: Artificial Intelligence Technologies And Solutions, Q1 2017,” Forrester Research Inc., April 18, 2017



Act – Service

If the other four senses described in this document are about processing information in various ways and engaging with people, this one is more dynamic. It's about using technology to complete processes and tasks.

Even though these robots aren't physical – you don't see them spray – painting car bodies on assembly lines – they are no less useful and no less tailored to the tasks they perform.

Common current examples of robotic process automation (RPA) include resetting a password, placing a customer order, or processing a supplier invoice. In the future, RPA will be extended by AI: Deep Learning algorithms will learn from historical data and decide appropriate processes and approaches to take in the delivery of services.

Act

What we can do now

- Rule-based RPA with service management tools for tracking
- Human intervention for exceptions handling (typically at levels of 20–30% and script management)

Where it's heading

- Fully-automated service delivery employing NLP, NLG, Deep Learning, biometrics, image and video analysis, and semantic technologies
- Human intervention in managing configurations, monitoring performance, and supporting continuous Deep Learning

Weaving in AI and intelligent automation to transform your business

What conclusions should we draw here?

First, of course, that AI is set to enhance and transform the way major enterprises and their employees manage their processes and serve their customers – and second, that AI reaches its fullest potential when it's approached with equal intelligence.

AI and intelligent automation need to be woven into your organization, not bolted onto it. This means taking time before any implementation to understand the exact needs of your business, the efficacy of your processes, the extent of your current technology, and the capabilities of your workforce.



Organizations are now convinced of the benefits that AI can bring. They are now asking themselves where and how they should invest.”⁸

Gordon Schembri
Principal Digital
Technology,
GE Oil & Gas

⁸ Ibid.



[AI] involves self-learning systems that use data mining, pattern recognition, and natural language processing to mimic the way the human brain works, without continuous manual intervention.”⁹

HfS Research Ltd.

Think – Analyze

Just as human minds apply thought to knowledge, AI detects patterns, recognizes trends, and applies algorithms to information to determine appropriate actions or predict future consequences.

What’s more, AI can do this at scale. Deep Neural Networks (DNNs) can perceive patterns humans would miss because the data sets within which

they’re operating are simply too large for any one mind to accommodate.

For example, in the next two years, most major businesses will redefine their processes and products to deliver enhanced customer experiences with AI-based technologies. These will have derived courses of action from vast data sets of customer interaction.

Think

What we can do now

- Language libraries and other tools are used to analyze market trends, service levels, and customer expectations
- Human intervention in the interpretation of statistical results

Where it’s heading

- Real-time machine learning using Deep Learning-based analytics, pattern recognition, and predictive analytics
- Human intervention in managing configurations, monitoring performance and supporting continuous Deep Learning, pattern recognition, and predictive analytics

Remember – Knowledge

Information only becomes knowledge when we can remember it and when it’s relevant in answering a question, which is why data storage and retrieval are so important. Managing this knowledge typically involves the use of a central repository.

AI turns knowledge management on its head. Instead of being driven by the data and systems in which it resides, AI is driven by the needs of the business and the value it brings in shaping future direction.

Knowledge is power – and AI can help to release it.

Remember

What we can do now

- Knowledge database using text analytics and NLP for quick retrieval
- Human intervention consists of database maintenance and exceptions handling

Where it’s heading

- AI-based knowledge platform employing Deep Learning techniques, text analytics and NLP, advanced analytics, and knowledge extraction algorithms
- Human intervention in managing configurations, monitoring performance, and supporting continuous improvements in intelligence and speed of retrieval

9 “The 2017 AI-Powered OneOffice Premier League Table,” HfS Research Ltd., August, 2017



Change one thing. Change everything.

Carole Murphy

Global Head of the Finance Powered by
Intelligent Automation Practice,
Capgemini's Business Services

Introducing the Digital Global Enterprise Model©

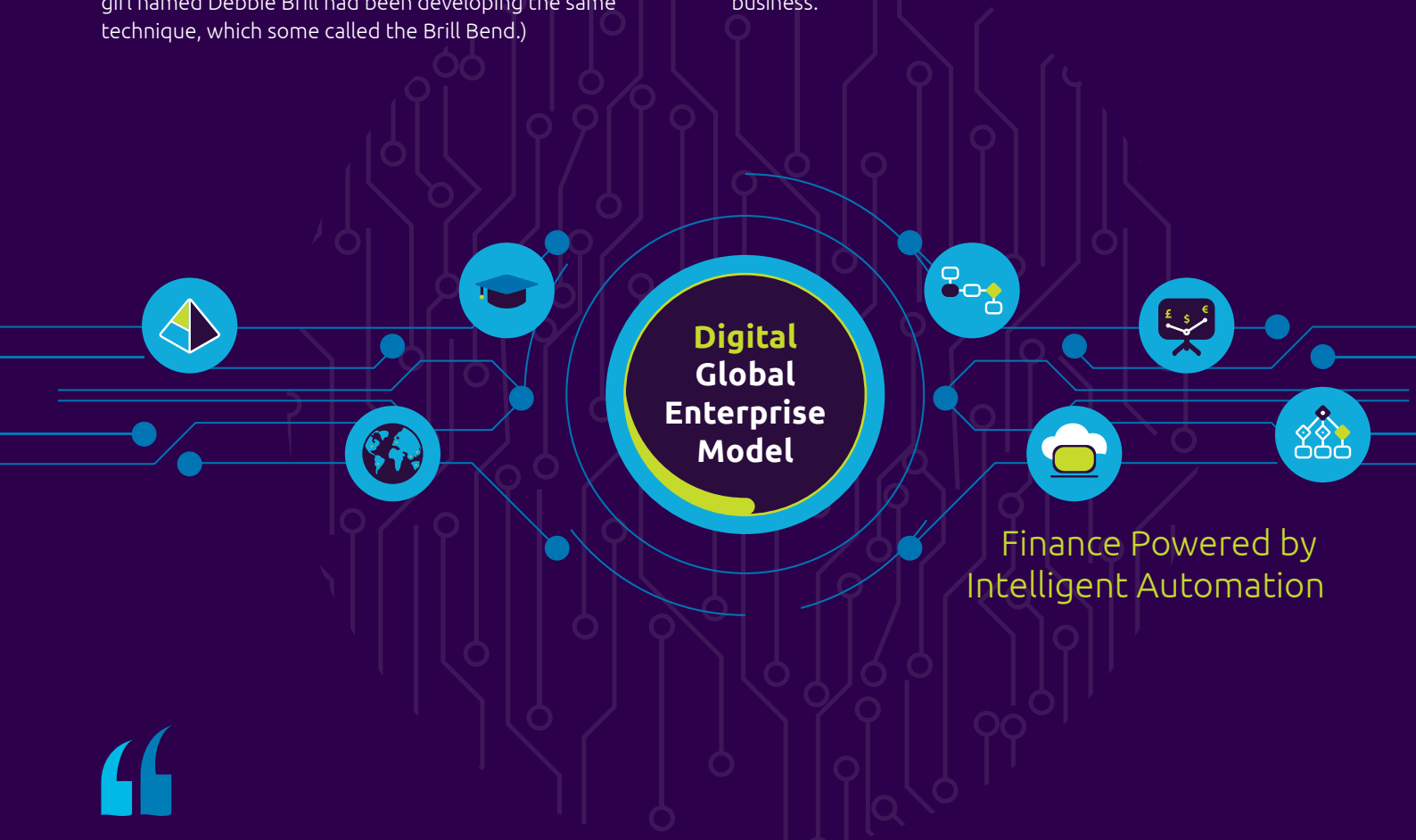
When the Olympic Games took place in 1968, the world record for the men's high jump hadn't been beaten in five years. Back then, the standard approach to the jump was the straddle method, which involved jumping over the bar face down, lifting each leg over individually.

Everything changed at those Games in Mexico City. A young American named Dick Fosbury surprised everyone by curling backwards over the bar, flipping both feet over together behind him. (Fosbury didn't know it, but a young Canadian girl named Debbie Brill had been developing the same technique, which some called the Brill Bend.)

Fosbury won gold. His method went mainstream, and less than three years later, the world record was broken using what by then was being called the Fosbury Flop. It's since risen a further 17cm.

The point?

A small change in one place can sometimes become a big change everywhere – you can reimagine how you do things. Over the next few pages, you'll see how that's true in business.



“

Capgemini's Digital Global Enterprise Model© is a simple, complete transformation platform. It brings together our deep understanding of technology and automation, our experience of running worldwide operations, and the finance insights we have gained from delivering services to leading global brands.”



D-GEM is a flexible model that can be adapted to the needs of individual enterprises, whatever their sector, whatever their scale. It takes full advantage of the evolution of automation and analytics to transform every factor and function.”

That was then...

In its early days, business process outsourcing (BPO) was primarily focused on labor arbitrage. It worked on a straightforward “lift & shift” basis, without much emphasis on delivering value – operations were transferred en bloc to the services provider and run under contract against the parameters of a service level agreement (SLA). There was some scope for process improvement, but not much – the focus was mainly on quantifying the operation and on offsetting responsibility for it, replacing some people with others in another location.

It has now become a recognized mechanism for delivering transformation, and Capgemini’s Global Enterprise Model® (GEM) was the first stage in that evolution.

Capgemini’s aim has been not just to shift processes, but to rethink them – end-to-end, across geographies and business units, using levers of transformation and seeing how they might work together. GEM was our template to deliver this – it’s been a highly successful approach, achieving significant improvements in productivity and ROI.

But the world is moving on, and so has our model.

... this is now

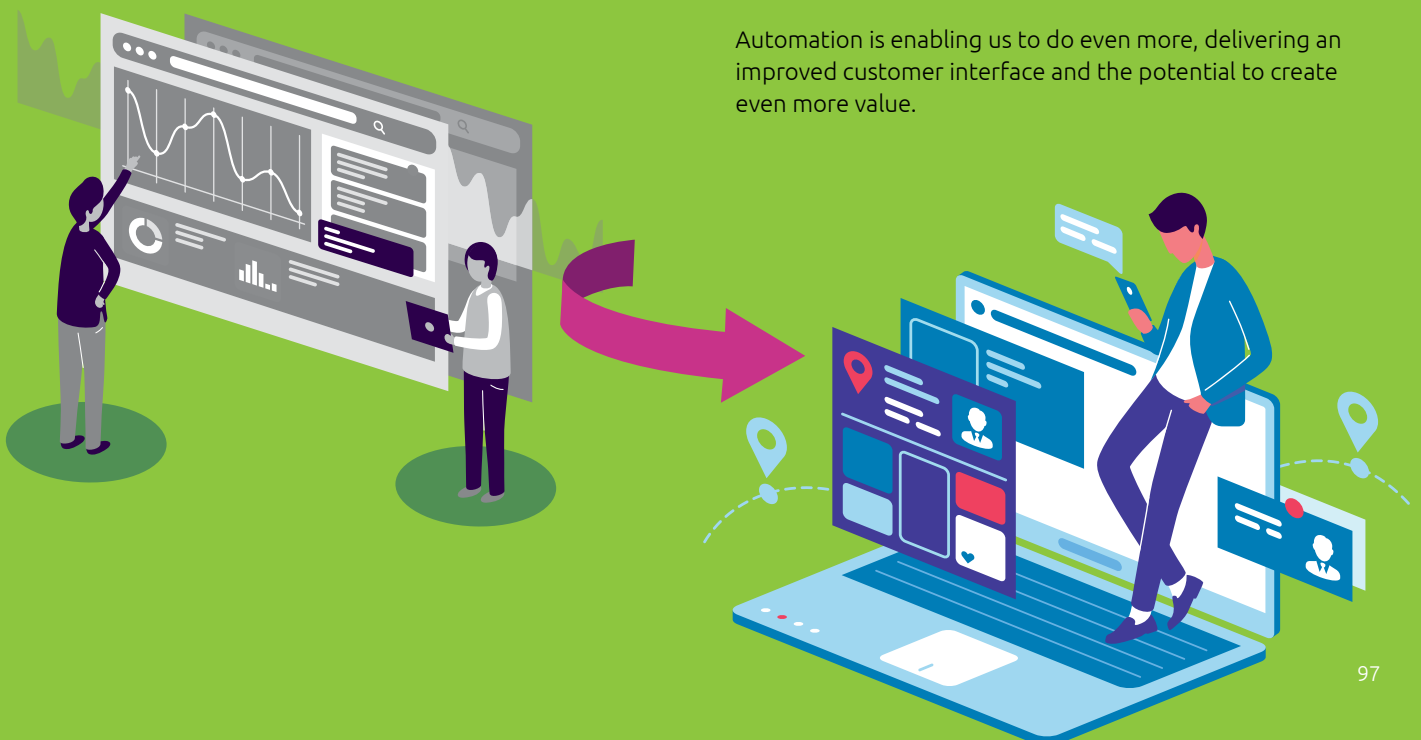
To help our clients keep up and even get ahead in the digital age, we have reimagined our model to transform the future of finance.

The Digital Global Enterprise Model®, or D-GEM, is a flexible, platform-based architecture. It provides a complete overview of an organization’s people, processes, technology, and governance with control points, accelerating the transition to transformed, future-proof processes.

With D-GEM, the traditional technology business lever within GEM has been extended to incorporate automation tools and enablers. This is not just one addition, one difference. The technologies we leverage have gone through a real revolution in the last three years, the way we connect processes and people have changed – they collectively form a bigger part of the story.

D-GEM brings together 400 F&A process flows with supporting narratives and approximately 1,000 transformation recommendations, enabled by 60 tools across three F&A towers (P2P, C2C, and R2A) and 3,500 robots.

Automation is enabling us to do even more, delivering an improved customer interface and the potential to create even more value.



Seven levers – supercharged by automation



Grade mix

Achieving the right team structure to perform, extend and supervise activities

Optimizing people's performance will always be important, but automation can dramatically alter both the scope and the outcome of what they do, thereby influencing the grade mix.

We see three automating forces that can ultimately create an upward trajectory of performance:

- The performance and replication of tasks.
- Augmentation of managers' ability to supervise, giving them a broader span of control. They can use technology to supervise the accuracy of people's work.
- The redistribution of knowledge of complex tasks to less experienced people at the bottom of the organizational hierarchy. By making this knowledge more accessible, lower grades can gain new skills faster than never before.

Give people better tools, such as Transversal, and give them early, and you'll increase not only their value, but their sense of value. It's good for their careers.

Location mix

Optimizing the virtual configuration of the Global Delivery Network to deliver services

Every organization needs to make best use of its strengths. Traditionally, these may have resided in particular places – this location has language skills, this one has accounting expertise, this one holds deep regional business knowledge, and so on.

Technology brings virtual concepts into the mix, and blurs the boundaries. Just as servers and storage can operate as single entities even when they reside on physically distinct machines, so automation enables the creation of virtual delivery centers (VDC), defined by need and function rather than merely by location.

At Capgemini, we have created virtual delivery models such as these to manage the automated workforce. This means that knowledge, ideas, and expertise – which until now had resided in just one geography – can now be brought into the cloud and can more easily be shared and applied as best practice throughout the organization.

We believe that upwards of 40% of traditional activities can be automated and conducted in the VDC. At Capgemini, the location of the future is the virtual data center.

Competencies

Achieving the right mix of skills and capabilities with insight and automation

Integral to Capgemini's Global Enterprise Model© was the principle that organizations and individuals improve their performance by learning, whether through experience or via formal training initiatives. This lever addresses competencies at all levels. The advent of increased automation means that people now need to develop greater technological literacy and use this technology to extend their capacity to solve problems.

The lack of such knowledge can be a barrier to progress. Indeed, a study that Capgemini published earlier this year, "Reimagining finance for the digital age," reported that organizations at all levels of automation experience mentioned a lack of relevant skills internally, at levels of 30% and 27% respectively.

With the insight that automation brings, managers can better understand their team's training needs and act to plug gaps. This demand-driven knowledge approach not only means that they can identify and address these needs, but they can also ensure people are learning effectively. What's more, they can identify people who are particularly keen on learning, and begin to map career paths accordingly.

As well as changing how people acquire competencies, automation also changes the nature of the competency itself. The many different roles within an organization all stand to evolve as automation's benefits are brought to the business. They all can grow and extend their role-specific achievements – and because they are interdependent, they can all enhance one another.

Automation carries within it the potential to fulfil the performance improvement principle and transform grades throughout the enterprise. It transforms our thinking about competency – instead of being about how you're doing your job, it's about how quickly you can learn to do your job. It can help to close the competency gap by changing how we manage knowledge in the organization. That's why, as part

of Capgemini's Automation Drive, we created an Automation Academy and Automation Library that empowers managers to learn about what automation can do, and make it work for them.

Best-in-class processes

Aiming to move beyond lean processing into high performance and consistent value

The aim of Capgemini's ESOAR methodology (Eliminate, Standardize, Optimize, Automate, Robotize) has always been to re-engineer processes to drive best practice and optimize business value.

D-GEM increases the scope for ESOAR's application, so organizations can reap further benefits from their investment. Whereas before, organizations could aspire to best possible process performance, now they can look further afield, extending process discipline to deliver at scale and in new ways.

For instance, how can we refocus the resources we've liberated and apply them to entirely new areas? Let's say financial recording is now running sweetly and is less demanding, does that mean we can now add value by enhancing reporting processes with the time and budget we're saving?



Technology

Establishing an automation-first approach to deliver productivity gains of up to 40–60%

Automation represents an evolution not just of the technology lever. It makes a transformative difference to the performance of all the others. It is the means by which the “Five Senses of Intelligent Automation” can be realized (see “How to make a change – and unlock value”).

Automation uses best of breed technologies to create platforms rather than a single ERP. We map its technologies to the human senses to help us reimagine how each of these technologies can change the way we work. These technologies have within them sophisticated AI techniques that enable the bot to work intelligently. When all these senses are connected to knowledge and are integrated, a fully artificially intelligent platform can be achieved.

D-GEM is informed by our Group Automation Drive, and matches all the relevant technologies to where they can make best make a difference to an organization and its processes. In short, D-GEM can help the CFO get a head start in setting out on the automation-led transformation journey.

Automation is set to be the Fosbury Flop or the Brill Bend of the enterprise – changing one thing can change everything.

Pricing

Steering the ability of pricing to drive behavior and effect transformation

It’s long been the case that pricing can shape business models. For example, low-budget airlines have changed customers’ expectations about the levels of service they receive and the size of bags they can carry.

In cases such as these, pricing imposes uniformity of behavior. But in the digital world, there’s more flexibility. Automation enables the creation of individualized consumption-based or experience-based pricing models, akin to digital consumer services such as Netflix. You buy what you need, when you need it – and you still expect a positive customer experience. These expectations needn’t be compromised by price.

Automation enables us to calibrate services better. It can not only improve outcomes, but the very business model that

gives rise to them. For example, an enterprise that regularly buys in certain products or processes can choose to standardize around its best available options, and to run the procurement process that oversees these purchases on an “as-a-service” basis. But there will always be exceptions – occasions when the default volume option is not applicable – and the pricing model needs to be sufficiently flexible to accommodate such instances. Automation can make it easier to identify and handle such exceptions.

With D-GEM, pricing is increasingly driven by value and less by cost alone.

Governance

Driving transformation, aligning accountability and expectations, and demonstrating delivery

Traditionally, service reporting was binary. It consisted of answering yes or no to the question of whether expectations had been met. Capgemini’s GEM extended the scope. It aimed to ensure that organizations could be certain they were achieving efficiency, effectiveness, control and value.

D-GEM takes this a stage further still. It reflects on adoption and customer perception of the service, and also looks to leverage Big Data analytics to understand where more value can be created for the enterprise.

Technology can provide a much richer expectation of what transformation can deliver, and how it can be measured and tracked.

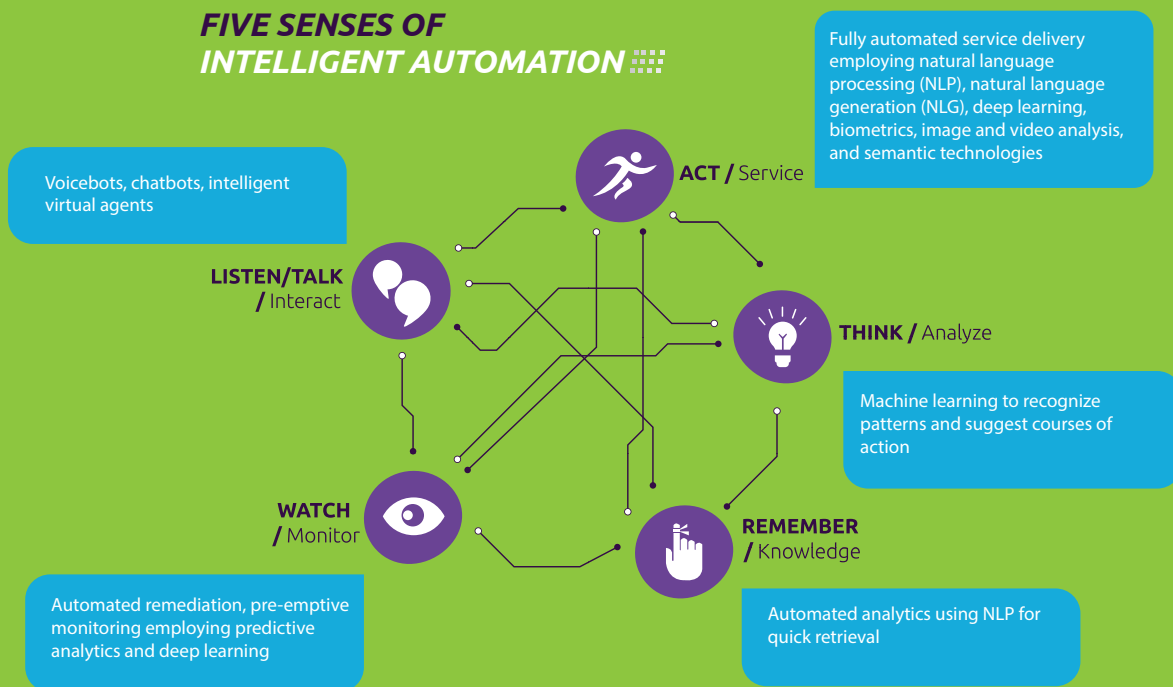
Once again, D-GEM’s ability to automate increases value and creates new opportunities.



How to make a change – and unlock value

Reimagine the future with the “Five Senses of Intelligent Automation”

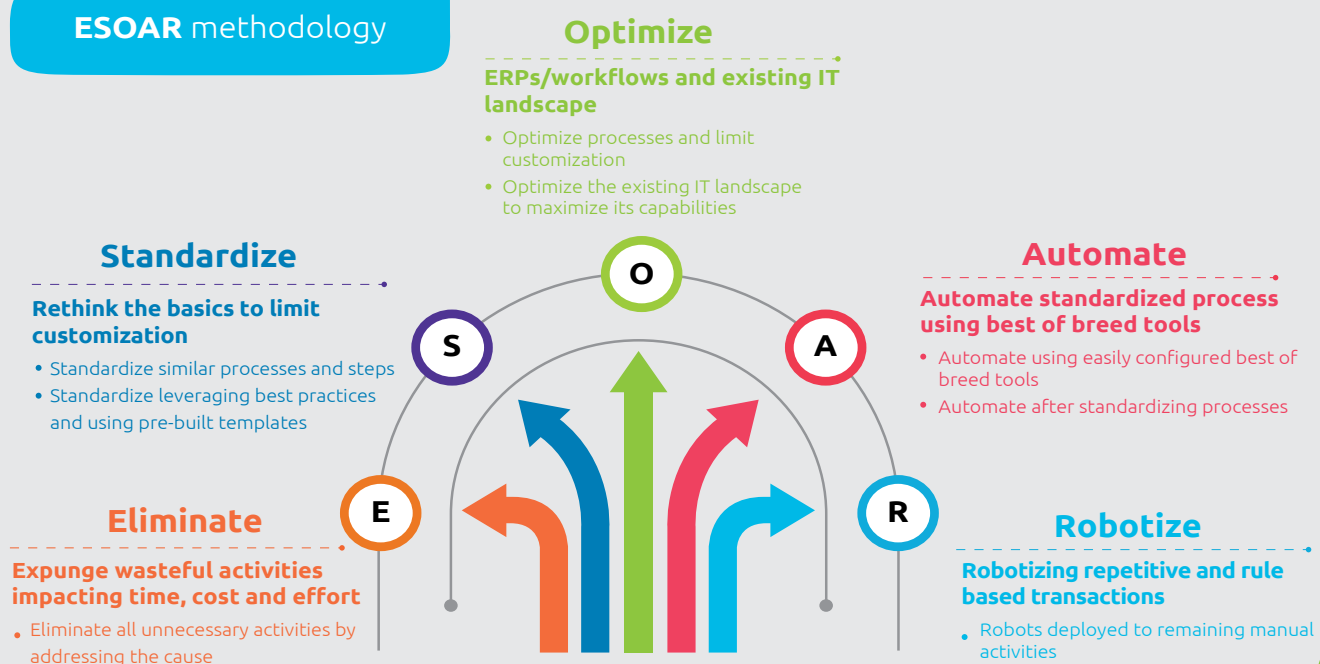
FIVE SENSES OF INTELLIGENT AUTOMATION



Re-engineer processes using ESOAR methodology

Capgemini's ESOAR methodology assesses and addresses the gap between intelligent automation and an organization's current situations, re-engineering processes to drive best practice and business value

ESOAR methodology



Employ the Digital Global Enterprise Model®

Review and harness the impact of automation on processes, places, people, and operations



Tangible improvements

D-GEM can deliver:

- Productivity gains of up to 40–60% upfront, depending on speed of adoption.
- Paperless core business processes that connect silos and enable the processing of multiple inputs at reduced cost.
- Straight-through processing and touchless business administration with continuous access to reliable data and information.
- Alignment of business processes for better outcomes and improved visibility of corporate performance.
- Automated libraries to easily gather, store, and use knowledge to determine what happened last time and what the best next actions should be.

Taking stock

This paper opened with Dick Fosbury and Debbie Brill. When they each started trying something new, neither of them could have known they'd be changing their sport for decades to come.

Similarly, the change that automation represents can have profound effects not just on the development of technology in an organization, but on every other business driver. A single change of approach can have consequences that extend far beyond immediate circumstances. Processes, places, people, and operations can be transformed. Efficiencies can be achieved, both locally and at scale. Insights can be gained, enterprise-wide, and used to shape strategy. Value can be created and increased, to levels that even in recent years may have been hard to imagine.

Traditionally back-office finance systems were expensive and clunky. Reconfiguring them was hard, entailing a huge rollout.

The Digital Global Enterprise Model® changes all this. In the past, major changes were imposed – they were done to people. Now, the automation integral to D-GEM means that change is something that is done both with us and for us. Its aim is no less than a metamorphosis of the businesses to which it is applied, in a digital world facing a fast-changing future.

D-GEM. Change the way you look at one thing. Change everything.

Carole Murphy leads Capgemini's Finance Powered by Intelligent Automation Practice, and is responsible for developing and delivering transformational solutions for our clients. Drawing on over 20 years of experience across operations, consulting, and transformation, Carole helps large global organizations achieve their business objectives and operational excellence through BPO-led transformation and alignment of Capgemini's Business Services and Group assets to deliver efficiency, value, and improved control in their operations.



Moving with the digital times

Greg Bateup

*Head of Solutions and Transformation –
Procurement, Capgemini's Business Services*

Enterprises need a new business transformation model – and it just arrived...

The dome Brunelleschi designed for the cathedral in Florence was and is a miracle of the Italian Renaissance. It spans 44 meters, and it was built without scaffolding. It's ingenious, it's beautiful, and it was built to last. However, if the great architect were to return to us today, I'd bet he'd do things differently. Now, as then, he'd make best use of current tools, techniques, and circumstances.

A similar evolution has taken place in business transformation and outsourcing. At Capgemini, we replaced the "lift & shift" of traditional business process outsourcing (BPO) some years ago with our Global Enterprise Model© (GEM) – a mature, comprehensive model that transforms processes end-to-end across geographies and business units, ensuring the right teams and technologies are available to support these processes and their interactions with each other.

GEM has been a highly successful model, achieving significant improvements in productivity and ROI – but the world is moving on, and to help our clients keep up and even get ahead in the digital age, we have re-architected our model to put automation at its heart.

Introducing D-GEM

The Digital Global Enterprise Model©, or D-GEM, is a business architecture that puts automation first, providing flexibility to adapt to the changing digital landscape. It incorporates a complete overview of an organization's processes with control points, accelerating the transition to transformed, future-proof processes.

The D-GEM levers – grade mix, location, workforce and management competencies, processes, pricing and cost allocations, and the governance model – are addressed in the context

of the optimal automation strategy for their management and execution. It's not just about choosing the best tools, but how they are best implemented, whether they should be owned outright or bought on an as-a-service basis, and how they can be future-proofed.

But before any of these issues can be considered, an even bigger question needs to be asked: in the digital world, what is the ideal shape and character this enterprise should take, and what role will automation play in its achievement?

Answering the big question

This question marks the biggest difference that D-GEM represents. Until recently, business transformation has been achieved via incremental step-changes; but now, we're looking at a brand new, holistic model that defines a single, major enterprise-wide change from the bottom up. Why? Largely, it's because the rate of acceleration has changed. Developments in robotic process automation (RPA), artificial intelligence (AI), blockchain, and other technologies are moving too fast for an incremental transition. It's far better to create a universal, digital model that can accommodate evolution and not be thrown off course by it.

There's no denying that the prospect of embarking on a single, massive, enterprise-wide transformation is a daunting one. D-GEM enables a pace of transformation that fits with an organization's business priorities, resource constraints, and its ability to manage change. We're confident that organizations will want to organize themselves for this transformation when they understand quite how much they stand to gain. We're not only looking at significant

productivity gains up-front, depending on the speed of adoption, but driving business value through improved working capital, better customer experience, and increased revenue. We're looking at aligning business processes for better outcomes and better visibility of corporate performance; we're looking at straight-through processing and touchless business administration with continuous access to reliable data and information; and automated libraries that easily gather, store, and use knowledge, so organizations can determine what happened last time and what their best next actions are.

Best-practice strategies

D-GEM has not just emerged from GEM, but from other best-practice strategies for which we are known and respected:

- Our "Five Senses of Intelligent Automation" approach to technology helps us see our clients' technology investments differently.
- Our ESOAR methodology (Eliminate, Standardize, Optimize, Automate, Robotize) to assess and address the gap between intelligent automation and our clients' current situations, re-engineering processes to drive best practice and business value. We're very proud of D-GEM.

Like Brunelleschi's Dome, it's smart, and it's built to last – but we'll leave it to you to decide whether it's beautiful too.

***Greg Bateup** has worked with clients to deliver business transformation and BPO services for almost 30 years. For the last few years, Greg has focused on the digital transformation of the source-to-pay function, and how organizations can not only drive efficiencies in the procurement function, but also drive compliance and savings.*



D-GEM – the whole, and the sum of the parts

Emilia Kukurowska

*Senior Finance Transformation Consultant,
Capgemini's Business Services*

The Digital Global Enterprise Model© represents an evolution of our existing practice, incorporating technology-rich operations powered by intelligent automation that enable our clients to be competitive in a rapidly changing, digital business context.

There are a lot of great cars out there. Let me give you a little of the spec for a modern classic.

This one's an open-top coupé with a V12 740HP engine. It has a control system that manages each of its dynamic axles (it's 4WD, by the way, and it has four-wheel steering, too). It has a seven-speed gearbox, a top speed of 217mph, and it can accelerate from nothing to over 60mph in three seconds.

The importance of cohesion

Now, all these individual details are impressive. But what's really important is not any one of these things, but how they all work together. It's about the synergy of systems. It's about the performance, yes, but also about the look, and the feel, and about how everything contributes to your overall sense of satisfaction.

In short, it's about the whole being greater than the sum of the parts.

Our new digital, platform-based architecture is a prime case in point. Capgemini's Digital Global Enterprise Model© (D-GEM) represents an evolution of our existing practice, incorporating technology-rich operations powered by intelligent automation that enable our clients to

be competitive in a rapidly changing, digital business context. Much of the focus has of course been on that first word, digital, and in particular on the difference automation tools can make. But I'd argue that, transformative though they are, those are just part of the mix – the dynamic control system, maybe. They need to be embedded into subroutines, processes, and operations throughout the organization. They need, too, to be reviewed and validated in the context of people and their skillsets. Only then will the best possible overall impact be achieved.

The “Five Senses of Intelligent Automation”

The same is true of the constituent elements of intelligent automation. At Capgemini, we identify them within D-GEM as five senses, in terms of the principal functions they perform: interacting (talk/listen); monitoring (watch); providing a service (act); analyzing (think); and knowledge (remember).

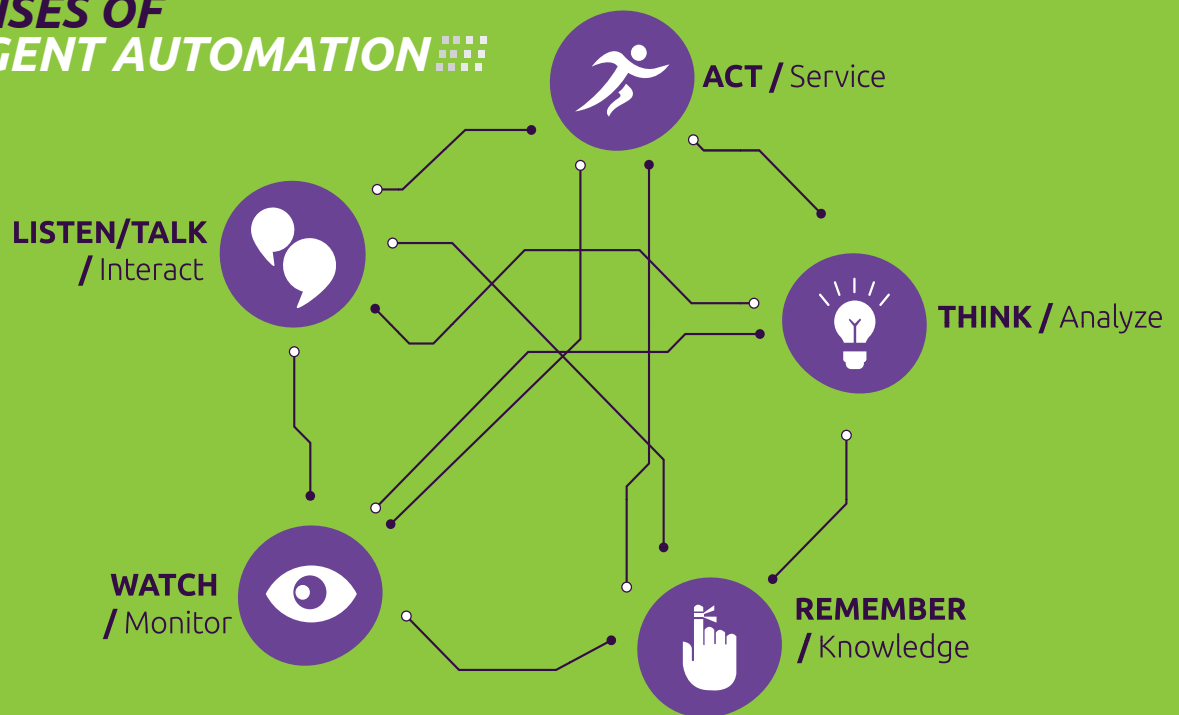
Just as people don't fulfil their best potential unless they engage in all these activities, so the full benefits of intelligent automation are felt only

when, first, all these functions take place; and second, when these senses share information with one another and pool their current status.

We use this approach to help ourselves and our clients understand how technology help see the world of finance differently, mapping activities to the components of the **“Five Senses of Intelligent Automation.”** Some of the technologies and tools we employ can address several of these “sense areas,” and others can address all five of them. Some of them are proprietary, while others are third party. They all reside in Capgemini's App Hub and Automation Drive Store, and can easily be accessed to address individual client organizations and their use cases.

Information and experience can deliver improvements in individual areas – but when those improvements aren't isolated, and communicate across sense areas, they can build positive sequences right through the overall process.

FIVE SENSES OF INTELLIGENT AUTOMATION



ESOAR

Similarly, **ESOAR (Eliminate, Standardize, Optimize, Automate and Robotize)** – our methodology for identifying opportunities and re-engineering processes to make improvements to people-based activities – really comes into its own when it maps onto these sense areas in the context of D-GEM. Indeed, D-GEM includes a repository of over a 1,000 ready-to-use ESOAR improvement opportunities.

The adoption of ESOAR enables organizations to redirect resources from repetitive tasks towards higher-value business activity. Its different elements are handy tools within the broader framework of D-GEM.

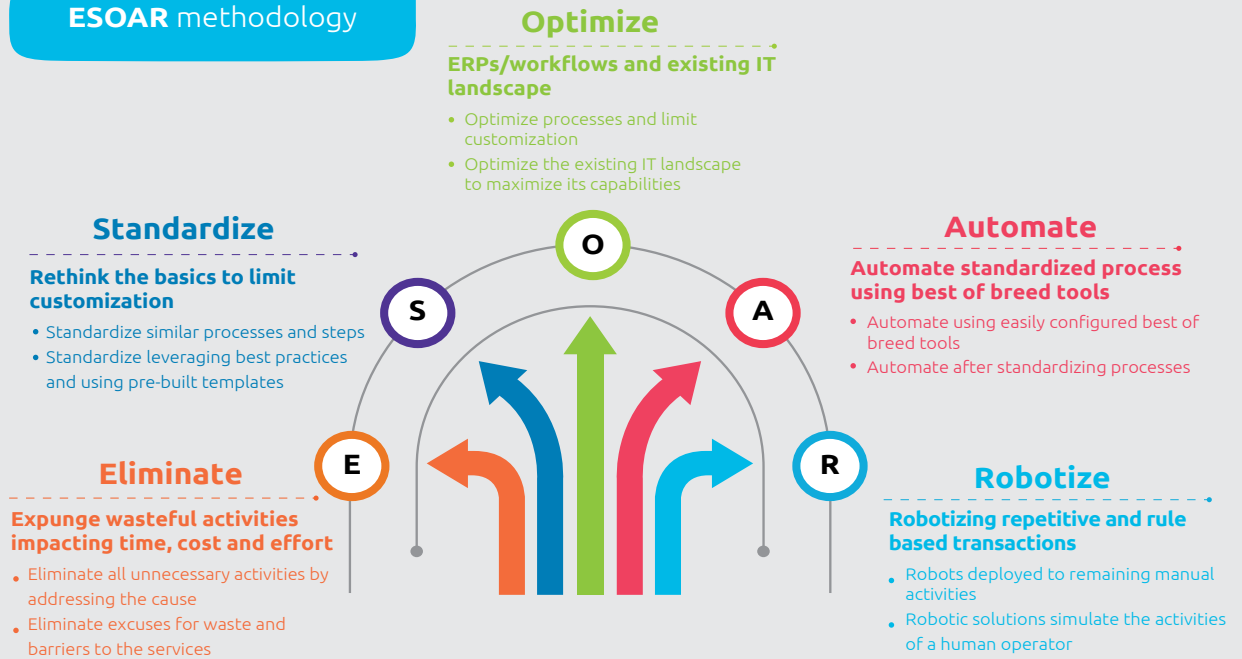
For example, the “Five Sense of Intelligent Automation” and ESOAR can reimagine and re-engineer record-to-analyze (R2A) processes to deliver diverse benefits, including a proactive

review of closing activities using RPA; preventive controls in upstream processes at source; the monitoring of bottlenecks and exceptions; and the ability to communicate between end-users and automation tools/RPA via interaction bots to act on ad-hoc queries, retrieving data, and resolving issues flagged by RPA.



The adoption of ESOAR enables organizations to redirect resources from repetitive tasks towards higher-value business activity. Its different elements are handy tools within the broader framework of D-GEM.”

ESOAR methodology



Bringing it all together

Everything in D-GEM needs to be considered as a whole. The seven levers of D-GEM – Grade Mix, Location Mix, Competency Model, Global Process Model, Technology, Pricing Model, and Governance – all have an impact on each other. Implementing change to one lever influences how the other six will look like. For example, the application of new technology (lever 5) to an organization's processes (lever 4) has a direct impact on the skills and competencies of its teams (lever 3) and its grade mix (lever one). In this way, D-GEM ensures that our operations teams can provide our clients with actionable analytics and value added activities that meet and exceed their expectations.

In summary, this is about cohesion – cohesion not just in the

interoperability of technologies, but of methodologies and functions, of processes and people. It's about the way the engine, the on-board control systems, the chassis design, the fuel, the engineer, and the driver all work together to meet and overcome any challenge.

And when that happens, the enterprise behind the wheel will be able to plan a route to its business destination and set off smoothly, swiftly and in comfort. It will be able to monitor the dashboard, adjust the controls, or move up a gear, and know that technology-driven solutions will ensure that everything is responding instinctively and with agility. It will, in short, have the most exhilarating ride of its life.

And if you're wondering what car I drive ... it's a red one!

Emilia Kukurowska helps Capgemini's clients execute their transformation agenda, and transform their processes, technology, and organization. Emilia was also instrumental in designing D-GEM.

“

In summary, this is about cohesion – cohesion not just in the interoperability of technologies, but of methodologies and functions, of processes and people.”



ESOAR – the sound of successful automation

Tim Ulrich

*Director, Technology Transformation – AI &
RPA, Capgemini's Business Services*

A unique transformation methodology that addresses the underlying causes of inefficiency in your business operations, before working on the actual symptoms.

With the deluge of information around robotic process automation (RPA) and intelligent automation thrown at us on an almost daily basis by the automation marketing machine, you might be forgiven for thinking that implementing one or a combination of these technologies at all costs is fundamental to successful transformation of your business operations.

As usual, however, the devil is in the details. In this case, it's crucial to identify the most promising areas for automation, before you actually start developing a solution for your organization. Despite the siren song of the automation bandwagon, as it rolls through the corporate boardroom, robotics isn't necessarily the best – and certainly isn't the only – answer to business transformation.

Capgemini's approach to developing an automation solution comes with the easy to remember term ESOAR (Eliminate, Standardize, Optimize, Automate, Robotize). This unique and straightforward transformation methodology addresses the underlying causes of inefficiency in your business operations, before working on the actual symptoms – just like any good doctor would.

Applied in exactly this order for maximum efficiency, the five steps of ESOAR enable an organization to:

- **Eliminate** unnecessary process steps, activities, approvals, reports, etc., that are either simply not required (in the automated world) or the results of which can be better achieved in other ways. It's surprising how many process steps don't resist a persistent "but why?" questioning or follow-up on the actual usage of their results.
- **Standardize** whole processes or at least process steps/clusters across different departments/regions/countries or their IT implementations. Although standardization initiatives have been around since the first large-scale ERP implementations, new possibilities of leveraging automation to implement standardization are reinventing the game.
- **Optimize** the usage of your existing tool landscape, most commonly in the form of not so prominent ERP functions or tools used only in certain "corners" of an enterprise. Our teams are, for example, often able to turn on or configure major, paid-for, functionalities of an ERP system, which bring significant benefits when used properly.
- **Automate** process steps that are typically error-prone or time-consuming with specialized – often small-scale and inexpensive – tools, either off-the-shelf or even custom developed. The term automation can certainly be used in a very broad context and often includes RPA and robotics, but doesn't include GUI-based RPA in this context. It isn't easy to keep up with the increasing market of these often niche problem-solving solutions, but in terms of efficiency gains, it's definitely worth identifying and implementing them.
- **Robotize** the remainder of any repetitive, rules-based, and often high-volume tasks, using either attended (front end) or unattended (back end) RPA, if a clear business case is identified for development and operation. Although other criteria should be taken into consideration, having a proven methodology for qualification and effort estimation – as well as other change management, governance, operation, and support measures – will help ensure positive implementation results.



This unique and straightforward transformation methodology addresses the underlying causes of inefficiency in your business operations, before working on the actual symptoms – just like any good doctor would."



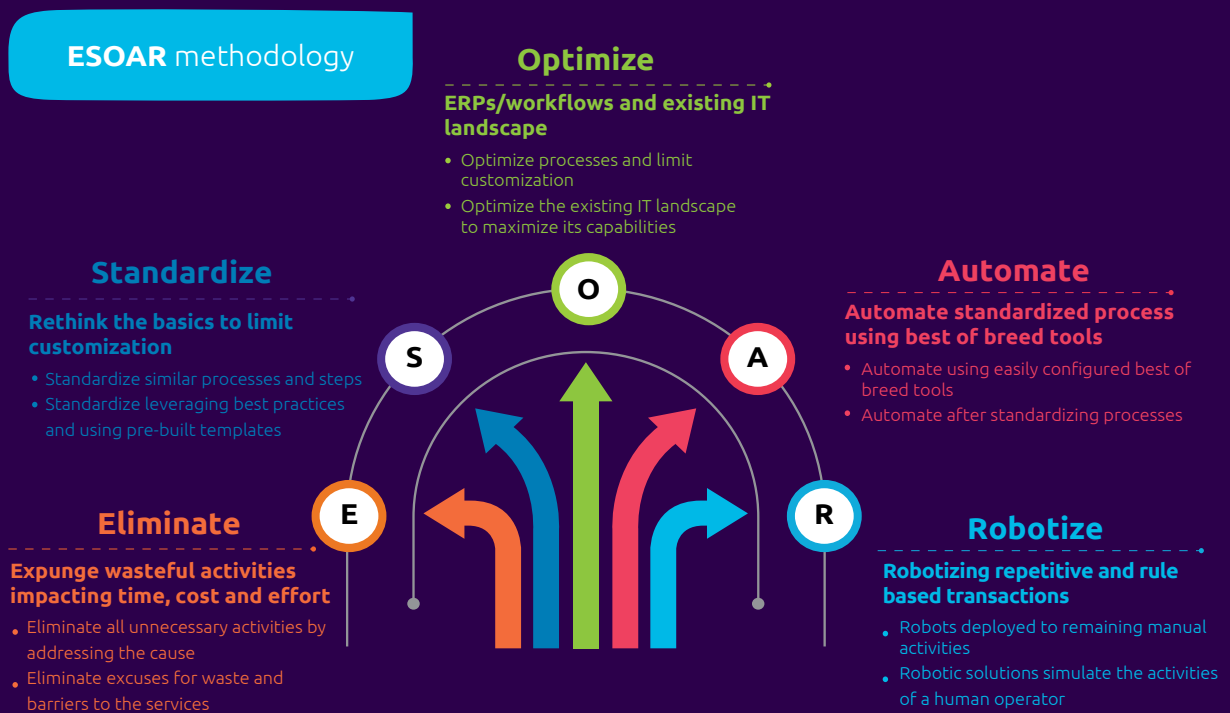
Viewing robotics as one of several options for improvement, rather than in isolation, is the yellow brick road to successful business transformation.”

Viewing robotics as one of several options for improvement, rather than in isolation, is the yellow brick road to successful business transformation. We've proved this at Capgemini through implementing ESOAR assessments, RPA, and intelligent automation for a range of clients across a number of different business cases.

But don't be mistaken by the logic of ESOAR – serious experience of business process implementations, new technologies, and a profound understanding of methodologies such as Six Sigma and Lean Management are drastically increasing the quality of our ESOAR improvement projects. If, however, ESOAR still seems too trivial, the next iteration of the methodology will ensure proper

representation of improvement opportunities through cognitive and AI solutions.

Tim Ulrich manages intelligent automation and RPA solutions across Europe, helping clients to increase process quality and efficiency, and reduce cost by deploying leading automation technologies.



MAC

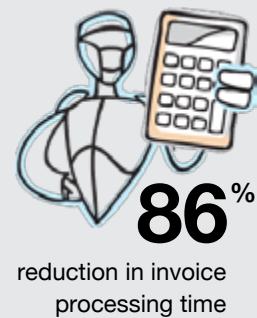
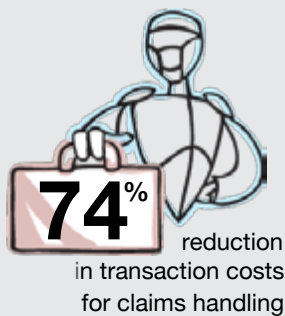
CHINE LEA

RNING ENABLES OR

GANISATIONS LIKE YOURS

TO SEE BETTER

NUMBERS



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Unique to inSTREAM is its ability to learn through the natural consequence of processing and monitoring the actions and decisions of humans in the process. It's machine learning, but to our customers it's the best knowledge worker they ever hired and it means better customer service, better compliance and better financial performance.

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ESOAR and supermarket shopping – an unconventional analogy

Kamila Sicinska

*Senior Director, Business Process
Transformation, Capgemini's Business Services*

Capgemini's unique ESOAR transformation methodology re-engineers your processes performance and business outcomes.

Do you remember the first time you shopped at a supermarket? I do. We'd be waiting for a supermarket to open in our town for years, and I remembering thinking what a luxury it would be to have all the things I needed under one roof.

Very naively, when a supermarket did open, I expected to be in and out within 15 minutes. But the rows and rows of products – aisle after aisle – made me feel dizzy. The choice of pet food alone gave me an unnerving sense of apprehension. I remember walking around for what seemed like hours looking for the most obscure items my husband had sneaked on to the shopping list without me noticing.

Supermarket sweep

In time, however, I learnt to speed up the weekly shop – it became easier and more enjoyable. I started to remember the kinds of products in every aisle, and wrote my shopping list

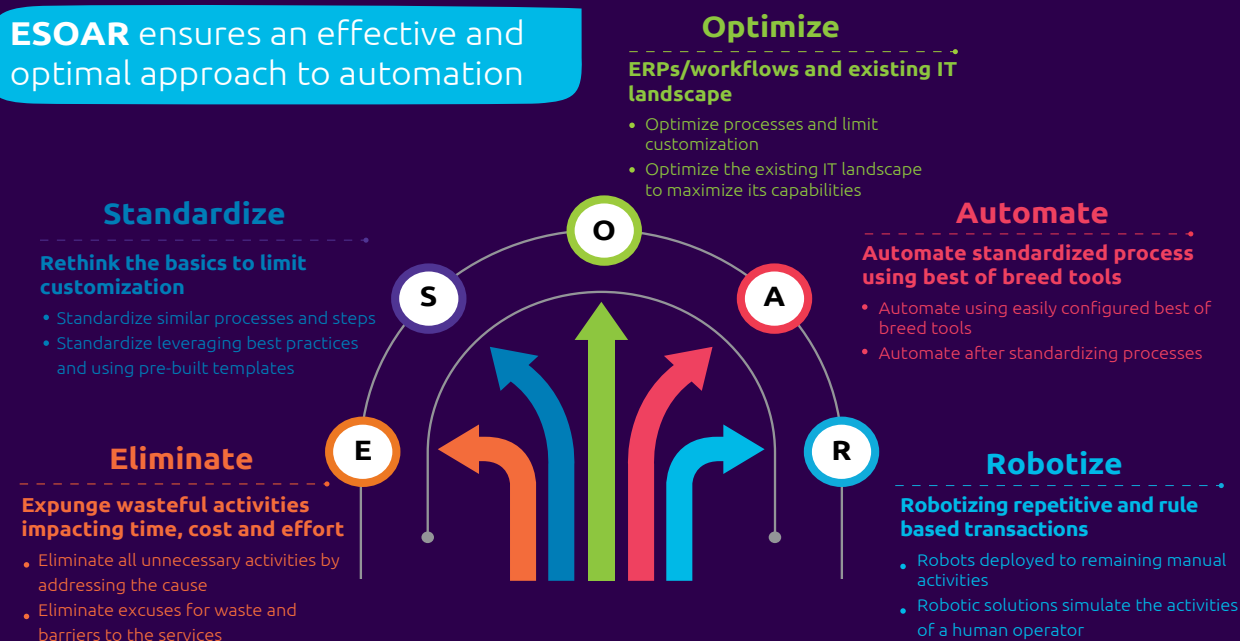
in a logical order specific to the layout of the supermarket. All I had to do was walk round in a certain direction, ending up at the self-service checkout to avoid the queues.

I was able to eliminate actions that didn't add any value to the process, standardize behavior that helped to speed up the process, and optimize the use of my shopping list and the self-service checkout for maximum efficiency. Today, of course, automation and robotics can deliver an efficient and personalized shopping service, without you having to leave the house.

Multinational DIY retailer Kingfisher – which owns B&Q, Castorama, Brico Dépôt, and Screwfix – has taken this one step further by designing an app that allows you to design your own bathroom, helping DIYers to reduce costs and increase chances of successful completion of their bathroom projects. This app has not only given me independence from having to phone up my ex-husband for advice, but also provided professional and technical DIY expertise, without having to make an appointment with a customer service representative.



ESOAR ensures an effective and optimal approach to automation



A unique transformation methodology

ESOAR (Eliminate, Standardize, Optimize, Automate, Robotize) is Capgemini's unique transformation methodology that enhances efficiency and enables the next level of growth through a structured review of process steps. Similar to my supermarket example, it's all about simplicity and adopting best practice:

- **Eliminate** – identifying and getting rid of all unnecessary activities that impact time, cost, and effort. Addressing and eliminating the cause of waste and barriers to services shifts the focus to more value-added activities in your business operations, such as analysis.
- **Standardize** – carrying out similar routine processes in the same repetitive manner by using standard templates to run transactions with less time and effort. Standardization is a way to avoid the cost of ERP customization and drive best practice across your business operations.
- **Optimize** – using all the functions of your existing tools to the maximum effect. Organizations

often have the right tools, but don't know to use them effectively. Optimization is a way to derive the maximum utilization and capabilities from what you already have, including your ERPs, tools, processes, and workflows.

- **Automate** – leveraging easily configured best-of-breed tools to automate standardized manual processes. Automation reduces or eliminates manual work, while delivering increased transparency and control over the process, with extremely high levels of accuracy.
- **Robotize** – deploying robots to drive efficiency in any remaining manual, repetitive, rule-based activities by simulating the activities of a human operator.

A holistic approach to business transformation

By re-engineering your processes in the context of intelligent automation, ESOAR sets the agenda for a holistic approach to transformation of your business operations – enabling you to implement straight-through processing and automated solutions, while delivering the enhanced outcomes to your business users.

Leveraging the five ESOAR steps in the correct order to review your business operations not only identifies opportunities to eliminate processes up front, but gives you the best return on your existing investments in technology and ERP, redirects resources from repetitive tasks towards higher-value business activity, and drives best practice.

Simple logic can deliver the best results.

Kamila Sicinska leads the Polish business process transformation team in helping global players to set up their transformation agenda, and transform their processes, technology, and organization.



By re-engineering your processes in the context of intelligent automation, ESOAR sets the agenda for a holistic approach to transformation of your business operations."



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A journey of a thousand miles begins with a single step

Lee Beardmore

*Vice President and Chief Innovation Officer,
Capgemini Business Services*

Focusing on the little things in a business process transformation journey can make the biggest difference.

Despite the increasing urgency for global businesses to digitalize and standardize operations, many companies are unsure of what the journey entails and are often reticent to buy in to a large-scale transformation. The prospect of a massive change across multiple geographies or business units, without the guarantee of a risk-free transition, can be terrifying.

Small steps on the road to big transformation

No matter whether your organization manufactures structural ceramics or produces Hollywood blockbusters, every business has a set of established practices and beliefs that can either help or hinder the transformation process.

Successful large-scale, global and multi-discipline transformations often rely on getting just one or two things right very early on in the process. In most cases, taking “**small steps**” can help overcome the challenges of a transformation journey. Applying a robust transformation process model to deliver results, even when conditions change, is paramount; and the importance role of human collaboration and communication, well-planned change management and mutual respect in any digital transformation journey shouldn't be underestimated.

At Capgemini, we've spent a lot of time “demystify digital,” and there are two key aspects that enable our teams to work closely with our clients to execute dramatic, digitally-driven business transformations:

- Start with a proven methodology – each transformation journey we carry out for our clients follows a set of steps based on proven frameworks that guide every effort

and decision. These frameworks are adapted and modeled on the specific parameters of each company according to their objectives.

- Leverage a best-in-class digital operating model – using a flexible, platform-based methodology for business transformation and benchmarking can deliver the right operating model for an organization. In turn, this can provide a complete platform to deliver the right outcomes at the right pace, based on the individual needs of our clients' business.

Transformation is a journey, not a single destination

Throughout every transformation journey, we seek to be our clients' guides – they help us set the destination and we help them walk the route. But when we see our customers getting just as excited for the next leg of the journey, it's because they see that digital transformation is not only possible, but also profitable.

However, not every organization is in a place where they can jump into a large-scale global transformation with both feet. It's crucial to roll out a digital transformation methodology incrementally and be able to prove at every stage of the journey that the transformation is going to plan. Once the business case has been verified and a client's trust has been earned, our teams often have a greater opportunity to be involved in future projects at an earlier stage, which can deliver greater value in a more integrated way.

Partnership is a key aspect of a successful transformation. It gives our teams the freedom to think big with regards to transformation and propose

wide-reaching process transformation. It's also important from the outset to align our transformation model with our clients' immediate and longer-term goals. Having an agreed roadmap in place gives us a platform for growth, innovation and continuous improvement. And once a cost or productivity benchmark has been met, the bar is immediately raised.

It's when all these early steps come together – when we get to look back at how far we've come – that the next leg of our journey looks that much easier.

***Lee Beardmore** has spent over two decades advising clients on best strategies for technology adoption. More recently, he has been leading the push in AI and intelligent automation as the CTO for Capgemini's Business Services. Lee is a computer scientist by education, a technologist at heart, and has a wealth of cross-industry experience.*



Successful large-scale, global and multi-discipline transformations often rely on getting just one or two things right very early on in the process.”



Success



Danfoss drives accurate financial reporting with standardized accounting processes and smart automation

Customized SAP solutions empower Danfoss to transform its financial processes, streamline operations, and improve financial controls

Energy efficiency with innovative engineering

Think of comfortable office spaces and refrigerated aisles in retail stores, and Danfoss is certain to be present. The Denmark-based company provides heating, ventilation, and air conditioning solutions for industrial and commercial purposes. However, it does not stop there. Danfoss also helps to reduce emissions and make cities more energy efficient in the wake of rapid urbanization.

Danfoss employs more than 25,000 people worldwide and handles global functions smoothly. However, the company recognized that improvements to its corporate finance operations would play a key role in taking the next step as an industry leader.

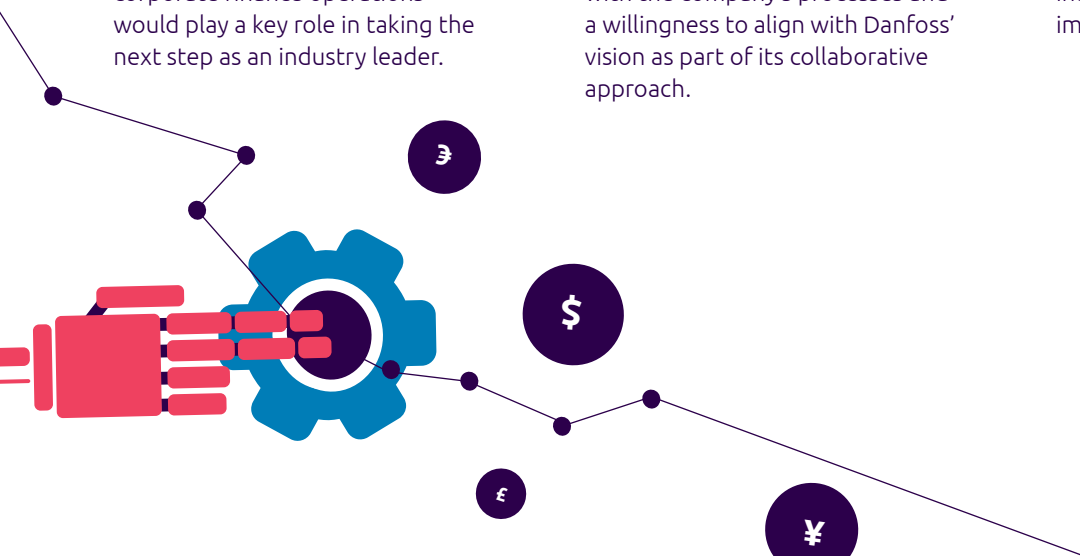
Feeling the heat

Danfoss understood that its finance and accounting solution needed to address a range of challenges, including a lack of standardized accounting processes during financial consolidation. In addition, Danfoss wanted to improve its ability to report real time financial information throughout the closed period and achieve optimal control and global visibility.

To meet these challenges, Danfoss needed a transformation partner to help standardize its finance operations across all geographies with best-in-class processes. Through a competitive bidding process, Danfoss selected Capgemini due to its familiarity with the company's processes and a willingness to align with Danfoss' vision as part of its collaborative approach.

In 2014, Danfoss and Capgemini partnered to launch the Danfoss Finance Program. The main objective of the project was to standardize processes in accounts payable (AP), accounts receivable (AR) and general ledger (GL) across all of Danfoss' business units. This also involved updates to travel and expenses in 35 locations. To meet these project goals, Capgemini designed and implemented the Global Process Model® (GPM), which standardized these processes.

Building upon the success of this project, Danfoss again partnered with Capgemini to launch Project One ERP in 2016. With this program, Danfoss wanted to align and standardize different SAP platforms into SAP S/4 HANA. As the partnership moves forward into 2018 and beyond, the standardization of processes and integration of an ERP platform will be implemented in parallel.





Our partnership with Capgemini has yielded strong results due to a combination of collaboration, innovation and automation.”

Jens Vestergaard Jensen, Head of Finance
Center of Excellence, Danfoss

Delivering a smooth flow of financial information

For both of these projects, Danfoss leveraged Capgemini's Automation Drive, a unified approach on automation, and Global Enterprise Model® (GEM), including GPM, to transform its business operations, expedite its financial transformation, and realize cost savings quickly. Built on a strong, 17-year foundation and the Automation Drive suite, GEM introduced automation and enhanced accuracy to Danfoss' financial processes while also minimizing costs and risks. The Global Danfoss Model (GDM), which was built on GEM, enabled Danfoss to create a global calendar that included all milestones, global tasks, and local tasks, as well as a reporting deadline and hard close process to enforce discipline.

Capgemini and Danfoss partnered with world-class accounting tools such as Runbook Closing Cockpit® and Runbook Balance Sheet Reconciliation® to automate closing and financial reporting processes. These tools enabled Danfoss to capture financial data at every step of its vendor and customer transactions, resulting in substantially smoother AP and AR functions.

Closing and reconciliation of the balance sheet is now an easier process for Danfoss' accountants. This translates into a seamless record-to-report (R2R) function that delivers timely financial reporting due to the implementation of these tools. This also resulted in a reduction of the closing period from 7 to 5 working days and minimization of the need for manual error correction.

An important component of the solution's overall success was the implementation of appropriate automation and robotics for a variety of processes. This includes the verification process, foreign exchange rate updates, and intercompany reconciliations, all of which resulted in reduced manual interventions and error rates.

The benefits delivered

With the driving force of GDM behind its financial transformation, Danfoss achieved significant improvements to its financial reporting, including:

- Best in class vendor payments
- Improved customer collections
- Improved accuracy in all accounting processes

- 56 standardized R2R processes
- Alignment of processes and tasks to Capgemini's offshore and nearshore delivery centers based on location strategy
- Creation of an intercompany hub, leading to faster closing of all transaction types globally and a reduction in closing period from 7 working days to 5 working days.

In summary

Capgemini's solution provides accurate, real-time financial information that enables Danfoss to navigate the complex and dynamic global financial environment, meet statutory and regulatory reporting requirements, enhance financial controls, and enjoy better decision-making. In addition, Capgemini's Rightshore® model enables Danfoss to tap into a global delivery model that combines efficiency, talent, collaboration, and scalability.



Transforming the Capgemini Group's Finance function

Capgemini deploys robotic automation to deliver enhanced business outcomes and benefits across Group Finance

The case for robotics

As an organization that is constantly looking for opportunities to improve its processes, Capgemini understands the speed at which robotic automation can transform a business. However, it also understands that a lack of proper preparation before introducing robotics can lead to a start-and-stop implementation. With this in mind, the Capgemini Group identified an opportunity to automate the invoicing process of its Finance function in order to handle increased demand without compromising its stringent requirements for accuracy. As such, robotic process automation (RPA) offered an ideal solution.

The challenge of enhancing operational efficiency

Capgemini's Business Services Finance & Accounting (CBS FA) is a shared services team that provides a range of administrative services to the Group's Finance function, including the processing of over 8,500 invoices manually every month. Invoice

processing is a critical step for the realization of revenue and acts as upstream input for Capgemini's entire order-to-cash (O2C) cycle, which is managed end-to-end by CBS FA's dedicated team of project accountants via the Oracle R12 Project Accounting platform.

The team was facing a range of operational challenges, including dealing with multiple processes and formats, ensuring the absolute accuracy of invoice data for a large volume of requests, comprehensive management of exceptions and fallouts within short timelines, and coordination of the entire process cycle with multiple stakeholders.

In order to continue delivering seamless billing and revenue flow to the Group's projects, the CBS FA team needed to increase efficiency through analyzing existing processes and eliminating non-value added process steps. This maximized client revenue and provided best-in-class utilization of the Group's existing technology platform, application hub tools, and robotic methodology.

In addition, Capgemini's Group Finance had extremely high expectations of its internal CBS FA team, including:

- An increase in measureable productivity benefits
- Enhanced maturity and competitiveness, with the expectation of realizing €1.3 million in savings
- Reduced manual interventions in the process, while maintaining overall accuracy of the output
- Significant increase in "transaction per FTE" with 100% compliance on quality.

All of this supported the goals of non-intrusive automation, seamless service delivery with the capacity for expansion, and the absorption of increased volume within the CBS FA team's existing bandwidth.

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“By leveraging Capgemini’s proven ESOAR methodology, we streamlined and standardized our invoicing process, which generated immediate cost savings and helped us accelerate the move to shared services for more value-added business benefits. Our RPA-enhanced service capabilities manage the existing volume of transactions, while offering the potential for further expansion.”

Luc Bourguignon

Vice President, Head of Finance Tools and Processes, Capgemini

Capgemini’s ESOAR methodology provides the foundation for RPA

As a first step, CBS FA consulted project accountants directly involved in the invoicing process on the opportunities of RPA. This provided valuable information about how the team viewed RPA adoption as a means to move to higher-value functions. It also gave a detailed view of the challenges the project would need to address from an employee’s perspective while further outlining the project requirements and objectives.

Based on this information, the CBS FA team developed and implemented the unique ESOAR (Eliminate, Standardize, Optimize, Automate and Robotize) methodology to holistically assess the needs of the Capgemini Group’s clients, agents, and managers at

various steps of the invoice process in detail. This included eliminating multiple input formats from requestors, reducing manual handoffs, standardizing input and output requirements, optimizing the usage of the Oracle R12 for printing invoices and implementing robotics to automate repetitive tasks.

CBS FA deployed UiPath’s industry-standard RPA product, part of Automation Drive, Capgemini’s unified approach on automation, which applies virtual robots to emulate and automate the manual activities involved in invoice creation, such as mouse cursor movements, keystrokes, and copy and pasting, and performing simple calculations and text string manipulations. This provided a real-time operating and

decision-making environment, with robots constantly reporting their progress to a central server and an intuitive flowchart-style graphical interface enabling the team to design and implement the business processes as workflows. A robust control mechanism was also introduced to increase the accuracy of invoices and enhance client experience and satisfaction.



Increased process efficiency and competitiveness

CBS FA implemented proper controls throughout the project, leading to a smooth and successful rollout of its RPA solution for the Capgemini Group. In addition, the ESOAR methodology provided value addition and productivity gains for Group Finance by enabling the CBS FA team to approach the project with a strong plan that ensured smooth delivery.

The solution assisted in reducing the turnaround time for invoice generation and improved invoice accuracy. There was significant reduction in queries in the downstream process, which led to better cash collection and enabled a reduction of days sales outstanding (DSO) for the Capgemini Group.

Implementation of CBS FA's RPA solution and ESOAR methodology led to a range of tangible benefits including:

- **Increased cost reduction** – over €1.5 million saved for the Capgemini Group against a target of €1.3 million
- **Enhanced accuracy** – 91% improvement in accuracy, with a reduced error rate from 45 to 4 errors on a baseline of 8,500 invoice creation requests
- **Reduced cycle time** – 75% reduction of invoice processing from 20 to 4 minutes per request
- **Enhanced productivity** – reducing the overall cost of finance for the Capgemini Group by 88 resources

- **Reduced cost of service** – 20 FTEs redeployed to higher analytical work such as reconciliations and cost accruals

- **Increased standardization** – standardization of inputs resulted in fewer queries, exceptions, reworks, and manual handoffs.

Successfully implementing robotics within its own Finance operations is an example of Capgemini's ability to transform complex manual processes and apply best-in-class automation solutions. This project demonstrates Capgemini's position as the trusted partner of choice for organizations wanting to transform their Finance function through implementing customized robotics solutions.

The project also won the "Gold" category of the prestigious D.L. Shah Quality Award, recognizing CBS FA's efforts in automating the invoicing processes for improved efficiency and service delivery.

The collaborative approach

The Collaborative Business Experience™ is central to Capgemini's philosophy and is a pillar of our service delivery

- **Enhanced efficiency** – collaboration between the onshore team, requestors and the processing team minimized deviations, and reduced to and fro queries, with operators redeployed on audit and exception handling rather than transactional activities

- **Improved employee experience** – through redeploying 20 FTEs to other value-adding tasks across CBS FA's business. The overall 88 FTE reduction was compensated by further headcount addition from onshore roles, thereby further reducing the cost of finance

- **Continuous improvement** – CBS FA's people continue to generate new ideas on how repetitive, manual tasks can be automated or solved through robotics. This is recognized across the Capgemini Group as a powerful example of data, technology and talent coming together to create value.



"By leveraging Capgemini's proven ESOAR methodology, we streamlined and standardized our invoicing process, which generated immediate cost savings and helped us accelerate the move to shared services for more value-added business benefits. Our RPA-enhanced service capabilities manage the existing volume of transactions, while offering the potential for further expansion."

Luc Bourguignon
Vice President
Head of Finance Tools and Processes, Capgemini



Capgemini's unique methodology and technology platform has demonstrated high transformational capabilities driving process efficiency and competitiveness, and delivering quality through innovation and operational excellence."

C. K. Biswas

CEO, Quality Council of India

ESOAR is Capgemini's unique methodology of continuously improving the efficiency and effectiveness of operations. This is done through a combination of process, technology and user experience:

Eliminate – multiple input formats to reduce error and rejections

Standardize – the input and output requirements for maximum synergy

Optimize – the usage of existing ERP and platforms

Automate – standardized processes using best-of-breed tools and identify further opportunities for automation

Robotize – repetitive, rulebased, transactional processes through leveraging RPA

ESOAR methodology

Optimize

ERPs/workflows and existing IT landscape

- Optimize processes and limit customization
- Optimize the existing IT landscape to maximize its capabilities

Standardize

Rethink the basics to limit customization

- Standardize similar processes and steps
- Standardize leveraging best practices and using pre-built templates

Eliminate

Expunge wasteful activities impacting time, cost and effort

- Eliminate all unnecessary activities by addressing the cause
- Eliminate excuses for waste and barriers to the services

Automate

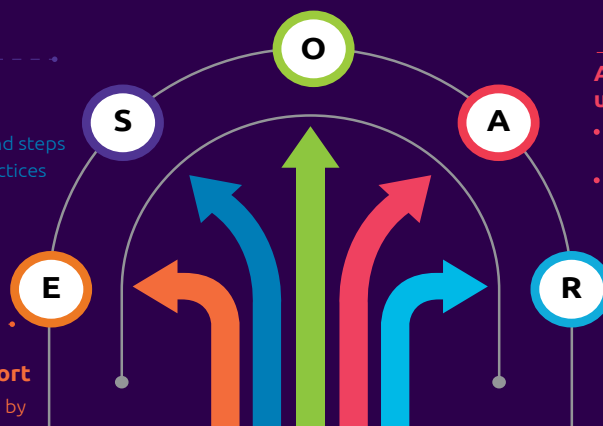
Automate standardized processes using best of breed tools

- Automate using easily configured best breed tools
- Automate after standardizing process

Robotize

Robotizing repetitive and rule based transactions

- Robots deployed to remaining manual activities
- Robotic solutions simulate the actions of a human operator



Capgemini named a Leader for Finance and Accounting Digital Augmentation Suite by Everest Group

Automation-driven digital capabilities are recognized in Everest Group's inaugural PEAK Matrix™

Capgemini has been named a "Leader" in Everest Group's **PEAK Matrix™ for Finance and Accounting Digital Augmentation Suite (F&A DAS)**.

Capgemini was acknowledged for delivering "widespread automation-driven capabilities across the entire value chain with particular penetration in the manufacturing sector."

Everest Group evaluated 19 Finance and Accounting Outsourcing (FAO) service providers for the report where they were assessed based on their vision and capability along with market impact. According to the **report**, Capgemini has successfully "used RPA for process-agnostic solutions such as data ingestion, data extraction and process-specific automation. Capgemini was also recognized for enhancing front end/ user interface layer using chatbots and self-service features, leveraging Odigo."

Anis Chenchah, CEO, Business Services Global Business Line, and member of the Group Executive Committee at Capgemini said: "We are delighted to be positioned as a Leader in Everest Group's inaugural report on Finance and Accounting Digital Augmentation Suite. This recognition is a testament to Capgemini's long-standing expertise in finance and accounting services, embedded with automation-led solutions, and powered by a digital approach to solve our clients' complex business challenges worldwide."

Rajesh Ranjan, Partner, Everest Group said: "Enterprises increasingly seek FAO providers that can integrate multiple digital components and capabilities to drive higher efficiency, enable superior experience, and impact business outcomes. Capgemini, with its investments in automation capabilities, including RPA, intelligent OCR, and proprietary tools such as

Odigo, is helping clients meet some of these objectives, making it a Leader in the F&A DAS PEAK Matrix™ 2018." Capgemini has been at the forefront of developing advanced client solutions using intelligent automation, cognitive and AI technologies. Capgemini's F&A service, Finance Powered by Intelligent Automation, demonstrates the digitally augmented services assessed by Everest.

With automation rapidly changing the market landscape, it has become essential for IT service providers to deliver RPA-based delivery solutions, to help organizations in a wide range of areas such as data entry and validation, file and data manipulation, automated formatting and workflow acceleration.



This recognition is a testament to Capgemini's long-standing expertise in finance and accounting services, embedded with automation-led solutions, and powered by a digital approach to solve our clients' complex business challenges worldwide."

Anis Chenchah, CEO, Capgemini's Business Services

Capgemini ranked #2 in the the HFS Top 10 RPA Service Providers 2018 report

Capgemini positioned as a global service provider focused on process optimization and RPA industrialization.

Robotic process automation (RPA) has emerged as a powerful change agent, with enterprises around the globe embracing it as a means to automate manual processes and create a bridge to a digital future. Despite signs of vibrant growth among most prominent RPA software firms, RPA is still a nascent market with enterprise strategies continuing to percolate and a notable dearth of experienced talent.

In a first of its kind report, the HFS RPA Services Top 10 report examines the role service providers are playing in the evolving RPA market. HFS assessed and rated the RPA services capabilities of 29 service providers across a defined series of innovation, execution, and voice of the customer criteria. The report also includes detailed profiles of each service provider, outlining their overall and sub-category rankings, provider facts, and detailed strength and weaknesses.

Ranking #2 in the report, Capgemini is positioned as “a global service provider focused on process optimization and RPA industrialization,” with the following main strengths:

- **Unified automation practice yielding dividends** – centralized investments and expertise in RPA and intelligent automation under the Automation Drive umbrella in 2016, which helped refine focus on delivering business outcomes through process optimization and scalable operating models.
- **Strength across the RPA services value chain** – strong credentials across the value chain supported by our ESOAR (Eliminate, Standardize, Optimize, Automate, Robotize) methodology to help drive process optimization prior to automation, our factory approach to CoE set up, and our Virtual Delivery Center for governance.
- **Depth and breadth of tools experience** – rated in the top quartile of the HFS assessment of providers’ experience with leading third-party RPA tools, including the big three (Automation Anywhere,

BluePrism, and UiPath) and beyond to providers such as WorkFusion and Celatone.

- **Sizable talent pool and strong focus on training and knowledge management** – ranks in the top three for sheer volume of RPA trained resources. Strong internal training (Automation Drive Academy) focused on comprehensive third-party tools training and training on internal tools, methodologies, and resources to help continually skill up resources. Knowledge is captured and curated in a global knowledge hub (Automation Drive Library).
- **Flexibility** – clients were pleased with its ability to adjust to varying RPA needs and application concepts and deploy skilled resources accordingly.



Capgemini named as a leader for cloud and multi-process HR services by NelsonHall

Capgemini ability to meet future client requirements and delivering immediate benefits to its HR clients with a specific focus on cloud-based services are recognized by NelsonHall.

NelsonHall has identified Capgemini as a “Leader” in the NelsonHall Evaluation & Assessment Tool (NEAT) report for cloud and multi-process HR services.

Capgemini was recognized as a Leader for its capabilities and strengths in the following areas:

- End-to-end capabilities for cloud and multi-process HR services from concept to execution including cloud consulting, Human Capital Management (HCM) system implementation, post-go-live Application Management Services (AMS) support, and HR Business Process-as-a-service (BPaaS).
- Focus on incorporating digital developments into its HR services, including Digital Employee Operations, Digital Helpdesk, and Digital Learning Operations.

- Emphasis on creating the business case for transformation to the cloud through post deployment HR BPaaS support.

- Heavily leveraging next-generation technological innovations, including robotic process automation, chatbots, machine learning, and artificial intelligence.

Anis Chenchah, CEO of Capgemini’s Business Services, said: “We are delighted to be recognized as a Leader in NelsonHall’s NEAT report for Cloud & Multi Process HR Services. It reflects Capgemini’s ability to satisfy its client and partner eco-system worldwide with the power of integrated services and platform solutions. Digital Employee Operations follows our consult-digitalize-operate approach allowing us to shape the future of

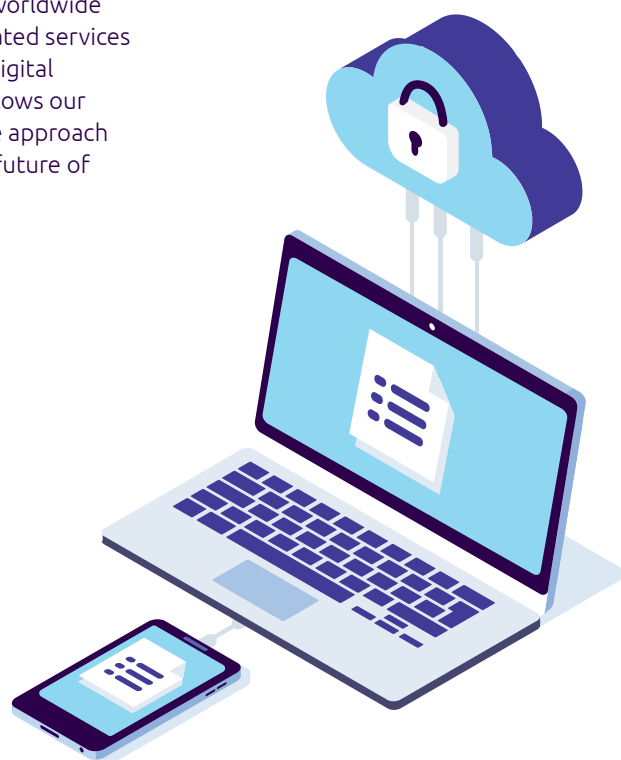
business operations for our clients, using intelligent automation to deliver outstanding value.”

NelsonHall’s NEAT is a method by which strategic sourcing managers can evaluate service providers and is a part of NelsonHall’s Speed to Source initiative. The NEAT tool assesses service providers against their “ability to deliver immediate benefit” to buy-side organizations and their “ability to meet client future requirements,” which is a pragmatic evaluation of the service provider’s ability to take clients on an innovation journey over the lifetime of their next contract.



This recognition reflects Capgemini’s ability to satisfy its client and partner eco-system worldwide with the power of integrated services and platform solutions.”

Anis Chenchah, CEO, Capgemini’s Business Services





Digital Employee Operations

Next-generation HR operations that drive enhanced operational efficiency and employee experience

With traditional HR cost and value pressures being compounded by digital native employees looking for a seamless experience, it is essential that organizations attract, grow, and retain the talent they need to fuel business strategy in a world of fast changing skills sets and competing global demand.

Capgemini's Digital Employee Operations puts your individual employee at the center of your HR value proposition to deliver:

- Increased profit
- Enhanced employee satisfaction
- Increased productivity
- Optimized use of your human capital
- Minimized risk to your reputation



Scan here to know more about Capgemini's Digital Employee Operations



About Capgemini

Capgemini is a global leader in consulting, digital transformation, technology and engineering services. The Group is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year+ heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. Today, it is a multicultural company of 270,000 team members in almost 50 countries. With Altran, the Group reported 2019 combined revenues of € 17billion.

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