Capgemini
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Digital
Playbook

Capgemini Digital Playbook – converging IT and business on the digital customer journey

November 2015, Version No. 1.0

People matter, results count.

What's your story?

Delivering Digital Transformation with a complete end-to-end proposition, from strategy consulting and solution design, to technology integration, change management and governance. Our Digital Playbook brings the digital customer experience vision to life with a wide range of assets, tools and methods tailored to the unique and evolving needs of every single client.
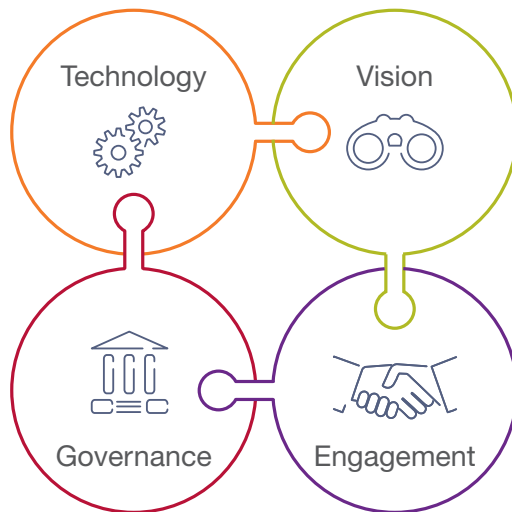
What's your story?

There is no single Digital Transformation story. The only constant is that all organizations, no matter their size or sector, recognize the need to embed digital in their day-to-day operations. And customer experience – whether for external or internal end-users – sits at the heart of digital initiatives.

But what works for one enterprise may not be right for another, even if they're in the same sector and facing similar challenges. There is also a marked difference in the digital maturity of different industries. Our work with Massachusetts Institute of Technology (MIT) reveals that the high tech, retail and banking sectors are the most digitally advanced, with the highest percentage of organizations using new technology solutions to change their business and increase their productivity, performance and profitability.

Yet even these 'Digital Masters' are looking for help on their Digital Transformation journeys. That's because nothing stands still in the digital enterprise. The digital marketplace is constantly evolving. This demands continuous disruption in the way people think, the way they work, and the way the digital enterprise engages with its customers.

Getting this disruption right is no easy task. It requires a shared and transformative **vision** of the digital future. It needs full employee **engagement** in making that vision a reality. It must have strong digital **governance** to keep the transformation on course. And it has to fuse **technology** and business communities in the building of digital skills and transformed technology platforms. We make all of this possible with our Digital Delivery Playbook – enabling the digital customer experience.

Capgemini is at the forefront of helping businesses and government organizations transform their business outcomes through digital. This experience gives us a unique perspective on leading best practice. And it has enabled us to bring together all our assets, tools and methods in our comprehensive **Digital Playbook**. This is an end-to-end delivery portfolio. It is designed to help each client write their own unique Digital Transformation story and deliver the very best digital customer experience.

Technology

Vision

Governance

Engagement

Why Digital Transformation?

Why Digital Transformation?

NO 29%
YES 48%
PLANNING 23%

Chief Digital Officer
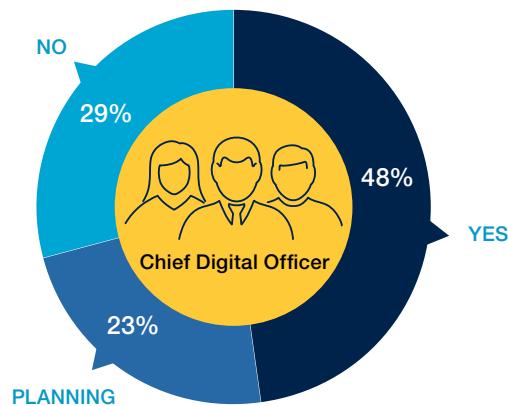
More and more organizations are assigning strategic priority to digital. Capgemini's research for its 2015-2016 World Quality Report shows that 48% of the surveyed organizations now have a Chief Digital Officer, and 23% are planning to establish the role this year.

Digital maturity equates to business success. Our research with MIT in Boston, USA reveals that Digital Transformation can increase profitability by 26%, relative to other organizations.

Digital Transformation offers a means of transforming into an organization able to seize the opportunities presented by continual technology disruption. It ensures your workforce can readily adopt the game-changing technologies putting customers at the heart of everything you do.

Digital Transformation embeds digital capabilities across the value chain, from your online customer experience to connected supply chains, employee devices and more open ways to innovate. It ensures you are equipped to deal with uncertainty, using data as a new currency to transform your understanding of your customers, employees, processes and performance.

Those organizations that fail to transform will be – and are already being – left behind. That's why it's important not just to deliver an effective transformation program, but to make sure it evolves and is sustainable long into the future.

Our Digital Playbook is designed to ensure our clients achieve this. It is an enabler of the Capgemini Digital Transformation Framework by which we help organizations use digital technology to transform the customer experience, people and organization. It covers each stage of the customer journey, from understanding who the modern digital customer is, gaining insight into what customers are looking for, and equipping business and IT with the right tools and approaches to ensure Digital Transformation achieves its promised outcomes.

Delivering transformation

Delivering transformation

Customer Experience

People/Organization

Operations

Today's digital customers are both external and internal users of an organization's networks, systems, data and more. Ensuring a great digital customer experience at every level must be the overriding objective of Digital Transformation programs.

Our delivery of change programs in diverse sectors shows that Digital Transformation comes in many guises. While customer experience and mobility typically form the central tenet of such programs, our Digital Transformation Framework expands the horizon by identifying three key areas of digital investment, for which we have defined the following Delivery Focus Areas:

- **Customer Experience:** customer insight, experience design, customer engagement;
- **People/Organization:** digital skills building, digital worker enablement, digital culture;
- **Operations:** product & service innovation, connected operations & systems, process automation.

Each of these represents a different aspect of the digital customer, both internal and external. Each has its own requirements, although all have data and the digital customer experience at their core. Our Digital Playbook contains solution designs and delivery models for each of these three core areas and these are outlined in this document – see Delivery Focus Areas.

The Digital Playbook sets Capgemini apart in our ability not just to envision digital change, but to work with clients to define and deploy the business and technology tools, operating models, roadmaps and governance needed to bring about successful, sustainable Digital Transformation. Our approach starts by assessing where the client is and then develops a set of actions to move along the journey towards becoming a master. The environment will continuously change as new competitive threats arise and technology opportunities appear. This demands a continuous re-assessment of where you are on the journey. Crucially, using the Digital Playbook will accelerate the digital journey and speed time to value for our clients.

Delivering transformation

Capgemini's Digital Playbook takes our clients on their individual transformation journeys. It provides all the building blocks needed to deliver a successful Digital Transformation.
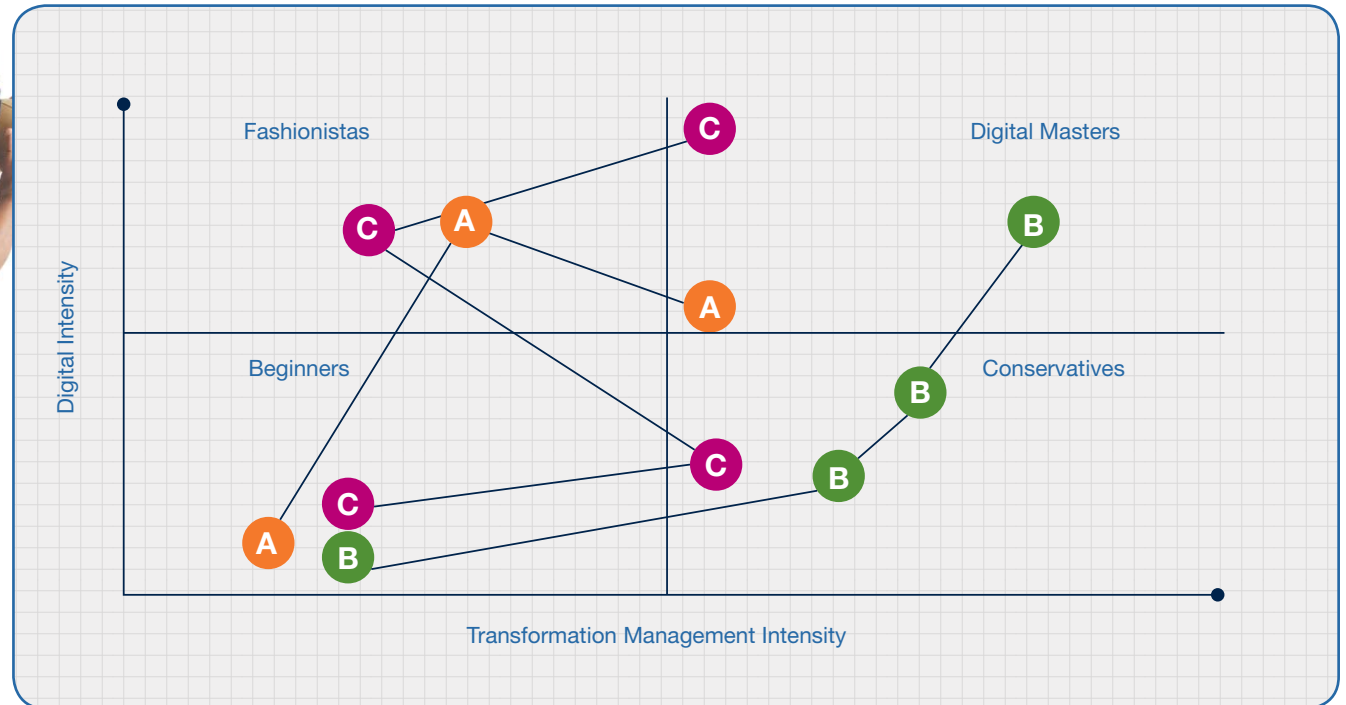
What's in our Playbook?

» Creating opportunity and managing business change
» Creating and delivering a compelling, mobile first user experience
» Technology Transformation
» Creating a multi-speed operating model
» Agile – continuous delivery models – DevOps
» Digital Orchestration Platform
» Delivery focus areas

What's in our Playbook?

A successful global consumer goods and retail brand determined that its customer engagement was not joined up across channels and was failing to fully leverage the power of digital interaction. We worked with the Chief Marketing Officer and a cross functional team to develop a customer vision, roadmap, target architecture and business case for realizing the vision. We then demonstrated the opportunity by running a series of 'test and learn' proofs of concept to show what would work (and what wouldn't), validating how implementing the vision would deliver 'fresh' revenue. The client is now progressing ahead with the global transformation.

The Capgemini Digital Playbook approaches the delivery of Digital Transformation initiatives from both a business and technology perspective. It contains all the assets, tools and methods we have successfully used in diverse client transformations in recent years to deliver end-to-end strategy and technology integration.

Creating opportunity and managing business change

Our delivery teams deploy these re-usable components to a greater or lesser extent, depending on the unique digital needs of each client. Most of our clients accept the need to go digital, but are asking how to make this happen – how do they manage the change process across the business? Our Digital Playbook includes specific tools and methods for achieving this successfully, such as:

- **Collaborative development of vision and roadmap** – using our network of Accelerated Solutions Environments;
- **Innovation Labs** – identifying areas of opportunity, through our Applied Innovation Exchange Framework and network of Innovation Labs;
- **Change Strategy 2.0** – introducing desired behavioral change virally rather than by imposition;
- Leadership in the digital age – where we define the particular traits and capabilities that address the requirements of a connected, collaborative workforce;
- **Digitally enhanced communication** – our method and tools for developing effective, compelling and fast communication through the use of social media during the change process.

What's in our Playbook?

The quality of the user experience (UX) can be the difference between successfully engaging, or losing, a customer, employee or partner.

Creating and delivering a compelling, mobile first user experience

The quality of the user experience (UX) can be the difference between successfully engaging, or losing, a customer, employee or partner. Enterprises must place user experience at the heart of any digital transformation.

Capgemini brings together proven digital UX design capabilities and global, industrialized technology and testing resources to ensure impactful experience and design implementations. We tightly integrate UX initiatives not just with business objectives, but with front and back-end hardware and software platforms as well.

Our Experience & Design offering provides end-to-end mobile strategy and services that aim to help our clients optimize their end-user experience and maximize business value.

Whether you are exploring digital transformation for consumers or internal digitization to improve productivity, our comprehensive and modular 'UX services' are the answer. The tools and stages of this process are shown in the diagram on the following page.

Our end-to-end delivery method shows how we create a seamless link between the UX/UI design and the implementation of the supporting technologies and applications.
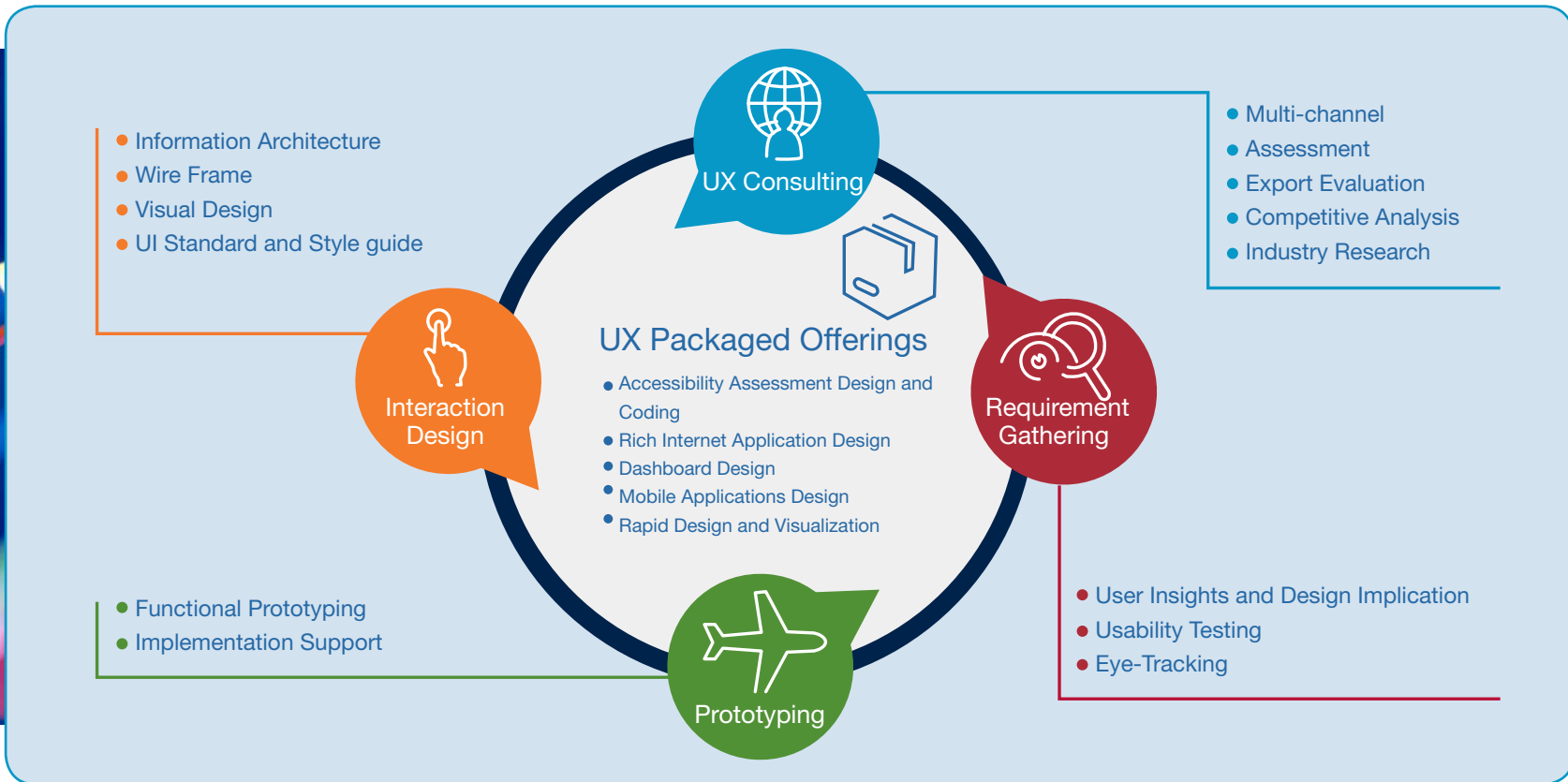
What's in our Playbook?

- Information Architecture
- Wire Frame
- Visual Design
- UI Standard and Style guide

UX Consulting

Interaction Design

Requirement Gathering

Prototyping

UX Packaged Offerings
- Accessibility Assessment Design and Coding
- Rich Internet Application Design
- Dashboard Design
- Mobile Applications Design
- Rapid Design and Visualization

- Multi-channel
- Assessment
- Export Evaluation
- Competitive Analysis
- Industry Research

- Functional Prototyping
- Implementation Support

- User Insights and Design Implication
- Usability Testing
- Eye-Tracking

Driving business impact through Backelite, the award winning digital agency and the heart of the Capgemini UI/UX Center of Excellence and network.

What's in our Playbook?
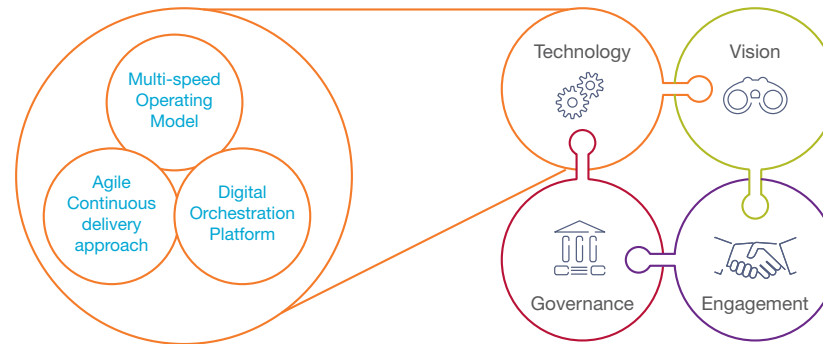
Technology Transformation

We break down the technology transformation into three areas of focus:

- Developing a multi-speed operating model for the technology function;
- Creating an agile, delivery approach with links development and operations into continuous delivery;
- Creating a digital orchestration platform.

Creating a multi-speed operating model

We have also developed a Digital Technology Operating Model to help bring about technology change. Part of the Digital Delivery Playbook, this features tools and examples designed to support the transition to a new digital service model. These include:

- A definition of the different roles of the technology function (digital services provider, integrator or governor);
- A model for the new skills required;
- An ecosystem management model to ensure effective management of a new and diverse community of partners. This is shown on the following page.

What's in our Playbook?

Capgemini's Digital Technology Operating Model
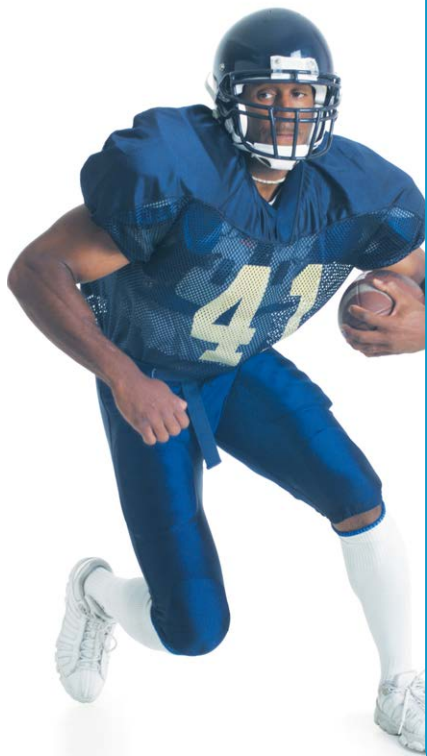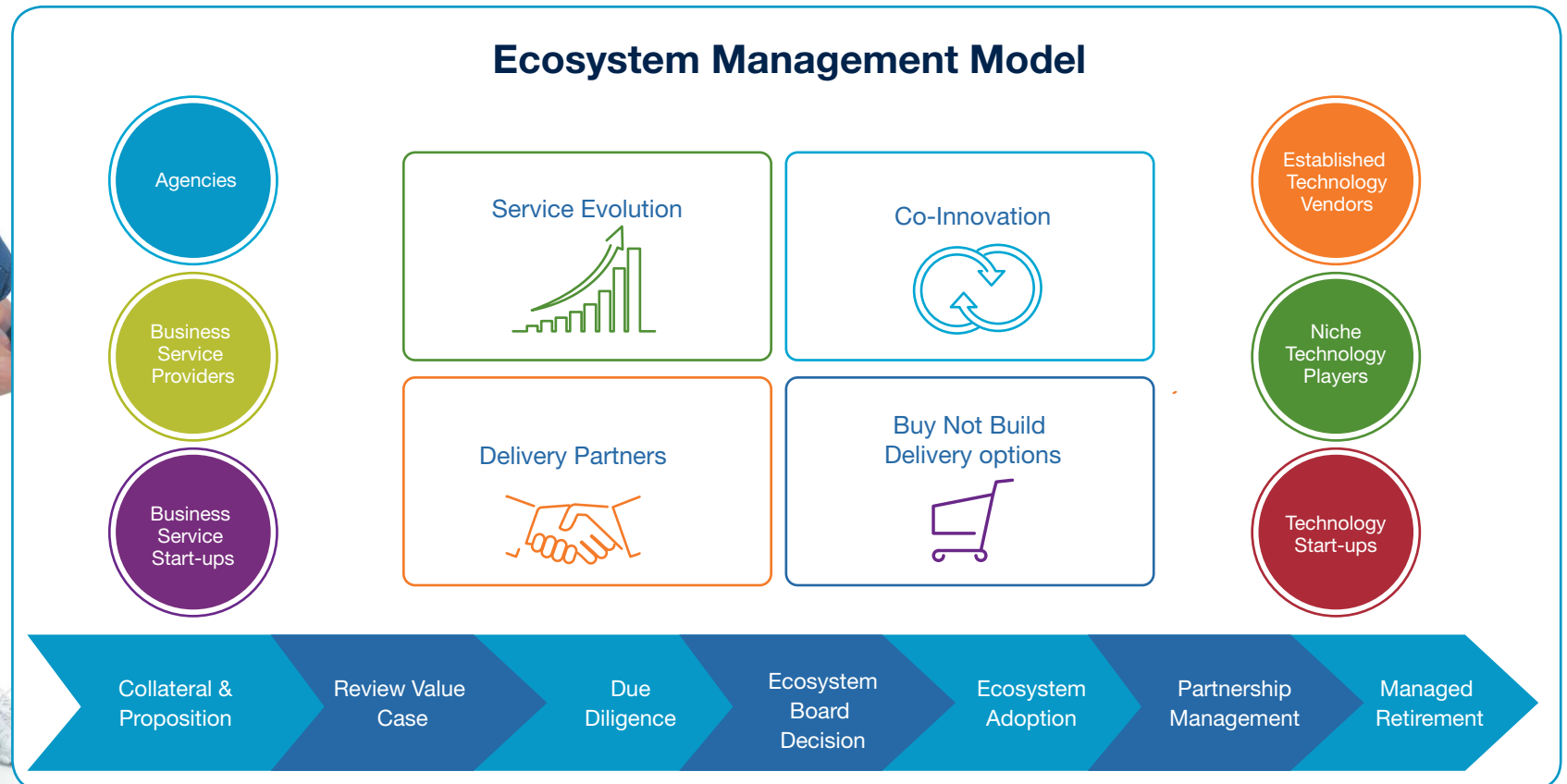
Ecosystem Management Model

- Agencies
- Business Service Providers
- Business Service Start-ups

Service Evolution

Co-Innovation

Delivery Partners

Buy Not Build Delivery options

- Established Technology Vendors
- Niche Technology Players
- Technology Start-ups

Collateral & Proposition → Review Value Case → Due Diligence → Ecosystem Board Decision → Ecosystem Adoption → Partnership Management → Managed Retirement

What's in our Playbook?
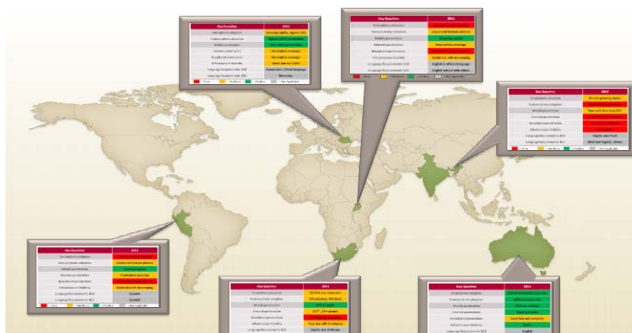
The above digram shows as example of a global deployment and operating model, developed for a consumer good organization, using our Digital Playbook.

"The Digital Technology Operating Model also has tools and models for the global deployment and management of services. These include:

- Definitions for different operating models, ranging from local and standards-based, to shared service and delivery, global service, and build one, deploy many;
- Examples of where Capgemini has globally deployed the RACI (responsible, accountable, consulted and informed) matrix model;
- Illustrations of different deployment patterns for specific functions and digital technologies;
- Examples of completed and ongoing global rollouts of digital transformation programs.

A motor manufacturer sought to develop a new model for managing its customers on a global basis, linking its consumers through digital channels to its dealer network. We worked with the client to define and implement a global operating model for digital customer management and platform support, enabling it to drive increased customer loyalty and repeat purchases.

What's in our Playbook?

A major international bank was having challenges coordinating 20 Agile Scrum teams and suffering from a lengthy, expensive end-to-end process. Capgemini worked with the client to establish a DevOps vision and implement working methods, organization and tools, both onshsore and offshore. The result was a major reduction in delivery time and cost, as well as increased response to change.

Agile – continuous delivery models – DevOps

We adopt a Digital Technology Continuous Delivery Model to manage the digital technology transformation across these three areas. This uses a common Agile Rational Unified Process (RUP) development model, underpinned by RightShore delivery model, across different technology platforms. It also features common tools for application lifecycle automation and environment management. This gives us the right environment for creating an integrated end to end model, between specification, agile development, release management and operation, i.e. DevOps. Our approach recognizes that this requires both the right tools and cultural change.

At the core of our approach are the following methodologies:

- Capgemini Agile Framework (CAF) - This demonstrates best practice in agile delivery
- Capgemini Distributed Delivery Model – This provides platforms for Rightshore operations, linked to UX/UI front offices and innovation hubs
- Our Applied Innovation Exchange (AIE) – this model provides a toolset for establishing innovation hubs to feed the front end of our continuous delivery model

What's in our Playbook?

We bring a range of tools and partners to implement continuous delivery and DevOps for our clients as shown below:

PaaS Partnerships, Cloud Foundry Foundation sponsor, OS PaaS

Assessment Frameworks to determine existing organisational and application maturity

Commercial PaaS based on CF and available from Pivotal which provides additional services for mobile and BI applications

IBM BlueMix is a commercial PaaS based on CF and available from Pivotal which provides additional services for BI-Watson, mobile , DevOps, Jazz and access to IaaS via Softlayer.

Capgemini « Apollo » Framework using Docker containerisation and opensource continuous x components

Hackathon approach for building skills and demonstrating new ways of working
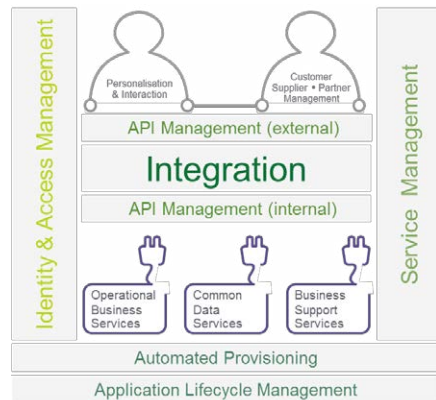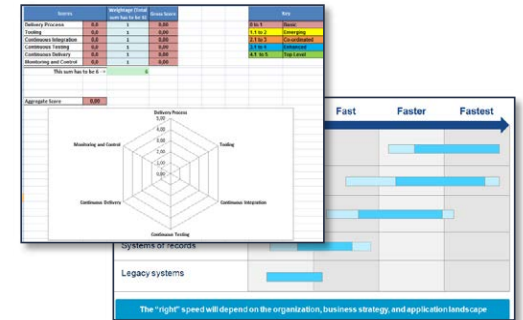
Immediate Digital Platform

dADC - Digital Accelerated Delivery Center

My3D LEAN toolset to deploy Lean fundamentals and establish distributed working practices

https://www.youtube.com/watch?v=etBGVgzXuIM

What's in our Playbook?
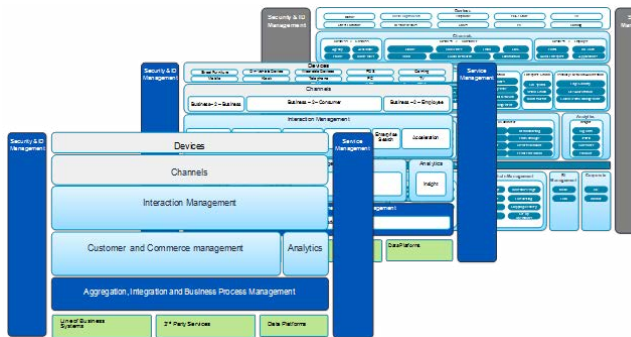
Digital Orchestration Platform

Our approach recognizes that all aspects of a Digital Transformation need to be supported by a common platform approach. Furthermore, that platform should be an orchestration of services to support loose coupling and service agility. We define our approach against a number of key principles, as illustrated below.

Using this approach and our experience across multiple sectors and different technologies, we have developed a common, layered reference architecture with sector and technology variants, as illustrated opposite. This architecture is supported by a federated data and information architecture, as well as the other products associated with an end-to-end architecture framework (TOGAF9). The reference architecture enables us to quickly baseline each client's estate and identify gaps, strengths and weaknesses in the platform for supporting their evolving vision and roadmap.

A major retail bank wanted to understand how its technology organization could better support the business, in terms of speed of change driven by its digital requirements. We carried out a short study to define the digital technology enablement strategy. We were able to use our reference architecture and operating model to rapidly map current platforms and gaps. The net result was a clear definition of the actions needed to increase the speed of change, which application areas to focus efforts on and the organization changes required to enable increased speed of change.

1
- **"Buy not build"** through loosely coupled, componentized architecture
- **Build** when it is the organizations IP and use 'ourselves
- **A deployment strategy** to balance flexibility & standarization
- **"One platform across all channels"** to enable true **"Multi Channel"**

2
- Rapid **"Test & Learn"** [Prototype, MVP, A/B Testing]
- Engineering practices of **Agile & DevOps**
- **Control master data and information flows** to enable true federation

3
- **Implement SaaS and Opensource** for cost flexibility and innovation
- Maintain a **rich eco-system of partners** to maintain the **pace of innovation**

What's in our Playbook?

A French bank needed a new feature-rich, multi-platform mobile application that would allow its millions of customers to manage their accounts and budgets across all platforms. Capgemini subsidiary Backelite - a digital company that works for major brands to define, design, implement and optimize the performance of their web and mobile devices – provided a one-stop shop solution, from design through to application delivery and maintenance, using an iterative approach that included user testing to adjust and evaluate ergonomic choices. Launched in July 2014, by the end of the year it had been downloaded 2.5 million times, continuing at a rate of 3,000 downloads per day.

As such we have built up a comprehensive model and set of tools and accelerators for defining and delivering mobile platforms and services, using our Mobile Orchestrator model, as llustrated below.

Users: Customers | Employees | Things

Sectors:

Accelerators: Intellectual Property | Methodologies | Frameworks | Omnichannel Services

Services: Strategy | Experience & Design | Development | Testing | Security | Managed Mobility

Industrialization: Mobile Factory | Collaboration Zone | Mobile-as-a-Service | Partner Ecosystem
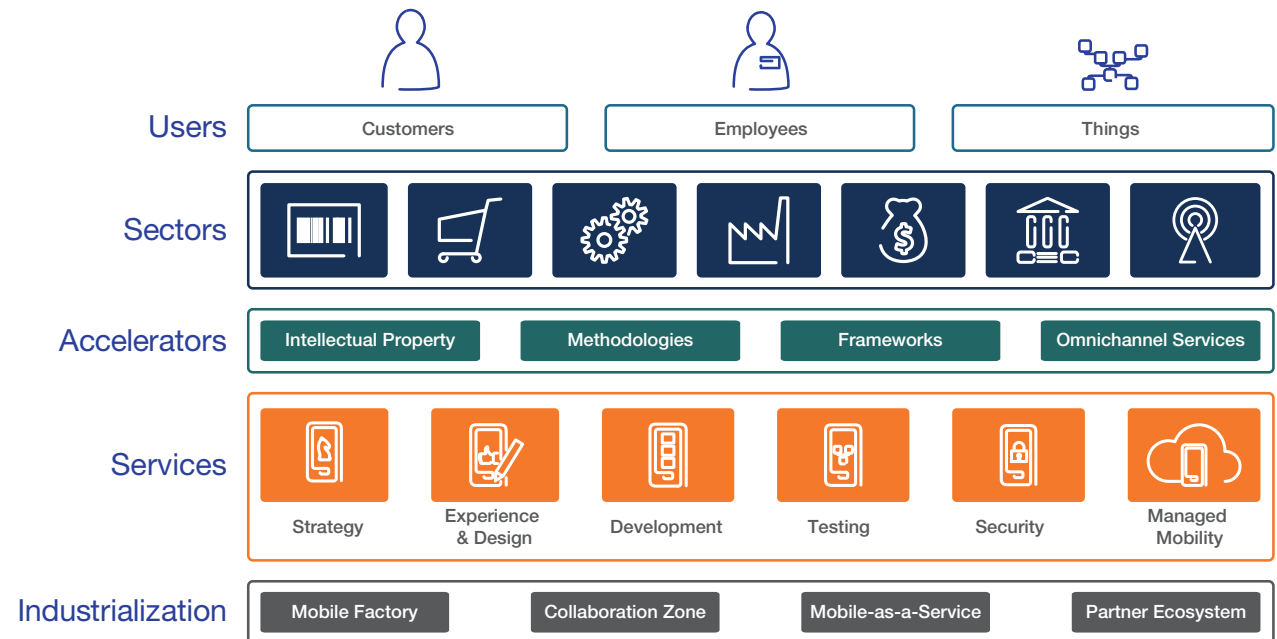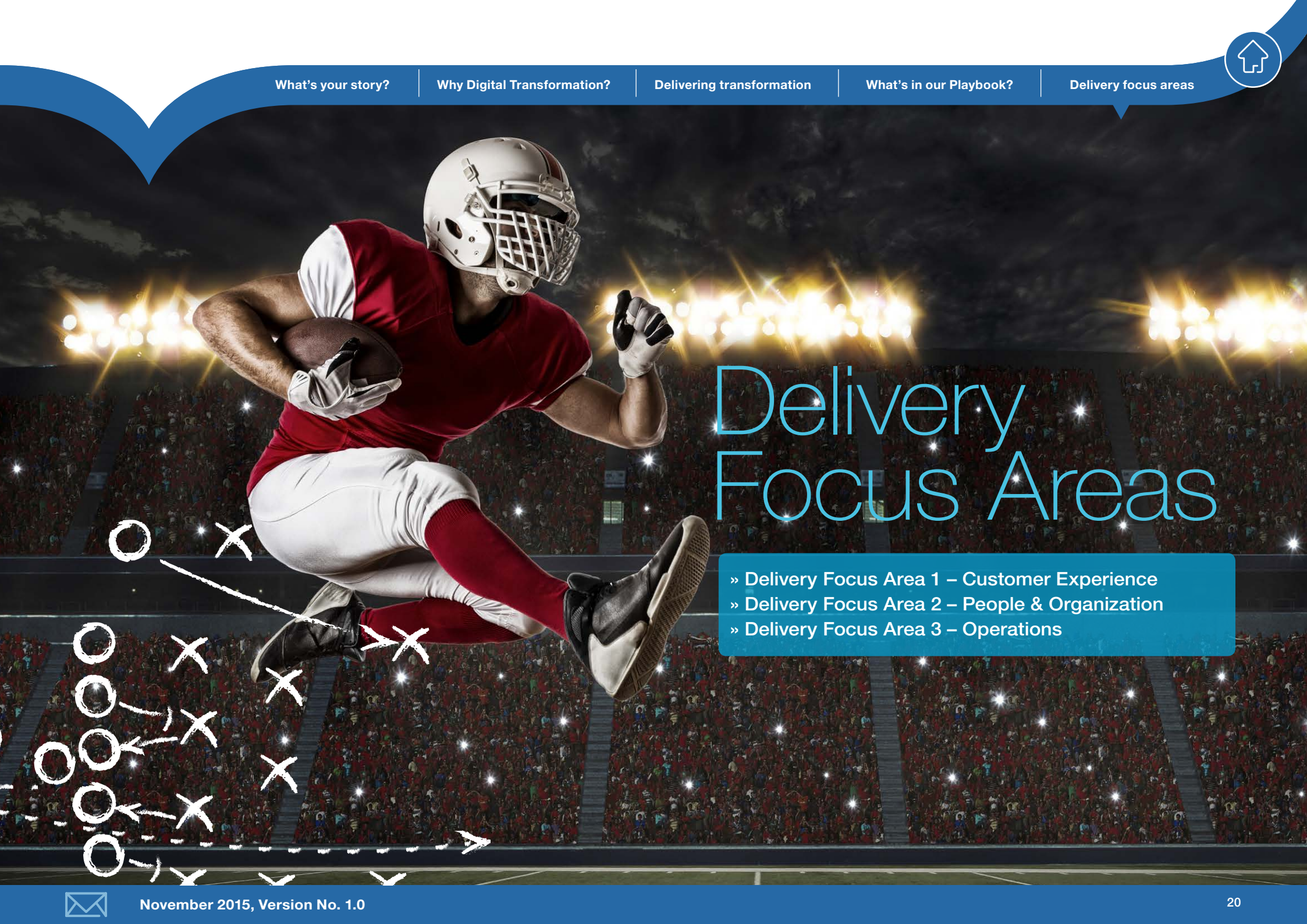
Delivery Focus Areas

» Delivery Focus Area 1 – Customer Experience
» Delivery Focus Area 2 – People & Organization
» Delivery Focus Area 3 – Operations

Delivery focus areas

What's your story? | Why Digital Transformation? | Delivering transformation | What's in our Playbook? | **Delivery focus areas**

Customer Experience » People & Organization » Operations

Customer Experience

People/Organization

Operations

The three Delivery Focus Areas enable our delivery teams to ensure their clients bring about successful and sustainable transformation of the customer experience, operational processes and business models.

All three Delivery Focus Areas are components of the digital customer experience transformation, encompassing external end customers (the consumers of services and products), internal customers (users of IT and digital processes), and suppliers, partners and operations teams across the digital supply chain.

Detailed in the following pages, they are:

- **Customer Experience**
- **People/Organization**
- **Operations**

We underpin these areas with our expertise in

- **Insights and Data**
- **Cybersecurity**

Delivery focus areas

What's your story? | Why Digital Transformation? | Delivering transformation | What's in our Playbook? | **Delivery focus areas**

Customer Experience » People & Organization » Operations

Delivery Focus Area 1 – Customer Experience

Digital Transformation programs that have the customer at their core aim to use the latest digital technologies to: understand customers' needs and behaviors; design new and engaging digital customer experiences; and engage with customers in new ways by continuously sensing and responding to their changing demands and buying patterns.

Our Digital Playbook provides tools and methodologies to help clients achieve these objectives across the following areas:

- **Customer Insight:** qualitative customer research, customer persona development, current and future state journey mapping;
- **Experience Design:** customer journey mapping, experience and content architecture, interaction design, brand ecosystem creation, prototype building;
- **Customer Engagement:** omni-channel experience strategy, experience and interaction design, campaign planning, digital media planning (paid, earned & owned), content strategy, customer identity management, customer experience management.

Delivery focus areas

What's your story? | Why Digital Transformation? | Delivering transformation | What's in our Playbook? | **Delivery focus areas**

Customer Experience » People & Organization » Operations

We have defined the following three core pillars of activity for this Customer Experience Delivery Focus Area:

Within each of these pillars (see following pages) there is a set of delivery enablers available in our Digital Delivery Playbook.

Marketing Management	**Customer Management**	**Commerce Management**
Messaging Management	Sales Transformation	Omni-commerce Transformation
Social Media Management	Service Transformation	Digital-branch Transformation
Content Management	Loyalty Management	Omni-commerce Enablers

Delivery focus areas

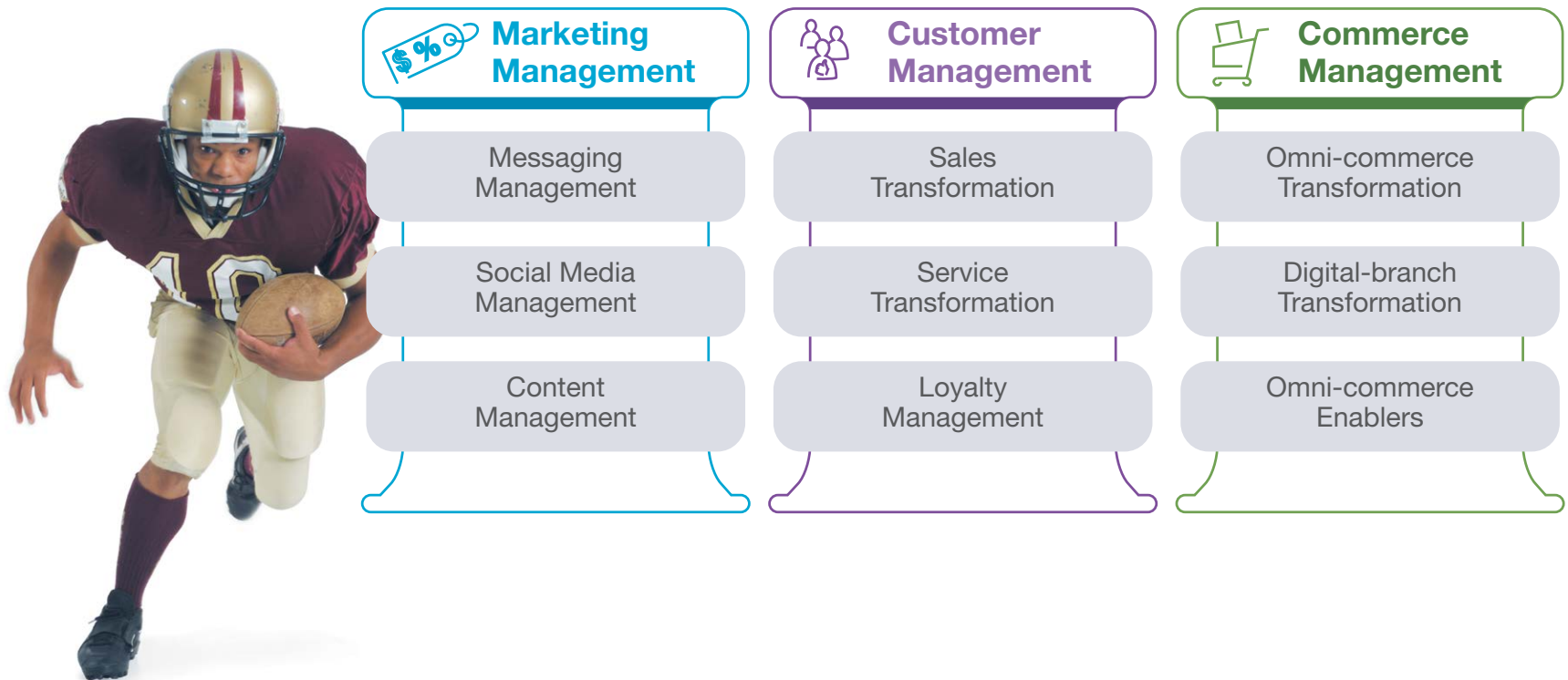What's your story? | Why Digital Transformation? | Delivering transformation | What's in our Playbook? | Delivery focus areas

Customer Experience » People & Organization » Operations

Customer Experience – Marketing Management

This pillar of our Customer Experience Delivery Focus Area helps clients define winning marketing strategies and then leverage them with the right capabilities and applications. It offers tools both to measure digital performance and ROI and to provide dynamic, compelling content that engages, entertains and interacts with customers. Our Digital Playbook also enables the personalization of offers and rewards, and it helps to drive revenue from social media initiatives.

Marketing Campaign & Messaging Management	Social Media Management	Content Management
• A delivery model which shows how to progressively build business capability as the sophistication of the tools and platform evolves • Our comprehensive end-to-end architecture and solutions addressing in-bound and outbound messaging, from advertising through to known customers • A marketing ecosystem management model that shows how to combine the best of the common platforms with the integration of new differentiated services and data sources • Platform delivery models and patterns with partners such as Teradata, IBM, Salesforce, Oracle, Adobe and Hadoop based analytics platforms	• Our Social Media command center model to define an operating model for success • A proof of service capability to help clients test and learn new capabilities before investing in their own dedicated services • Examples of how to manage communities and drive self service, with a definition of the skills and capabilities required • Our data framework for joining social media data with operational data to create unique insight • A model for integrating an evolving technology ecosystem with partners such as Teradata, SAP, Saas, Lithium, Clarabridge, Adobe, salesforce – we draw on experience of delivering integrated services and managing the data across those services	• A capability model that addresses all areas and usage of content management platforms and services, across consumers, customer and employees • A content management platform architecture that shows how to support all channels, enabling a personalized and engaging experience • An end-to-end delivery process that integrates with UX design, whether created by our own teams or the client's agencies • Adobe solutions focusing on delivering an engaging digital experience • A structured approach for delivering Drupal-based platforms at scale • A Digital Employee framework recognizing the key role of portals and involving partners such as Microsoft and Salesforce

A global consumer goods organization wanted to understand the opportunity from for driving new insights from combining internal and external data, to listen, analyze and engage with consumers. Our delivery approach was based on rapid iterations where we used evolving technology proofs of concept to develop business capability and create the operating model. Our approach ensured that at each stage we created insight, which we could use to demonstrate value to different brand managers, either providing improved consumer insights to drive campaign effectiveness, or enable real time adjustment of messaging during a campaign. The approach has evolved from a small pilot into a global initiative that will enable the transformation of the organization's consumer relationships.

Delivery focus areas

What's your story? | Why Digital Transformation? | Delivering transformation | What's in our Playbook? | Delivery focus areas

Customer Experience » People & Organization » Operations

Customer Experience – Customer Management

This pillar of our Customer Experience Delivery Focus Area aims to ensure clients are equipped to put the customer at the heart of their business and better understand them through advanced analytics, which we help them to embed in more effective front-end/digital design, whatever the device and wherever the customer is.

Sales Transformation	Service Transformation	Loyalty Management
• Our patterns and tools span direct B2C, assisted selling and the growing area of B2B sales enablement • Our patterns recognize the differences between sectors, e.g. Banking versus Utilities or Retail • Our approach in all cases is underpinned by our technology and data model for creating a 'single view of the customer', combining context and history • Our customer journey modeling approach shows how to drive sales with digital customer experience, e.g. in Financial Services • A well-developed approach to B2B sales transformation encompassing insights, salesforce enablement, sales management and customer engagement • Partnerships with key players, such as Pega, Salesforce, Netsuite, Oracle, SAP	• Our approach starts from an understanding of the multi-channel customer experience, supplemented by a view of the operational consequences • Our customer journey modeling approach allows us to analyze behavior from initial customer interest, through discovery, immediate package/offer shipping, onboarding (welcome to customer) and regular shipping • We have specific assessment tools to define channel shift opportunities and how to optimize service costs, particularly in call centers • Our well defined global roll out and operations model realizes service cost efficiencies • Innovation in experience and agent activities with tools such as Odigo and Nice • Partnerships with key partners, including Pega, Salesforce, Netsuite, Oracle, SAP	• Model based on a next generation of mobile users and engagement through new mechanisms (such as in store tracking) to create a 'next best action' • A data framework which allows us to combine customer context with loyalty, history and rewards data to optimize engagement • A Customer Relationship Management model that views 'loyalty' as a key set of capabilities • A capability model that enables us to integrate new services and offers through mechanisms such as mobile coupons • A loyalty factory to deliver operational services, such as reporting, consumer analytics and data collection • Partnerships with key players, such as Salesforce, Greenplum, Teradata, Oracle, IBM, SAP

An Automotive manufacturer wanted to roll out new CRM and Marketing capabilities globally to link consumer data with market data and drive increased sales and improved relationships with the dealer network. We successfully rolled out 15 capabilities into 10 regions over 2 years. This program drew on our framework of operating models and deployment patterns, creating an effective engagement model with each of the regional teams.

Delivery focus areas

What's your story? | Why Digital Transformation? | Delivering transformation | What's in our Playbook? | **Delivery focus areas**

Customer Experience » People & Organization » Operations

Customer Experience – Commerce Management

This pillar of our Customer Experience Delivery Focus Area helps clients maximize all customer interaction points with leading edge digital commerce that streamlines purchasing activities, grows geo footprint and provides a platform for new products in new markets, to increase revenues. It aims to bring to life Digital Transformation in stores, for sales teams, and across management.
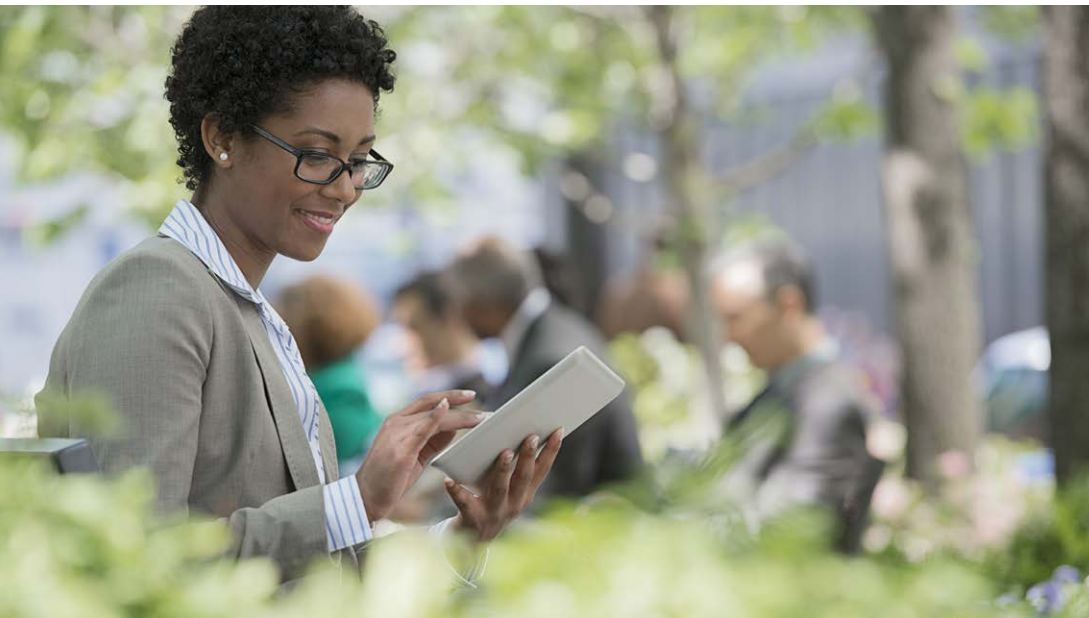
A French-based medical devices company wanted to accommodate the B2B eCommerce needs of its customers whilst adhering to the eCommerce best-practices of pioneering B2C eCommerce sites. The US subsidiary was selected as the first site to be deployed, but the long-term success of the project rested on designing a solution that could be deployed in subsidiaries across the world.

We delivered the platform using the Hybris B2B accelerator and taking an Agile RUP delivery approach. The project used integration with SAP to retain control of product data, customer data, pricing and order fulfillment, to meet the needs of the application in terms of displaying fresh data, whilst avoiding performance problems on a SAP platform designed for back-office usage

The result is a state-of-the-art, tailored and localizable eCommerce solution that is fully integrated into the company's IT landscape. Our client is benefiting from a new channel to engage with its customers, for product selling as well as services provision. The platform is supporting its Product2Services transformation.

Delivery focus areas

What's your story? | Why Digital Transformation? | Delivering transformation | What's in our Playbook? | Delivery focus areas

Customer Experience » People & Organization » Operations

Omni-commerce Transformation	Digital-branch Transformation	Omni-commerce Transformation
• Our delivery model and architecture shows how we can integrate commerce services with other aspects of the multi-channel customer experience, as well as providing standard models for back office and supply chain integration • Our model allows for the integration of 3rd party services to enable A/B testing and new forms of consumer targeting and engagement, as well as integration of new delivery methods (click and collect) and rewards (coupons) • We have a template for B2C eCommerce for new sectors, such as Automotive, encompassing all stages of the customer journey from discovery via digital channels (e.g. Facebook), purchase, contracts, receipt of product/car • We have templates for global deployment of B2B platforms and the necessary back office (e.g. customer profiles and pricing) integration for success • Our delivery is focused on partnerships with SAP (Hybris) and Oracle but we also work with IBM, Netsuite and Magento	• These models address stores transformation through Banking and Public Sector branch transformation • Our holistic approach embracing all aspects of the in-store experience, joining digital, physical and human aspects of the interaction together • Embeds mobile and wearable devices at the heart of the digital customer experience and has market leading examples both from Retail and Entertainment to demonstrate the opportunity • We use real-time data supported by analytics to focus on the customer context and drive next best action • Test and learn sit at the heart of our approach to ensure we can validate the business opportunity from the new user experience, rather than focus on technology • Innovation is crucial and we work with a wide range of partners to drive this, including IBM, SAP, Oracle, Catalina and a broad ecosystem of small partners	• We recognize the importance of data management platforms to support effective eCommerce delivery, given the increasing rate of change of products, offers and pricing • The increased rate of product change driven by eCommerce demands Product Information Management (PIM) and Product Lifecycle Management (PLM) systems and process integration. We have worked across industries and have both a delivery model and a Business Process Outsourcing Model (BPO) service • Our Digital Asset Management (DAM) links to our Web Content Management Model (WCMS) to ensure assets can be created and managed efficiently, across internal and external groups (Agencies) • For B2B clients we recognize the importance of Configure Price Quote (CPQ) tools as part of the solution and leverage our unique delivery experience in this area • We leverage our strong partnerships with technology leaders in this area: Adobe, Oracle, SAP, OpenText and StiboSystems

Delivery focus areas

Customer Experience » People & Organization » Operations

Delivery Focus Area 2 – People & Organization

The People & Organization tools and enablers in our Digital Delivery Playbook are designed to ensure that our clients achieve their Digital Transformation objectives to: foster digital innovation by removing operational and business boundaries within organizations; enable workers to operate and collaborate more effectively across organization silos; and move towards building a digital business based on transparency, efficiency and customer centricity.

Our Digital Delivery Playbook provides tools and methodologies to help clients achieve these objectives with the following:

- **Digital Innovation:** Innovation Labs (partnering, incubation, venturing…), innovation sandbox (internal structures to accommodate/test innovators), diffusion and scaling of successes;
- **Digital Worker Enablement:** integrated digital/physical workplace design, digital collaboration (e.g. ESN, video…), mobility management, employee experience management;
- **Digital Business:** digital organizational design, digital operating model, organizational change management, ecosystem management.

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Our Digital Employee Proposition drives outside-in change to organizations through our mobile enabled employee transformational services.
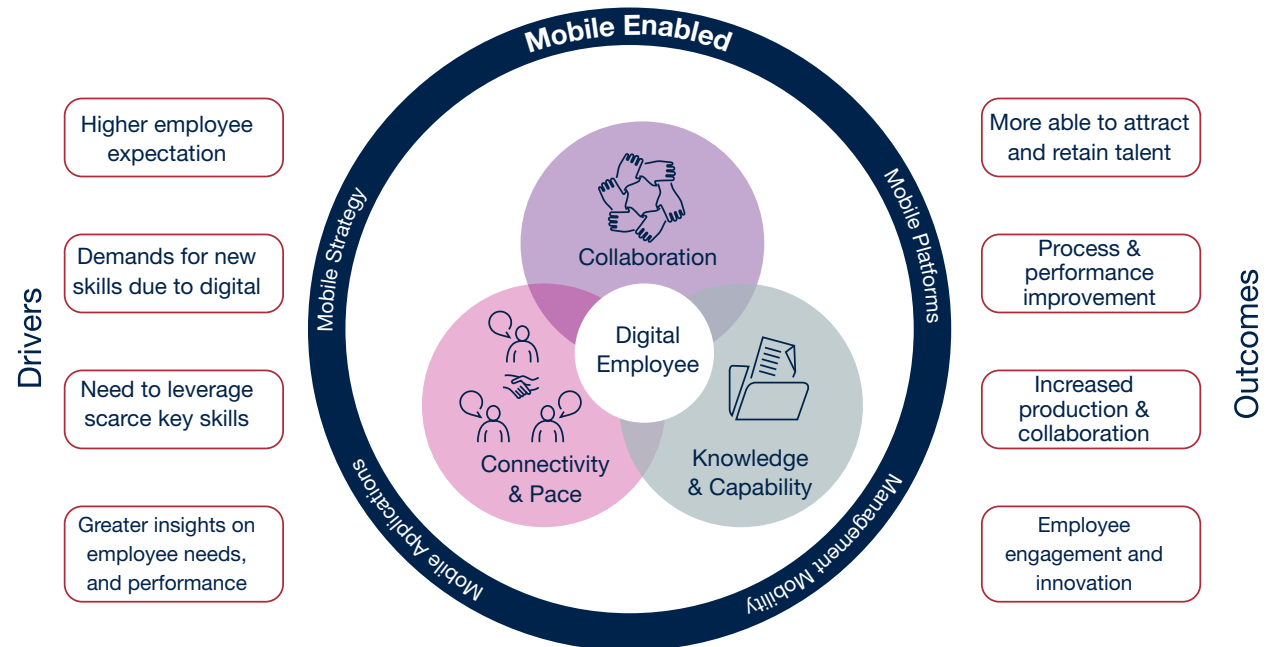
Drivers

- Higher employee expectation
- Demands for new skills due to digital
- Need to leverage scarce key skills
- Greater insights on employee needs, and performance

Mobile Enabled

- Mobile Strategy
- Mobile Platforms
- Mobile Applications
- Management Mobility

Collaboration

Digital Employee

Connectivity & Pace

Knowledge & Capability

Outcomes

- More able to attract and retain talent
- Process & performance improvement
- Increased production & collaboration
- Employee engagement and innovation

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We develop and deliver solutions that work by collaborating with clients to help them navigate and tackle the business challenges of a mobile workforce, knowledge access & and retention in an environment where the supply of talent is increasingly limited and customer expectations are rapidly growing

Collaboration

- We help clients leverage social technologies whilst managing the challenging aspects of identity management, security and governance. This enables effective interactions in both the virtual and physical space and, in turn, increases engagement, improves morale and enhances productivity and innovation within the workplace.

Connectivity at Pace

- As the world becomes increasingly global and mobile in fast paced environments, we enable clients to be non-location dependent and flexible in how and when they work. Our Mobility Centre Center of Excellence and solutions support workforce connectivity – whether you're looking to enable effective offsite working, collaboration across sites, or interaction with employees in the field. We help deliver benefits including increased employee engagement and productivity, lower rates of absence and attrition, reduced overheads and increased customer satisfaction, as well as enhanced responsiveness.

Knowledge

- We help clients ensure that skills and knowledge are maintained and transferred throughout the business by developing an understanding and focussed implementation, along with use of knowledge management platforms such as Microsoft SharePoint and using SaaS capabilities. This helps create a "content connected" workforce with increase productivity through the ability to access critical information and documents and collaboration between projects, departments, partners and individuals – regardless of location, time or platform.

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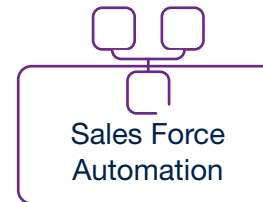Customer Experience » People & Organization » Operations

A national rail infrastructure provider wanted to assess the opportunity to equip its route-based engineering & asset management community with the tools, capabilities and insight to deliver against its business plans. Capgemini worked with the company to deliver a mobile ready decision support solution for Track assets. The solution consolidates complex engineering data from 14 asset information systems into a single digital solution, allowing engineers to view, manipulate and analyse the data on mobile devices.

A new operating model was defined to effectively embed the capability in the business, covering governance, data management, and process changes, while increasing the capability of the solution users. Collaborative development and rigorous testing has resulted in over 800 engineers using the solution.

Improved decisions have resulted in: more preventative track maintenance and renewal, resulting in fewer asset faults and failures, more first time fixes and fewer repeat faults across the asset estate, and increased asset availability overall, leading to improved customer services and fewer disruptions to trains.

Our capability framework allows us to assess the maturity of organizations and the opportunity areas for embracing a digital workplace of new forms of mobile workforce capabilities.

Communication / Collaboration

Business Intelligence

Human Resources

Office Productivity

Sales Force Automation

Field Service

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Delivery Focus Area 3 – Operations

The digital enterprise is able to continuously optimize operations and its ecosystem of suppliers, partners and employees. Our Digital Delivery Playbook has a range of assets to ensure clients achieve their Digital Transformation objectives in this area. These are to: respond to customer demand with innovative products and services; forge new ecosystems of internal and external resources; and automate operations for maximum efficiency.

Our Digital Delivery Playbook provides tools and methodologies to help clients achieve these objectives with the following:

- **Product/Service Innovation:** data-driven research & development, connected supplier/partner ecosystem, digital product lifecycle management (PLM), collaborative innovation & engineering platforms, rapid prototyping (e.g. 3D printing), asset lifecycle management;
- **Connected Operations/Systems:** value network design, demand-driven integrated planning, connected supply chain processes and control tower, centralized production control, digital shop floor management, smart service platform, data-driven value chain optimization, predictive quality & maintenance management;
- **Process Automation:** digital end-to-end process integration, no-touch order processing, digital workflow management, digital content & document management, predictive process analytics and reporting.

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In the coming few years, we expect thousands of new types of connected devices to emerge, creating billions of new Internet endpoints.

Internet of Things

The Internet of Things (IoT) revolution is having its biggest impact in the Operations area.

The IoT promises to open a new era in industrialization and innovation, providing organizations with the ability to automatically collect and analyze data from connected devices, sensors, machines and people.

The next wave of connected services originates from the IoT. We have already helped clients to use the IoT to deliver new services more efficiently and cost-effectively, and to automate processes, such as manufacturing and maintenance.

In the coming few years, we expect thousands of new types of connected devices to emerge, creating billions of new Internet endpoints. The opportunities promise to be a game changer for all companies, in all sectors. We have years of experience in the machine-to-machine market and, since it carries significant similarities to the new IoT market, our clients are in safe hands on the next steps of their digital journeys.

In this rapidly developing area we have a range of methods and approaches:

- **Internet of Things strategy**
- **Innovation Portfolio Management**
- **Solution design and delivery, in addition to wearable technologies such as glasses, wristbands, watches, and apparel**
- **Machine-to-machine solutions in manufacturing and maintenance**
- **Rapid concept and design prototyping.**

From smart metering to vehicle tracking and eHealth, the Internet of Things is revolutionizing business operations. Our e-Objects Platform provides the design, implementation and management services businesses need to support end-to-end object connectivity. We use the platform for connecting and managing objects, and linking them to business applications. By enabling two-way communication between a central server and remote devices, it allows enterprises to collect data, control devices and manage and monitor equipment or assets. Combined with an innovative business model, this can optimize processes, improve service quality and reduce operational costs.

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Permissioned Blockchain

- Leverages cryptography for identity management and transaction verification
- Protection against double-spend Security against external attacks
- Dynamically control who can connect, send and receive, create assets and mine
- Full control over every aspect of the blockchain's operations.
- Asset Control (Asset at par with Fiat currency)
- Manage by consensus by different banks
- Blockchain solutions that are compatible with Ethereum or Bitcoin Core capabilities

Blockchain Hub Connector

- Connects Bank solution to Blockchain ledger
- Translation service for different payment formats to blockchain payment format
- Dynamic rules definition (smart contract capabilities)
- API services that allow for easy integration with blockchain history
- Dynamic address creation (for privac against non-authorized agents)
- Support for multi-signatures
- Ability to build new type of payment services (micro-payments) and reward systems
- Tools for compliance and regulatory control

Some Characteristics of a Permissioned Blockchain Using a Payment Hub Connector

Source: Capgemini analysis

Blockchain

One aspect of Digital Transformation that organizations are still getting to grips with is the Bitcoin payment system – and its underlying blockchain technology. This was invented by Satoshi Nakamoto, who published the invention in 2008 and released it as open-source software in 2009[1]. Like any good story, this one is shrouded in mystery. No one knows who Satoshi Nakamoto actually is, and his, her, or their identity is still hotly debated today.

Even more significant perhaps than this creation of a purely peer-to-peer version of electronic cash was the technology that drives it. In essence blockchain is a decentralized, consensus-based, tamper-proof data structure that provides a shared public ledger open to all. The blockchain model is different from transaction processing models:

- Blockchain is a distributed processing model that does not rely on centralized hubs. Processing can occur on any node based on a first come, first served basis.
- It is an open model, where anyone with the right tools can participate and be rewarded. So it is not vulnerable to centralized control or profit taking.
- The security is based on cryptography rather than boundary defence of processing platforms, as well as open visibility of transactions. As such it happens purely in the cloud with no need for centralized systems or privately owned data centers.

This area of digital change is evolving rapidly and, as such, the biggest question is 'where do I start to investigate the opportunity?' We have a highly active Global community and capability in the area, where we have applied 'test and learn' to ourselves by issuing our own Crypto Currency for gamification of the learning process (the SRT coin).

We have developed a 7 Step evaluation model that can be used by organizations wishing to start considering the technology options relevant to their circumstances.

1   Davis, Joshua (10 October 2011). "The Crypto-Currency: Bitcoin and its mysterious inventor". The New Yorker.

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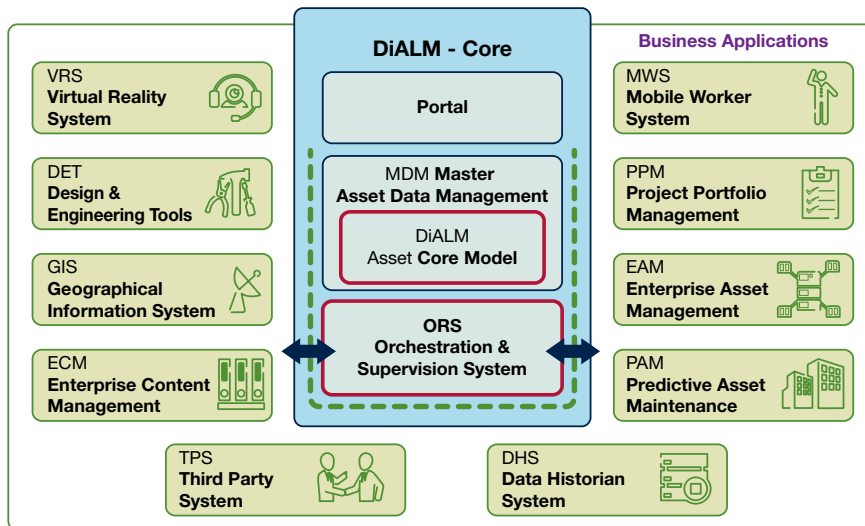
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DiALM - Core
- Portal
- MDM **Master Asset Data Management**
  - DiALM Asset **Core Model**
- ORS **Orchestration & Supervision System**

Business Applications
- MWS **Mobile Worker System**
- PPM **Project Portfolio Management**
- EAM **Enterprise Asset Management**
- PAM **Predictive Asset Maintenance**

- VRS **Virtual Reality System**
- DET **Design & Engineering Tools**
- GIS **Geographical Information System**
- ECM **Enterprise Content Management**
- TPS **Third Party System**
- DHS **Data Historian System**

A Master Data Management platform purpose-built for capital-intensive industrial enterprises

Digital industrial Asset Lifecycle Management (DiALM)

From design to decommissioning, industrial asset managers are challenged to make critical decisions across asset lifecycles. Treading a fine balance between safety, regulatory compliance, production efficiencies, budgetary constraints, and market pressures means that, in reality, they struggle to obtain a single instance of asset information from a patchwork of software. The result is bad, delayed, or ineffective decision-making, often leading to expensive project delays, industrial accidents, and penalties.

By basing these critical decisions on trusted asset information, they can achieve lower risks and costs – and when digitized and standardized, this information establishes a true digital identity of industrial assets. In turn, this empowers asset managers to enhance operational efficiency, comply with the most stringent safety, health, and environmental regulatory frameworks, and improve returns on asset investments.

For large enterprises with substantial investments in complex industrial assets, Capgemini DiALM offers a competitive edge through a robust, digital platform to record, organize, validate, and apply asset and process information. By substantially easing the day-to-day decision-making process of asset managers, DiALM reduces risks and costs and prepares our clients for natural calamities, seasonal production spikes, and planned maintenance shutdowns. While avoiding the common pitfalls of dispersed and incoherent data, DiALM also stands out as an advanced training tool for new entrants in industrial ecosystems – from trainee engineers to COOs.

Independent of the source applications, DiALM integrates asset data and allows process orchestration. It incorporates and shares data updates to maintain a trusted digital hub across the enterprise. Additionally, it enables owner-operators and Engineering, Procurement, and Construction (EPC) partners to seamlessly handover digital assets, while retaining their integrity during transitions. In its features and coverage, DiALM offers an incremental approach:

- From critical to less-critical assets, with increasing data depth
- From data acquisition to data production process control
- From pilots to highly available integrated implementations

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Digital matters. Be confident in your delivery options for faster and sustainable Digital Transformation.

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About Capgemini

With 180,000 people in over 40 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services. The Group reported 2014 global revenues of EUR 10.573 billion. Together with its clients, Capgemini creates and delivers business, technology and digital solutions that fit their needs, enabling them to achieve innovation and competitiveness. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.

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People matter, results count.