Catherine Doran
CIO Royal Mail Group

Catherine Doran joined Royal Mail in September 2011 as Chief Information Officer from Network Rail, where she led the company-wide transformation programme. Before that she had been CIO for BT Retail and Capital One (Europe) as well as holding senior IT management positions at NatWest Bank and British Telecom. Catherine is a member of the CIO Board for the Tech Partnership, a growing network of employers creating the skills for the digital economy and working to inspire young people about technology.

Q. Could you provide an overview of Royal Mail Group and how the various postal services are organised within it?

A. Royal Mail is one of the oldest companies in the world and we will be celebrating our 500th anniversary next year. Under our Universal Service Obligation we are required to deliver letters to twenty nine million addresses in the UK, six days a week, with the cost of a stamp being the same regardless of the distance that the letter has to travel.

The Group is split into three brands: Royal Mail, its core letters and packets delivery network, Parcelforce and GLS, Global Logistic Services which has operations in 37 countries. In terms of scale, we employ 143,000 people in the UK and hire additionally about 19,000 temporary staff for about six weeks to deliver the Christmas peak. We deliver in excess of 13 billion letters in the UK and 1.1 billion parcels every year.

Q. Where does technology fit into Royal Mail's operations?

A. For at least 15 years now, we have used letter sorting and address interpretation machines in the mail centres to process the huge volumes of mail handled every day. If any one of

these machines goes down, we are able immediately to re-route the mail. The system was designed as a kind of node system which meant that business continuity was built-in from the start. Since the core operations systems were inherently resilient, it had given the business an inaccurate belief in the resilience and the robustness of information technology systems.

It is really only in the last decade or so that IT has come to the fore with for example, the success of systems like the OBA, Online Business Account ordering platform used by our largest corporate customers. The OBA platform processes a huge volume of transactions in just a few hours every day and accounts for a large proportion of company revenues.

Q. How was IT organised when you joined the business?

A. Over an extended period of time, IT had been under invested in, like many other parts of the business. I joined Royal Mail from Network Rail in 2011, but some years before in 2003, nearly all of Royal Mail's IT had been outsourced including most of its people, the buildings, the machines and all the applications. There was a view, which was pretty common at the time, that having outsourced the IT you could outsource the risk.

Q. How were the IT outsourcing arrangements being managed?

A. Often when companies go through a major outsource programme, they will put a great deal of care into the

retained organisation as being the 'conscience of the business', as its 'corporate memory' and owning the future. Royal Mail had retained an internal IT organisation in 2003, but by the time I joined in 2011, of the 400 people retained in 2003 numbers were down to just 119 staff. We had a small set of individuals with huge amounts of knowledge in their heads which is both very powerful and risky in equal measure.

We did not even have capabilities such as a fully resourced and functioning architecture team or security team. Everything was cut back to the core of what was needed to be done 'to keep the lights on'. Looking back, when I consider how the 119 people managed to keep the whole ship afloat, I am stunned and full of admiration for them.

Q. You embarked upon a multi-year transformation programme soon after joining. What were its main priorities and their impact on the application landscape and other aspects of IT operations?

A. We had four things to balance and any of the four by themselves were big asks.

The first priority was to rebuild the IT function itself. At that time, the application landscape was 388 systems, but it took us about four months to find that figure out since nobody had a complete picture. Therefore, one of the immediate business needs was to get a clearer idea of the landscape itself. The annual

budget for IT was about £200 million with headroom to be as high as £350 million, but the ability to invest was severely constrained by the fact that the IT department was sub-scale. We needed a rapid infusion of talented people to work alongside our existing teams who could maintain and extract the best out of a legacy environment and build for the future needs of the business, which would need to operate in an increasingly competitive and deregulated market environment.

The second task was a programme that we called Get Safe, named as such to emphasise to non-technical people its importance in managing day-to-day operations. For many years under public ownership, Royal Mail had under-invested in its annual care and maintenance of its physical estate. Due to this successive under-investment, four years ago many of the servers were over 5 years old, and a few were even older. While these servers continued to function perfectly well, it meant that in some instances there were databases, applications and even operating systems which were out of support. Any ageing IT estate poses a potential risk to business operations and so we deliberately used the term Get Safe to help the rest of the business understand the need to invest in our physical IT assets, like they had to do with engineering systems for mail sorting operations in the mail centres.

The third task in 2011 was that the major service contract with our incumbent supplier at the time was scheduled to finish two years later in 2013. The business had not even started to think about what would be the desired shape of any replacement contract or set of contracts. At the time, as a publicly-owned body we also needed to go though the government procurement process, OJEU (Official Journal of the European Community) which itself can be a time

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consuming process. For these reasons, we decided to extend the existing contract by two years to give us time to decide on what we wanted to do in the longer term.

And fourthly, the UK coalition government had already stated its intention to privatise the RMG business. We knew that by early 2012, the Royal Mail would need to have built a long-term strategy to make the business more attractive to institutional and private investors. This meant IT needed to work more closely with the business and become more customer-centric, offering more products and services, and start to move the dial rapidly in terms of what Royal Mail was capable of doing.

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Q. What problems did you face in bringing about these transformational changes in an organisation like Royal Mail?

A. We had to keep the business transformation relevant and interesting for our own people while at the same time, organising a rapid programme to hire additional people. For both groups, we had the same story: that together with them we were going to rebuild and transform an IT function. That is pretty exciting for IT people.

At the end of my sixth month here, I got sign-off from the board to grow the internal IT function from 119 to 350 people. In fact, we ended up hiring more than that number because as we went on, we realised we needed more people. Incredibly, we received more than 33,000 applications for the 240 positions, which is by any odds just amazing.

Q. How did you do it from a crawl, walk and run perspective?

A. We could not wait for the recruitment process to be fully up and running because it would slow us down. As a business, we also could not afford to get external consultants to come in and do all this work for us.

So instead, we worked out that there were 67 critical roles which needed to be filled almost immediately. These 67 roles would give us sufficient head room to be able to launch a full recruitment drive. We met with several consultancies and told them that if they were interested in providing any of these roles, we would need to keep their people anywhere between six and twelve months, but while their consultants were here, they had to work for us and have our badge.

The second part was equally as important. There were 119 people internally who had each been through

difficult circumstances over a long period of time. We needed to make sure everyone understood what we were doing, why we were doing it, and what we needed to do between us to make it a success. We knew that because they had stuck with the business through all the hard times, they must want things to get better and were willing to make it happen. And they did it, more than any of us could ever have dreamt.

Q. How were you able to integrate such a large number of new staff so quickly into a complex organisation like Royal Mail?

A. There is a Royal Mail vision and we are part of it. One of our tasks in IT is to tell the rest of the business how we can contribute to delivering that vision. Any organisational culture is something that sits underneath this. My view was that if we started with 119 people and we finished up with 400 plus another 100 contractors and 2,000 people who we were working with from third-parties, then we would end up with some form of organisational culture. However, if we did not think about the culture beforehand, we may not like what we end up with.

To institutionalise what we previously carried out in the early days, over the last 18 months or so within IT, we have run what we call our Culture Crew. These are people who get together to think about our culture and think about ways to make all of our working lives better. This group has developed our three core values which are: be positive, be brilliant, be part of it. We have done exactly the same thing with our business partners since if you are sitting in one of our offices anywhere in the country, we all need to work together as a team.

One way of measuring the extent to which all employees are committed to the organisation's goals and values, and feel motivated to contribute to its success, is to run an employee engagement survey which Royal Mail has conducted for all of its workforce for a number of years. Back in the 2011, IT was ranked lowest in the company on the employee engagement score by a country mile. A year later in 2012, we caught the pack up a little, but we were still at the back. In 2013 and 2014 IT employee engagement had risen

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to joint third place in the company. In the 2015 employee engagement survey we are joint third again, but we are working hard as a department on improving that!

Q. What actions are you taking to promote IT as a career option to a more diverse employee base?

A. This whole area is really important to me. Ethnic diversity I am pleased to say, is not so much of an issue in IT compared with some other professions, whereas gender diversity remains a major issue to be solved. The proportion of women working in IT in the UK is hovering between 15 and 16 percent of the workforce. I think the maximum figure it got to was about 22 percent about 15 years ago, but the proportion of women working in IT is now going backwards. Part of the problem is a widespread perception issue about working in IT especially prevalent among women.

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I am on the board for eSkills UK and when we have carried out research that involves talking with female undergraduates, we have found that most women regard working in technology as not creative and being very male oriented. When they think of IT, often they think of desktop support and even people walking about with screwdrivers. What they do not see is the interaction that IT has with the rest of the business – working with the sales and marketing teams, working with finance, working with commercial operations, and understanding how to solve complex problems.

There is also a practical issue about the language and the visual imagery that is often used in IT job ads. Several years ago when Royal Mail was running its main IT recruitment campaign online, we made sure that the job postings linked to videos that featured people who could be identified with different ethnicities and equally represented the genders. Since workforce diversity is important for any business, we set ourselves a goal, but crucially not a target since it is more important that people are able to do the job and not whether they wear a skirt, to ensure 30 percent of our new hires were women. We thought that 30 percent of our new hires were women, it would be equivalent to double the national average and it would help make the working environment feel more balanced. We ended up with 31 percent women.

We are also working with Capgemini on several initiatives at an industry level to increase the number of women working in IT. As an employer, for the second year running, Royal Mail has also been included in The Times Top 50 Employers for Women.

Q. What were some of first IT initiatives delivered that the business benefited from?

A. I have already mentioned that it took several months after I started as CIO, to find out how many applications and systems we had. It also took a similar period of time to find out how many projects were running. One of the first things we had to do was to build a comprehensive reporting function. The number of projects delivered to the business also soon increased. By the end of 2012, we had delivered about 20 projects during that year and by the following year in 2013-14 we were able to deliver 40 business projects. Last year in 2014-15 we delivered 61. And all of this has been achieved with a flat headcount.

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In addition to the four key tasks which I referred to earlier, there has also been a need to build the credibility of IT by making sure that the people from IT who engaged with the business would work with them as equals, and who would willingly challenge business colleagues and bring new ideas to the table. All this coincided with Royal Mail Group undergoing significant organisational changes in the run-up to the part-privatisation that took place in 2013, after which it became a publicly-listed company.

Q. Can you provide examples of where you have removed complexity from the application landscape?

A. In most large established organisations, irrespective of ownership or industry sector, there will be certain systems that have been developed over a period of time that few people know much about apart from their core users. As an example, within Royal Mail there was a Yard Management System that was used by one of the major distribution hubs which assigned a loading bay to the lorries or trucks as they arrived. Managers knew that if the system went down, apart from the disruption to our own operations, within a few hours lorries could be backed-up on nearby major roads. In situations like this, where IT needed to work closely with the business owners to update a system to ensure it met current operational demands, it was encouraging that at board level, other senior executives were always supportive and wanted to become part of the journey with IT to find a solution.

As another example, in the past Royal Mail had a habit of creating a point interface for each of its largest corporate customers which led to it needing to support more than 300 APIs. For each new API, it could take several months to build the integration and to carry out all the testing before the API could go-live. Last year, we implemented a shipping API and it has now become our standard interface. As a consequence, we have been able to reduce the length of time it takes for a new large-scale corporate customer to integrate with us from months to weeks. There is also programme running to look at how API management can be further improved based on a direction of travel requiring that integration should be completed in a couple of days for complicated instances and a couple of hours for simple cases.

More generally, Royal Mail has always customised every application it uses which means that anytime either IT or the business wants to try to do anything with those platforms IT usually has a large-scale and complex job to do. To upgrade to any new release, we have to re-apply all of the existing customisations and conduct extensive regression testing. So nowadays, we have a new philosophy to any customisation. First of all, the answer is "no", but if there is something we really have to do because of an overriding business requirement, we will do it on the edge of the product rather than in the heart of it.

I mentioned earlier that in 2011, Royal Mail had 388 applications. As we sit here now four years later, we have 220 and our direction of travel is that we do not need all of these applications. We reached this number because like many similar organisations, over a period of time people had built silos. Our

Core Platform Model

Royal Mail has identified the need for approximately 18 core, flexible and customisable platforms plus around 50 specialist systems
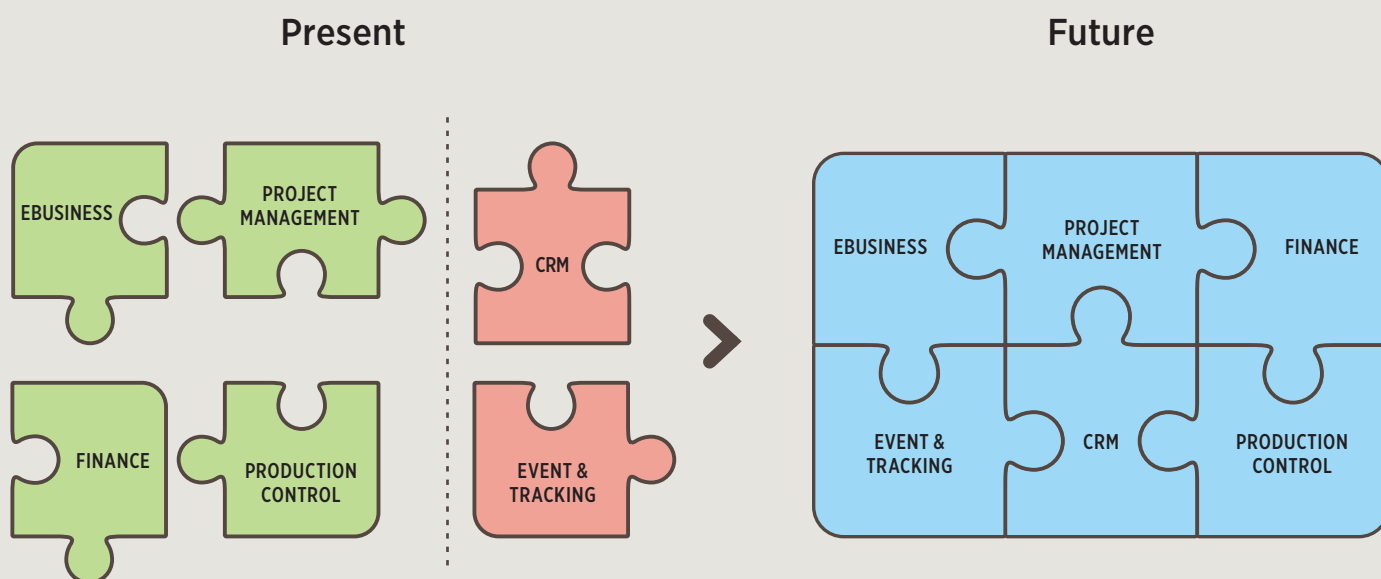
medium term goal is to have around 18 core enterprise platforms and between 50-60 specialist applications for niche business requirements.

Q. How were you able to measure the contribution IT was making to the business?

A. Let me provide a couple of examples across Sales and Marketing and Commercial Operations

Royal Mail has appointed a Chief Customer Officer, Mike Newnham who came to us in 2012 from a mobile telecoms operator. Mike has helped us focus better on how we think about our customers and our customer's customer, and how we are going to simplify our products. A customer in the Royal Mail's view had in the past always been the person who bought the stamp and not necessarily the recipients of letters and parcels.

Against that backdrop, the Business Digital Team was formed and at the same time in IT we set-up an e-Business team. Between us, we

Present

Future

decided to co-locate the business and IT people together and run these programmes and their teams like a platform. This requires us to have a standing team which includes some Capgemini people, so that the size of the teams can adjust quickly to match the peak and troughs in demand. The same model is being implemented for our HR platform where we have one of the most complicated payroll systems in Europe, running a weekly payroll for the vast majority of our staff. The platform model is also used for other business-critical areas managing complex, large–scale business processes, some of which due to the nature of our business, are subject to physical and operational factors beyond our control.

Our platform model has been running for the last three and a half years and these efforts have played a part in the Royal Mail Group being ranked 15th out of the Top 20 Business Superbrands in the UK. Four years ago, Royal Mail did not even get into the Top 100.

With regards to commercial operations, we know what 'goes in at the top' and we know 'what comes out of the bottom'. We also know that we deliver 93% of 1st Class mail within one working day of it having been posted anywhere in the British Isles, but we do not know how it is done because we do

not measure it. Consequently, there is a major project underway looking at the Group's entire commercial operations based on five pillars: data capture, production planning and control, supply chain feasibility, network scheduling, and final mile optimisation. The goal is to use information better to understand and streamline operations.

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Q. How are you planning for the future?

A. We have set-up a Strategic Change Forum to look at the most critical things for our business through a lens of business change. Much of its attention has been focused on our peak period running up to Christmas each year. Christmas at Royal Mail is five and a half weeks long and we start planning for it in the spring. Last year we were the only national delivery
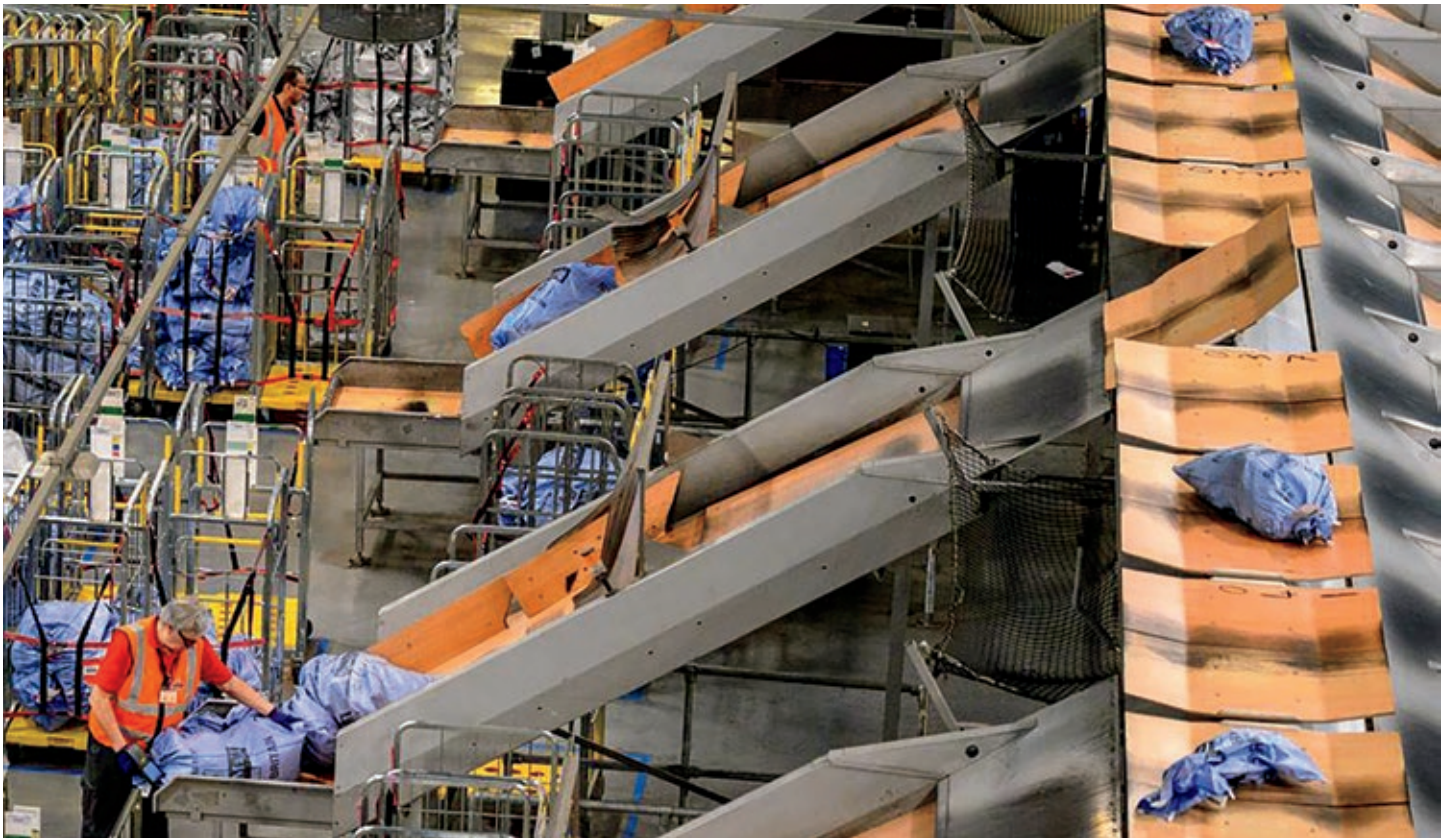
company that got through this entire period without any major problems. This was really important for me at a personal level, because it was the first Christmas that IT went through without touching the sides.

This year we expect again to handle higher parcel volumes compared to previous years and so I have been running a project all year to check that we would not face IT operational issues if the parcel volumes were to be doubled. Throughout my career, I have been used to working at scale, but what happens in Royal Mail for that five and a half weeks is just eye watering.

Q. How is Royal Mail's business changing?

A. A phrase I like to use to describe Royal Mail is that "we are a 500-year-old start-up". While it has a long history of operating a successful postal business, nowadays Royal Mail operates in a highly competitive national market as well as internationally. Like other businesses we face the power of digital and the challenge of needing to be 'always-on' and taking account of people's changing working patterns and lifestyles.

In recent years, we have also seen a number of new entrants into our domestic market not all of

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which have been traditional postal or logistics businesses. None of them have to meet our Universal Service Obligation which makes our business more geographically-dispersed, larger scale and usually more complex. For many years when the Royal Mail was publicly-owned, there had been under-investment in many parts of the business under successive governments. Fortunately, the historical under-investment in IT systems is now being addressed.

We also need to meet the expectations of more and more of our customers (myself included) who want to receive letters and parcels more quickly, and at a time and way that better suits them and their lifestyle. This provides us with a tremendous opportunity to develop new and better services for our customers and for the benefit of mail recipients, built on an increased customer-centricity that runs across the entire business.

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