THE
**ADVANCED
SERVICES**
GROUP
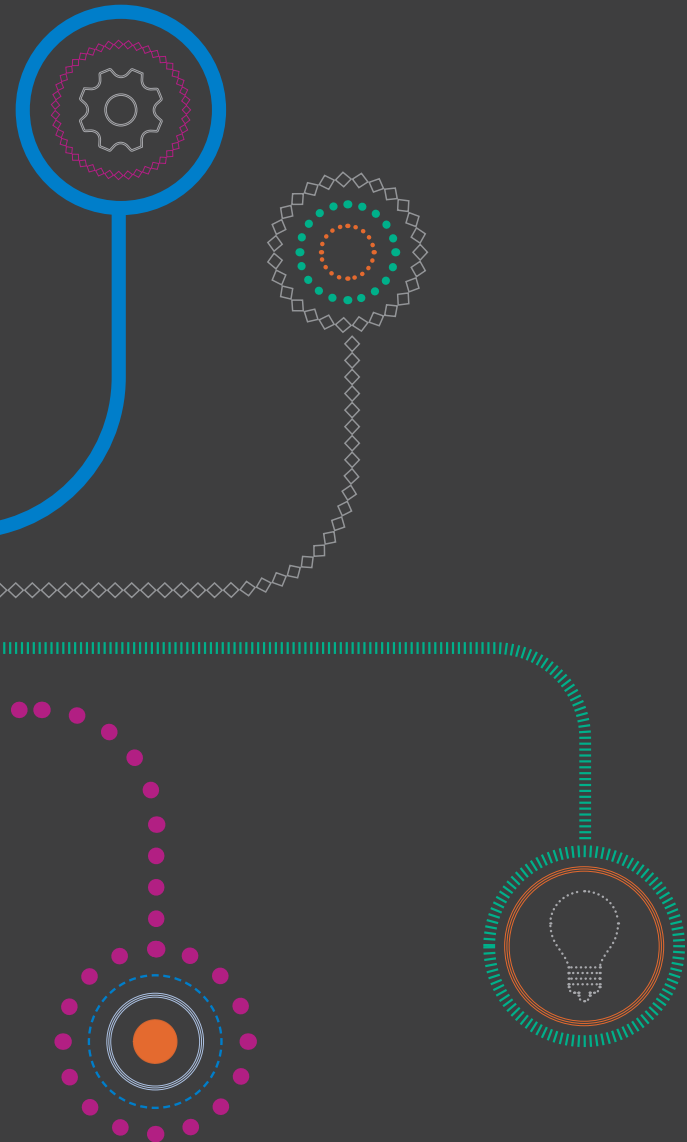
Aston Business School
BIRMINGHAM UK

FROM INVENTION TO SERVICES INNOVATION:
Xerox and its design journey with Intelligent Workplace Services.

Tim P Pearce and The Advanced Services Group

About this case study

This extended case study focuses on the evolution of Xerox's managed print services (MPS). It starts with a brief introduction to the company and – in particular - to printing in the office. It plots the emergence of managed print and how it has since evolved to be a prime example of an advanced service. It then lays out the journey taken to fully develop the offer, together with the implications and emerging issues for the underlying business model. The study closes with a look at the future of managed print.

The case study is authored by Tim Pearce- in conjunction with the Advanced Services Group-using insights drawn from his many years spent with Xerox Services, his last role before leaving being in global programme management. Xerox has not contributed to or endorsed this case study in any way.

Xerox:
A company introduction

This is how Xerox describes itself today and – as you would expect – it says a lot in a few words.

'Xerox Holdings Corporation makes every day work better. We are a workplace technology company building and integrating software and hardware for enterprises large and small. As customers seek to manage information across digital and physical platforms, Xerox delivers a seamless, secure and sustainable experience. Whether inventing the copier, Ethernet, the laser printer or more, Xerox has long defined the modern work experience'. [1]

This statement highlights the company's approach to improving peoples' work lives in organisations of all sizes, and that it works where disparate technologies meet, to ensure information transitions between virtual and physical media as smoothly as possible. The focus is on delivering an 'experience' for employees, like many contemporary organisations. Well-known stories of the company's past typically focus on the numerous new technologies to come out of its Palo Alto Research Center ('PARC'). Less well-known, but arguably more relevant to customers' businesses and the delivery of the 'experience', is the fact that it has also innovated advanced services off the back of these technological inventions.

The continuing relevance and scale of overall operations is illustrated by some key metrics: Xerox has a global customer base that includes all ten of the top global banks, healthcare payers and providers, some of the largest universities, eight of the top ten global telecoms providers and seven of the top ten largest automotive and truck manufacturers, as well as 50 state governments. It operates in 160 countries, holds over 18,000 active patents for innovation and is ranked #318 in the Fortune 500 list of the US' largest corporations.

Figure 1 shows that Xerox's core market is only 60% of what it was 15 years ago ($67bn compared to $112bn). It has also seen a dramatic shift in mix away from hardware for office print towards managed and value added services. In 2005, value added services were worth $20bn compared to $27bn of Managed Services in 2019, while Office Print (covering hardware) was worth $67bn in 2005 compared to $33bn (A3 and A4 multifunction printers combined) in 2019.

Financial reports show Xerox's business is in steady decline, but with a stated ambition to stabilise. It is highly cash generative, services remaining key (and delivering higher gross margins). In 2019 annual revenues were $9.1bn, with 'Services, maintenance, rentals' contributing 62% [2]. This represented a year-on-year decline of 6.2%, the target (pre-Covid) being to stabilise them by 2021. Gross margins on sales were 35%, and on services 43%, with an overall operating margin of 13.1%. This generated an operating cash flow of $1.244bn. As for channel mix, Direct / Enterprise accounted for 41% and 'Channels' for the rest - Indirect Channels 37% and Xerox Business Solutions (a wholly owned reseller network targeting SMBs) 22%.
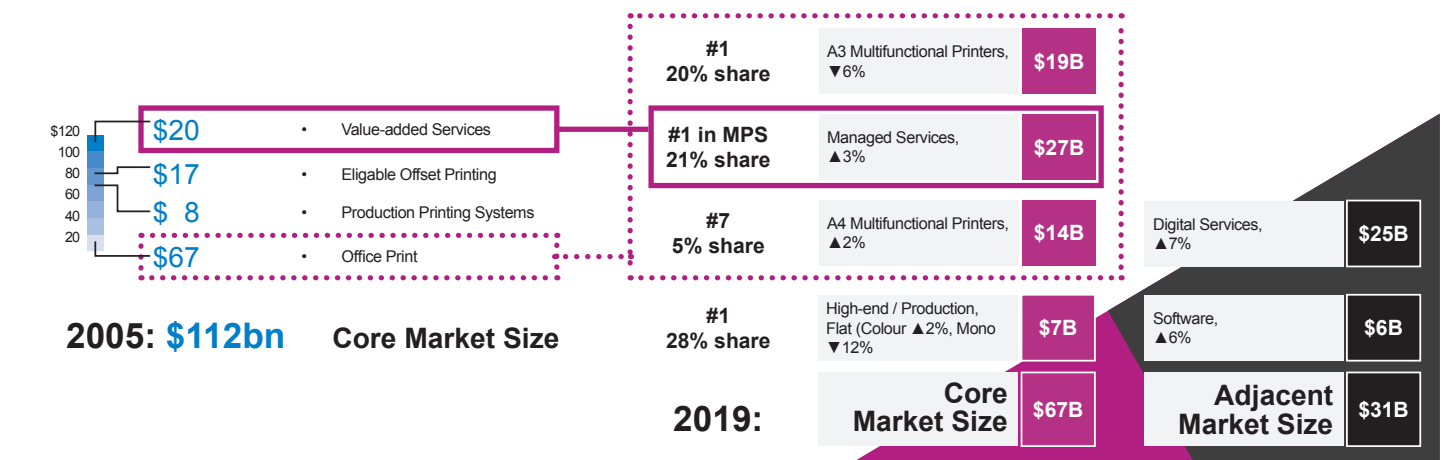
FIGURE 1: XEROX'S MARKET

Sources: Xerox 2005 & 2019 Annual Reports, Xerox 2019 Investor Day Presentation

Printing in the Office: Xerox's history

Xerox invented the copier, Ethernet, the laser printer and more. But the brand is most commonly associated with document copying- often referred to as "Xeroxing". This is because of the founder's initial focus. Chester Carlson was a patent lawyer and had to make carbon copies of the same document by hand. He focused on developing technology to turn this laborious job into one that happens at the press of a button. His answer was 'dry writing', the process for copying that later became known as 'xerography'. It replaced the existing 'wet' process by using electricity to transfer projected images onto copy paper [1]. The first commercial use of this technology came with the 914 and with it came the first business model innovation: it was offered on a lease as it was expensive to buy, with customers then purchasing additional copy volumes. This assured its commercial success.

The 1970s saw two more key Xerox inventions emerge. The Ethernet enabled numerous computer-like devices to connect within a local communications network. And the Xerox 9700 was the first commercially available laser printer, introducing the era of computer-driven, digital printing [4]. This - with other developments such as evolution onto the desktop and from mono to colour - drove international expansion and record earnings during the decade. At the same time intense competition arrived from Japan, prompting Xerox to improve product quality and design, to introduce its first digital copiers – with MFDs to follow. As then CEO Anne Mulcahy said in 2005:

"…we know more about the document, care more about the document and can do more with the document than anyone in our industry".[3]

This level of expertise is a pre-requisite for the development of advanced services, in Xerox's case around document management. Looking at how this has informed the product range Xerox has today, it provides users with a touch screen 'to make work flows simple and easy' through the Xerox ConnectKey Smart Workplace Assistant. It can be customised and personalised to provide the same user experience as a smartphone or tablet. In summary, the original 'one button press for a copy' has evolved into one touch access to the cloud for documents through an MFD (Multi-Function Device).

Managed Print: How did it emerge?

In the run-up to the new millennium Xerox went from prospering to facing a crisis, with alarming speed. Key markets weakened whilst competition stiffened. The company attempted to make too much change with too much haste, challenging existing customer relationships. Revenue and profits declined, and the share price halved. To survive, a few things needed to be done extremely well.

The turnaround plan had three major planks to stabilise the business, one being 'to strengthen the core business for growth'. Xerox discovered its customers' real issue was the total cost of running a print environment – not simply having ever-cheaper devices and supplies. What then if businesses didn't lease (or buy) copiers but simply contracted a managed print service instead?

Key to enabling this was understanding the cost drivers and the services then needed to reduce them. In addition to direct print costs there was commercial printing as well as the hidden costs of procurement, administration, the footprint of devices and storage of supplies and integration into the IT Service Desk, as well as those associated with environmental sustainability and organisational productivity. All told, it was estimated 1-3% of a company's annual revenue was taken up by print-related costs, rising to circa 10% in document-intensive businesses.

MPS could reduce this by 30% by managing a customer's entire print fleet, the more mature version of it involving the complete outsourcing of the print infrastructure (commercial print included). The customer stops owning the related assets – they are taken off its balance sheet – and only pays for what is used. A utility-type business model, delivered using a cloud-enabled technology platform.
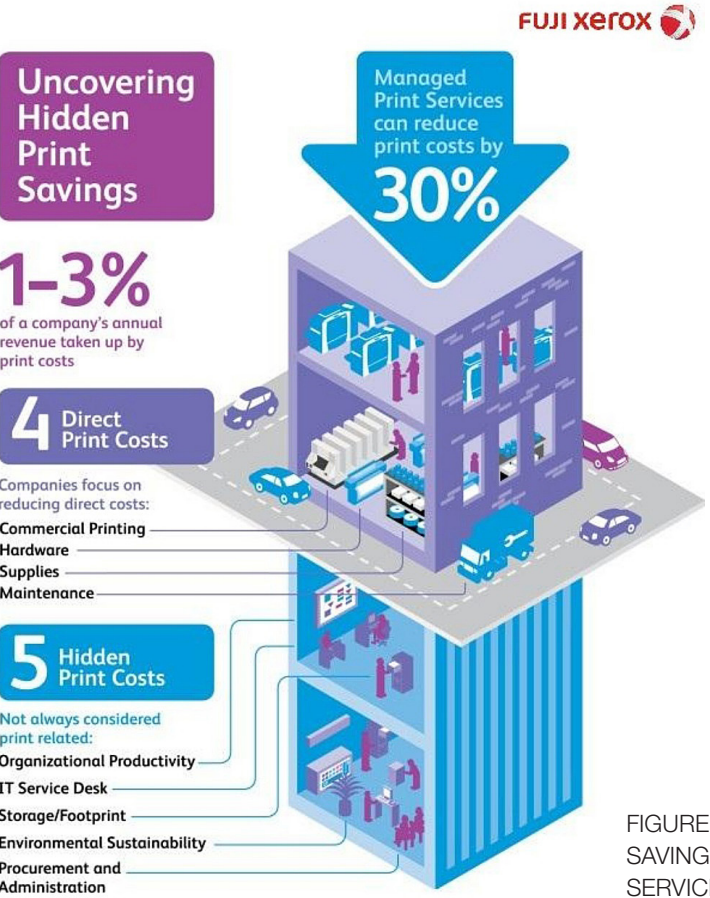
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FUJI XEROX

Uncovering Hidden Print Savings

Managed Print Services can reduce print costs by **30%**

1–3%
of a company's annual revenue taken up by print costs

4 Direct Print Costs
Companies focus on reducing direct costs:
Commercial Printing
Hardware
Supplies
Maintenance

5 Hidden Print Costs
Not always considered print related:
Organizational Productivity
IT Service Desk
Storage/Footprint
Environmental Sustainability
Procurement and Administration

FIGURE 2: UNCOVERING HIDDEN PRINT SAVINGS WITH XEROX'S MANAGED PRINT SERVICE. SOURCE: FUJI XEROX AUSTRALIA

Case Study:
A Major Global Financial Services Company
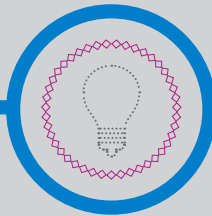
"We removed 35,000 printers from our fleet, cut our costs by 35 percent and freed up space in hundreds of buildings, all while improving security and sustainability. Once you see the benefits of MPS, it sells itself."

Project sponsor, Major global financial services company

The following case studies illustrate the managed print value proposition and what it delivered for customers [1]. The first is a major global financial services company, whose own growth was driving escalating complexity and infrastructure costs. A detailed upfront assessment drove the solution, one which focused on value and not purely cost, so that less expensive floor space was used whilst printing 'less for less'.

THE CHALLENGE

A major global financial institution was looking for ways to trim its real estate costs and more efficiently house its expanding employee population. At the same time, the firm's printing costs were climbing and its print infrastructure was becoming increasingly complex, exacerbated by a lack of centralised control. Although these challenges emerged independently, they were met with a single solution – Managed Print Services (MPS) from Xerox.

THE SOLUTION

Xerox provided a building-by-building assessment of the client's print devices and operations. Working closely with the customer, Xerox developed a Managed Print Services solution that involved reducing the firm's printer fleet, networking the company's printers, implementing shared device usage and centralising control. Consequently, costs went down and floor space opened up. Today, the global financial services leader is printing less for less, with less square footage devoted to equipment.

THE RESULTS

- Centralised print visibility, management and support on a global level
- Maximised floor space and occupancy for hundreds of buildings worldwide
- Improved user-to-device ratio from 3.2:1 to almost 11:1, eliminating over 35,000 print devices
- Cut overall costs by 35%
- Introduced proactive monitoring and maintenance
- Improved security via pass code-protected printing and daily image overwriting of printer hard drives
- Enabled mobile access to printers via smartphones and tablets
- Reduced greenhouse gases by 32%, energy consumption by 33% and solid waste by 41%

Source: Xerox UK[1a]

Case Study:
Northumbria University
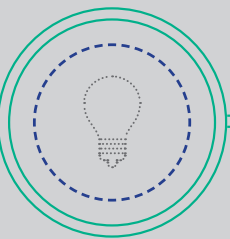
"By 2025 Northumbria intends to be a top-30 UK university. Digital transformation and sustainability are two of the areas we're focusing on to help us get there. Services and support from Xerox have helped us make great strides already."

IT Service Manager, Northumbria University

THE CHALLENGE

'We had more than 2,000 printers on campus, many of which were allocated to individual staff. Students, on the other hand, had limited access to printers. We wanted to change that, and make it easy for them to print in key locations and from their mobile devices

We also had an onsite design and print service for staff. As part of our transformation strategy, we re-evaluated our operational requirements. We wanted a solution that aligned better with changing needs, and was easier to access.

We decided to tackle both situations with help from Xerox. We also felt confident that Xerox would be able to go on supporting us as we continue to develop the organisation."

THE SOLUTION

"Xerox rolled out a managed print service across the campus. Just 272 multifunctional printers (MFPs) meet staff and student needs. They're kept up and running by a very proactive Xerox team, who are permanently on side.

Students love being able to print to almost any printer, including from their mobile devices. Pull printing helped us convince staff that sensitive documents would stay secure, despite doing away with personal printers.

Xerox provides us with print and design services on a consumption-based model that does away with fixed costs. Staff request jobs using an online portal; an onsite Xerox communications manager supports the process and advises on how to get the best results.

Everyone ties back to our financial management system, so we can track who's printing what and charge students and departments accordingly."

THE RESULTS

"...staff and students now have much more choice about when and where they print. Printers are more reliable, our design and print service runs more cost effectively, and we've dramatically lowered the cost of print for students."

- Printer fleet down by 86%, from 2,000 to 272, while maintaining high service levels
- Increased access to printers for students, with 90% of MFPs installed in shared spaces
- Ability to print from mobile devices
- 80% cut in print costs for students
- Cost-effective pay-as-you-go Xerox design and print services
- Information security and compliance with data protection regulations maintained using pull printing
- Support for ongoing digital transformation and sustainability aims

Source: Xerox UK[1b]

The second example is a story from the IT Service Manager of a university in North East England. The scale of the organisation is smaller than in the previous case, but still substantial, and this intervention also involved digital transformation. It extends into print and design services that are provided on a consumption-based model too.

The cost savings to the customer are enhanced by an on-site Xerox Communications Manager (within the print and design service) who spots lower cost ways to print and opportunities to switch to a digital format – as well as ensuring consistent use of the university's brand. This service also helped the university become measurably more sustainable through reducing student and staff print volumes and waste from stockpiled printed collaterals.

Having explained the concept of managed print and viewed it from a customer's perspective, let's now look at how Xerox has structured its broader portfolio of service offering. As they grow in sophistication, these services deliver a guaranteed business outcome that goes far beyond simply owning (or having the right to use) a print-related product.

Customer platform capability
Offer (example): Xerox Medical Records Management:
Outcome: Ensure on-line availability of the complete patient medical record at the point of need

Customer process capability
Offer: Xerox Digital Hub and Cloud Print Services:
Outcome: More positive CX at lower cost through consistent branded communications

Customer asset capability
Offer: Xerox Office / Print Services (for large enterprise, then also SMBs)
Outcome: Cost improvement, guaranteed availability, added security & improved workflows

Performance advisory
Offer: Workplace & Maturity Assessments, Xerox Analytics:
Outcome: Provide insight & enable fact-based decisions & preventative maintenance

Assured maintenance
Offer: Xerox eClick (for large enterprise) & PagePack (for SMBs)
Outcome: Reduce & consolidate variable expenses

Product break / fix
Offer: Xerox Service Pack:
Outcome: Fix (smaller) MFD when it fails

Product spares
Offer: Xerox Supplies and Consumables
Outcome: Supply ink, media and other key consumables

Product
Offer: Lease or purchase Xerox VersaLink, AltaLink and PrimeLink network connected devices
Outcome: Have access to MFD to use

INCREASING POTENTIAL FOR VALUE CREATION

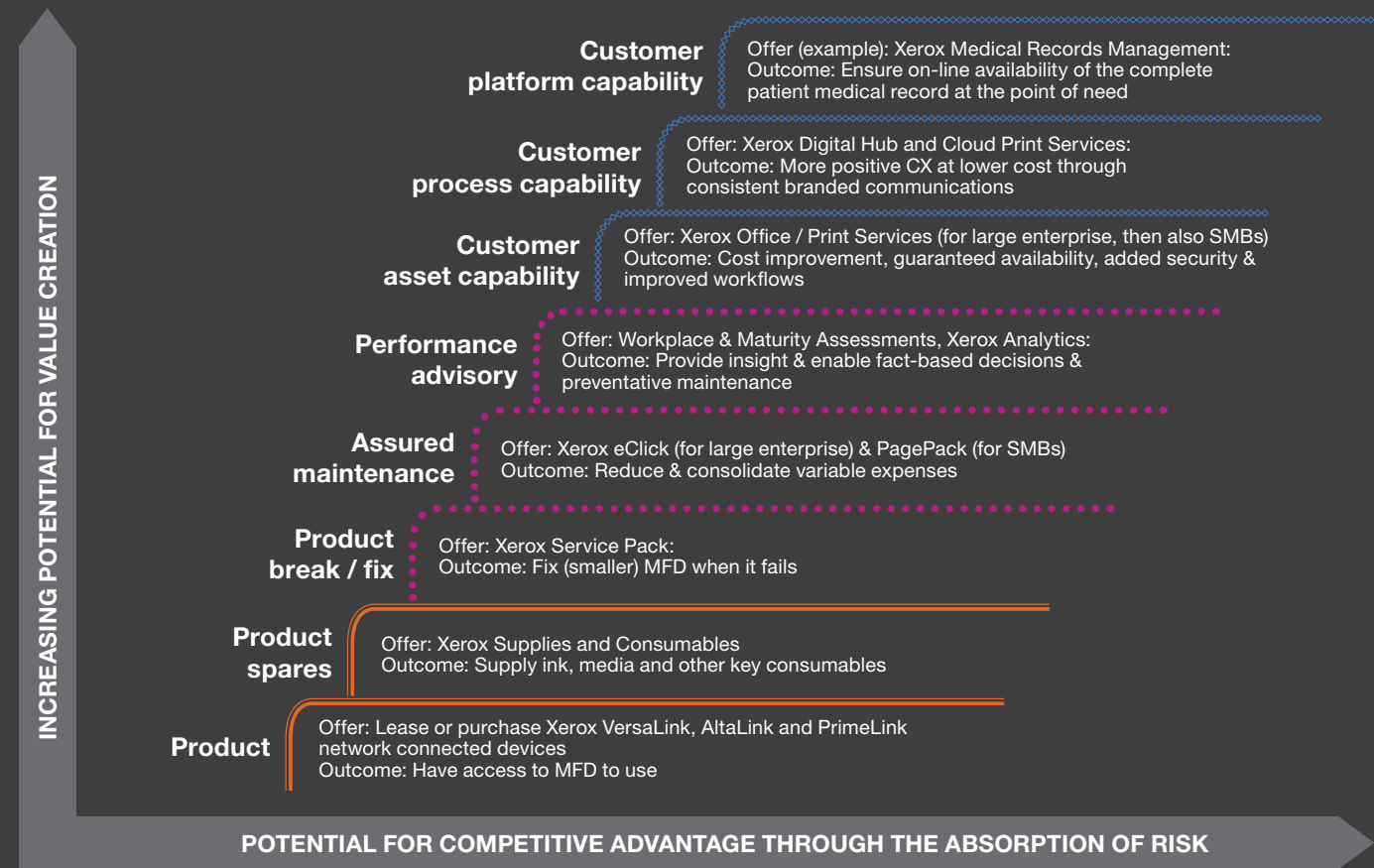**POTENTIAL FOR COMPETITIVE ADVANTAGE THROUGH THE ABSORPTION OF RISK**

FIGURE 3: THE SERVICES STAIRCASE FOR XEROX'S MANAGED PRINT SERVICES.
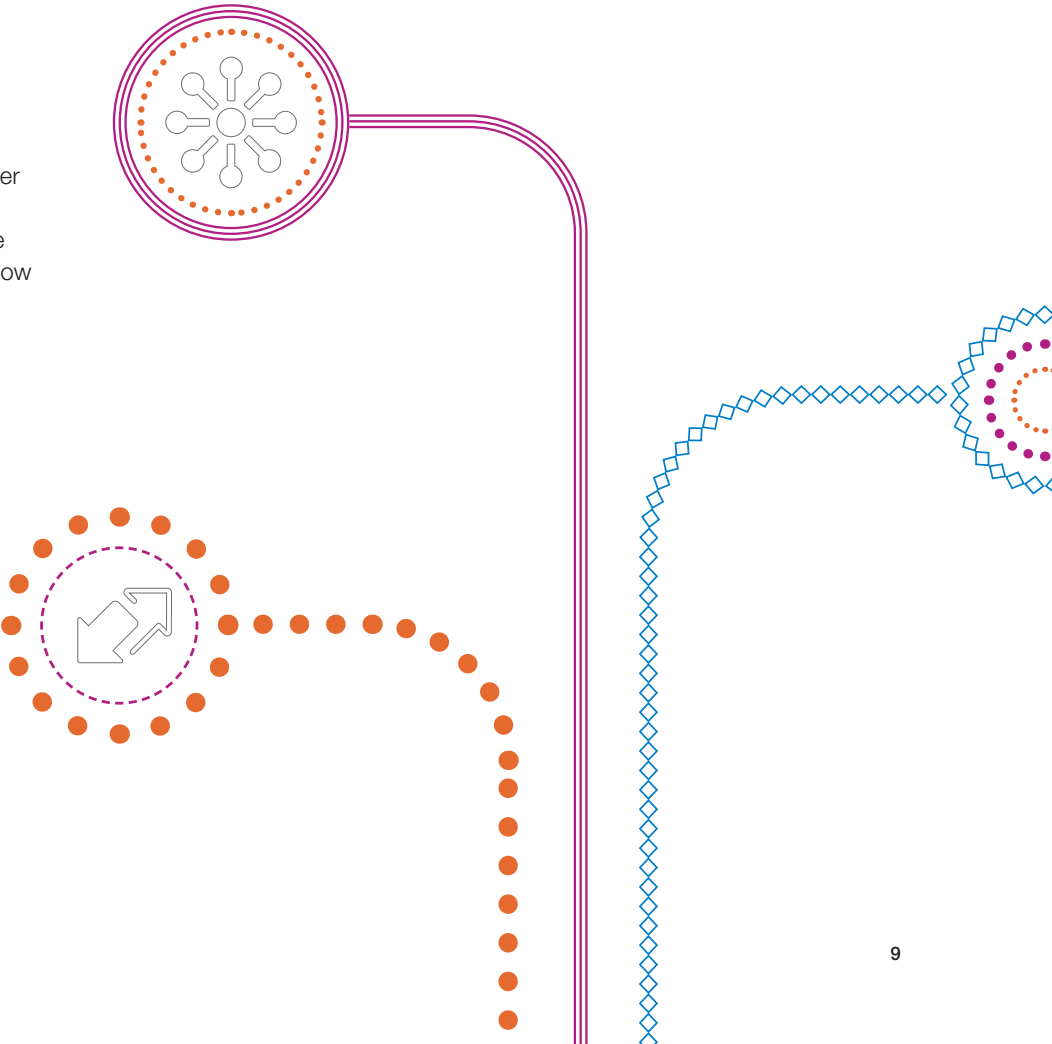
Figure three shows the range of Xerox's services. Managed Print Services cover the offerings on the three blue steps of the 'capability' driven service offering. These are strategic outsourced services that guarantee the outcome of a business process or even platform (as well as the total cost of ownership and availability of the embedded devices / assets). With this evolution Xerox has become increasingly integrated within its customers' businesses but has also had to 'stretch' its own internal organisation to deliver them – in key areas such as commercial management, professional services and service delivery.
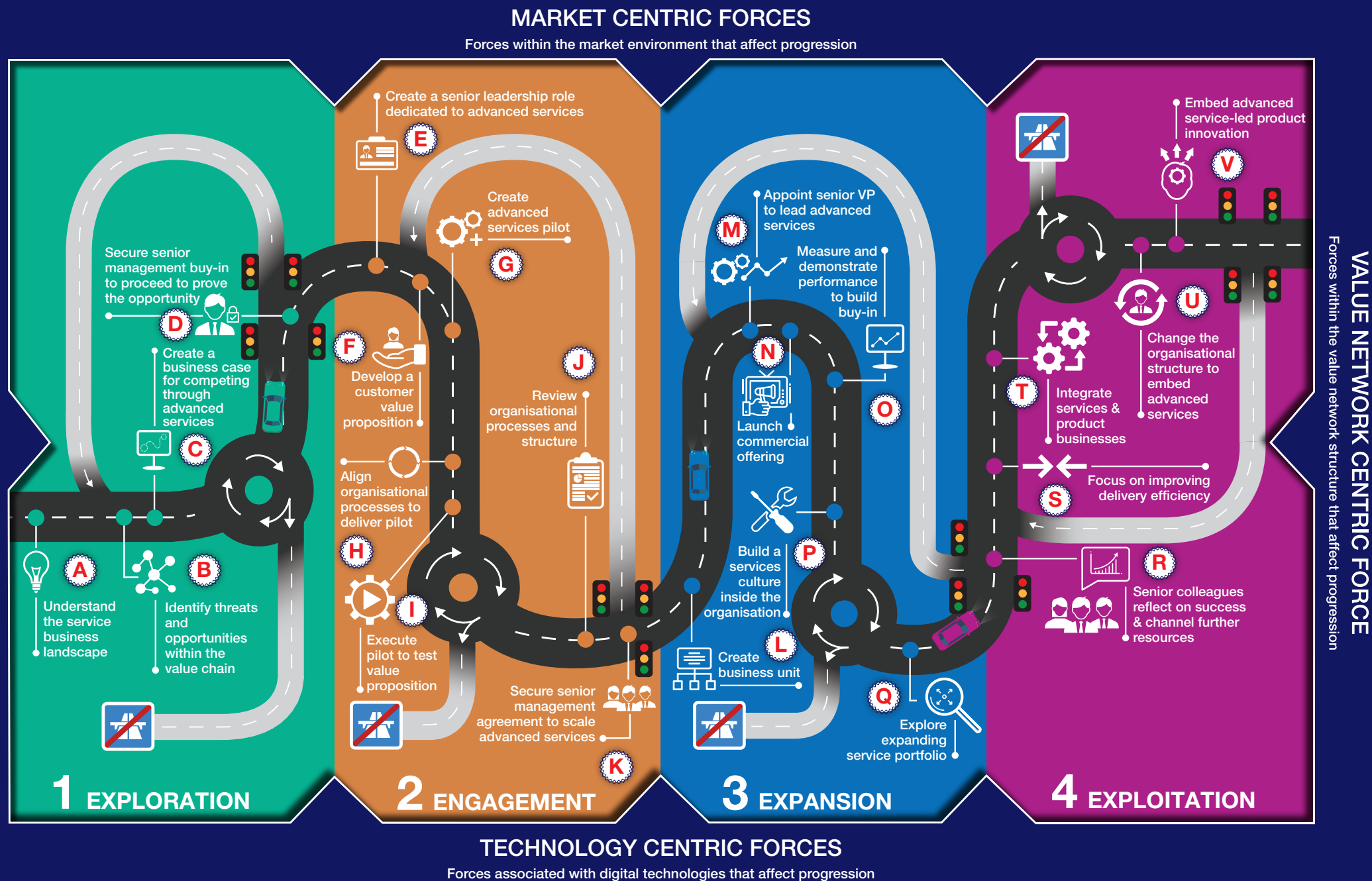
The entry-level offers provide replacement supplies and consumables and then, for smaller devices that fail, a break-fix service (beyond standard warranty) - the Xerox Service Pack. The ability to reduce and consolidate variable expenses comes with Xerox PagePack: this is charged at a fixed, banded cost per page per device, covering print supplies (media excluded) as well as maintenance. All are targeted at SMBs and sold through channel partners. Xerox eClick is equivalent to PagePack but to cover fleets of devices, so also sold direct to customers.

Using the ability to collect data from these network-connected devices, a Workplace Assessment Audit is the ideal start to a managed print conversation, to provide insight into an unmanaged, multi-branded fleet and enable fact-based decisions to be made about how to optimise the device count and office placements. To engage customers in Xerox's latest managed print offering, a brief Digital Maturity self-assessment can be used to determine whether an organisation is a digital follower, adopter or leader. All to enable fact-based decisions to be made about how to optimise productivity, efficiency and security.

Xerox Print Service guarantees cost improvement with added security and improved workflows. It was initially launched as 'Xerox Office Services', sold direct to large enterprises. 'Next Generation' software developments enabled offerings to tackle priority themes including sustainability, security, IT integration, mobility and productivity. These services manage both Xerox and non-Xerox branded devices.

To complete the 'capability' layer of the staircase, centralised print is also now a key component of Xerox Digital Hub and Cloud Print Services, providing a more positive customer experience at lower cost through consistent branded communications – as provided by Northumbria University's print and design service. Finally, managed fleets of MFDs are used within a number of UK trusts to deliver Xerox's Medical Records Management Service: incoming correspondence and patient consent forms are scanned to workflow to guarantee on-line availability of the complete patient medical record at the point of need.

Figure (left page)

MARKET CENTRIC FORCES
Forces within the market environment that affect progression

ORGANISATION CENTRIC FORCES
Forces within the organisation that affect whether or not the process start, and how fast it proceeds

VALUE NETWORK CENTRIC FORCE
Forces within the value network structure that affect progression

TECHNOLOGY CENTRIC FORCES
Forces associated with digital technologies that affect progression

Create a senior leadership role dedicated to advanced services — E

Secure senior management buy-in to proceed to prove the opportunity — D

Create advanced services pilot

Create a business case for competing through advanced services — C

Appoint senior VP to lead advanced services — M

Measure and demonstrate performance to build buy-in

Develop a customer value proposition — F

Create advanced services pilot — G

Review organisational processes and structure — J

Align organisational processes to deliver pilot — H

Launch commercial offering — N

Embed advanced service-led product innovation — V

Change the organisational structure to embed advanced services — U

Integrate services & product businesses — T

Focus on improving delivery efficiency — S

Execute pilot to test value proposition — I

Build a services culture inside the organisation

Create business unit — L

Senior colleagues reflect on success & channel further resources — R

Secure senior management agreement to scale advanced services — K

Explore expanding service portfolio — Q

Understand the service business landscape — A

Identify threats and opportunities within the value chain — B

Focus on improving delivery efficiency

1 EXPLORATION

2 ENGAGEMENT

3 EXPANSION

4 EXPLOITATION

FIGURE 4: THE TRANSFORMATION ROADMAP FOR XEROX'S MANAGED PRINT SERVICES.

The Transformation Journey

A number of forces were at play to trigger Xerox to market a managed service. Technology centric forces introduced the era of computer-driven, digital printing. Organisation centric forces demanded the core business be de-risked and strengthened for growth as part of the corporate turnaround, building on Xerox's document management expertise. Market centric forces highlighted the total cost of running a print environment as the real customer issue. And value network centric forces emerged as channel partners wanted to move into services provision (for the same reasons as the directly sold business had already done). With these noted, we can briefly plot the Transformation Roadmap [6] that Xerox followed [1, 2].

(1990s) A: Xerox's starting point for exploring the service business landscape was its pre-existing copying and mail-room services business

(1999-2001) B: In the run-up to the new millennium Xerox looked at moving 'upstream' into the office, closer to the executives and to being considered a partner rather than straight forward services provider. An industry report at the time stated two-thirds of businesses were working on reducing document management costs: these had remained unnoticed until digital technology put documents on the network and changed the way they were viewed.

(2001) C&D: The corporate turnaround plan effectively created the business case and senior management buy-in to pursue this perceived opportunity.

(2001) E, J, L, M: In order to engage the market, six existing organisations were integrated into one and a President was appointed to lead 'Xerox Global Services'.

(By 2004) F, N: The customer value proposition for managed print was defined: "Companies typically spend about $100 per month per employee for printing, copying, faxing and scanning. Xerox reduces these monthly costs on average by $25 per employee"

(2001-2004) G, H, I, O: Pilots were run within the existing client base, with early adopters including Sun Microsystems, Microsoft and Dow Chemicals. There were several equipment-financing agreements struck in 2001 too, under which GE became the primary provider (in the US, Canada, Germany and France).

(2002) K: Agreement to scale these services came when critical strategic decisions were made on where to invest. Three criteria were applied: they needed to be areas of high growth, where customers needed help and where Xerox already had core competencies. This prompted investment in three critical areas of the document market – the digital office, digital production and value-added services.

(2004) P: Expansion through Xerox Global Services meant Xerox had "morphed into a technology and services enterprise", this self-identification proof that a services culture had taken hold within the organisation. In 2007 'Lead with services in large enterprises' was highlighted as one of four corporate 'growth planks'

(2007): "Turnarounds are easy to track and to talk about; transformations evolve more slowly and are harder to define. Over the past several years – step by step and brick by brick – we have built a new Xerox. I believe we are at an inflection point. We have evolved into a services-led technology company that is known for innovation and customer focus".

Anne Mulcahy [3]

(2008): Xerox was named in Gartner's "Magic Quadrant" for MPS and would remain so through the years this quadrant was published

(2010) P: The underlying shift to a services culture was dramatically highlighted by the acquisition of ACS, a leading business process outsourcer that was subsequently spun out as Conduent in 2017.

(2009) Q: The services portfolio expanded with the launches of Enterprise Print Services and MPS for SMBs through channel partners.

(2011-13) R, S, T, U: Further resources were channelled into these services in 2013 with themed 'Next Generation' extensions (step R), and delivery efficiency was improved through 2011's acquisition of analytics-focused NewField IT with its key toolset (step S). The formation of the Large Enterprise Organisation (LEO) in 2013 effectively integrated the product and services businesses (step T), the same year that ConnectKey was launched (step U).

(2017-20) U, V: The largest product launch in the company's history came in 2017, involving 29 new services friendly devices (step V), with an EVP for Service Delivery and Supply Chain appointed in 2020 as the latest in a string of structural changes to embed advanced services within Xerox's organisation (step U).

The Challenges of Advanced Services

The starting point of Xerox's journey was innovation, driven by directly addressing customer pain points, the customer experience and ultimately their bottom line. It was led internally from the top, driven by the need to stabilise and drive revenues and strengthen the organsiation for growth. A cross-functional development process was assembled internally to codify and deploy these services more broadly. As this happened emerging issues included time to market and the ability to scale.

In taking this journey the business model design and evolution became central. It required managing a services eco-system with SLAs, not a linear product sales process. There were also P & L implications: the annuity model was understood (from the days of copying and mail room services), but with managed print came an expanded cost base and fundamentally different dynamics to selling products. In recognition of this, investment priorities had to change too, to include assessment services (through Newfield IT) and service delivery infrastructure as well as technology R&D.

At this stage of development, emerging issues included:

- Accounting for a new annuity stream;
- Asset financing (through agreements struck with GE);
- Gaining insights from operational data; and
- Managing a new profile of business risk – around credit provision, device and service performance (to contracted SLAs), device utilisation and service cancellation.

Crucially, to succeed with this new business model a change in culture and peoples' skills was required. It demanded a mindset to develop and deliver a service and a consultative sales approach, with team-based compensation. Challenges to delivering this new way of working included:

- Internal access to and transfer of knowledge on the newly defined services;
- Time to revenue on newly contracted accounts;
- Change management, to enable the focus on services within Xerox and also the changes to office print on customer sites;
- Service repeatability, given the drive to grow signings profitably (as part of the corporate transformation); and
- Continuous process improvement across business functions, particularly in sales and service delivery.

The Present Day and Future

This case study has set out to demonstrate how the market opportunity broadens through the adoption of advanced services. Digital transformation in working practices continues to accelerate, with IDC believing "by 2021, 60% of G2000 companies will have adopted a digital / physical balanced intelligent workplace" [7] and Quocirca holding the view that "the 'less-paper' office is more likely than the paperless office" come 2025 [8]. It seems that the hybrid office will be the 'new norm', with the aim of increasingly seamless physical / digital transitions for documents.

To deliver this work experience, Xerox Intelligent Workplace Services – its latest offering – 'uses comprehensive security, analytics, digitization and cloud technologies and software'. The service deploys software focused on print, document and workflow management to optimise use of all the networked devices (which can be viewed as a form of IoT, the 'Internet of Things'). Data harvested from these applications and the supporting IT infrastructure for delivering the service is analysed to feed this optimisation, ensure documents remain secure and support customers' improvement / automation initiatives. This infrastructure, including the business applications and analytics platform, can all be housed in a secure, utility-based cloud environment.

But business models, even successful ones, have a certain life span, and they are getting shorter. For Xerox, the question is now to what extent paper actually plays a role in future working lives and what primary role Xerox plays when paper is not present. This is an industry-wide challenge and one that Xerox will need to address in order to remain a key player in its industry

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