IT TRANSFORMATION THE CHALLENGE

REALIZED THANKS TO THE CONTRIBUTION OF THE CIOS OF CIONET ITALY. IT TRANSFORMATION & STANDARDIZATION AND OUPUT & PRINT MANAGEMENT ARE THE MAIN THEMES.

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Si prega di riciclare

SUMMARY

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After working for LRS for 13 years I have seen firsthand the impact of the digital revolution and the changes required for IT Transformation and standardization projects amongst LRS customers. We engaged with NextValue and CIONET to conduct a survey of a varying business types and sizes to better understand what IT transformation and innovation means to CIO's as well as find out how Output and Print Management could play a key part in that journey.

After reading the survey it's clear from the results that Standardization/Simplification, Transformation and Agility are the keywords for IT and innovation. That CIO's key drivers for the innovation are creating additional value for their customers, performance improvements and introducing new innovations. Together these paint a powerful picture of the expectations of CIO's and the innovation they provide for their businesses. Il would like to make some comments on other keywords a part the ones we have used in the Survey, otherwise called Buzzwords. The information technology world is filled with "buzzwords" that businesses, vendors, and analysts often use to support their arguments or promote their ideas. Like fashion trends or the "flavor of the month" at your

local ice cream store, these special words, phrases, and acronyms change over time. Though buzzwords can be (and frequently are) abused, they often refer to very important concepts that shape the long-term direction of the IT industry. In short, the concepts behind them have real value to your business.

For example, consider the word middleware, which Wikipedia describes as "the software that connects software components or enterprise applications. Middleware is the software layer that lies between the operating system and the applications on each side of a distributed computer network." Sounds right to me.

Another buzzword that relates to middleware is decouple, meaning "to separate, disengage, or dissociate something from something else." Now, let's weave these two words into something meaningful for a key element of your strategic digital platform; one that is unfortunately often overlooked — an output management system.

An output management system is often considered middleware because it captures documents from applications running on various platforms and delivers them to a variety of hardcopy and softcopy destinations. In terms of the overall logic flow, it sits "in the middle" and insulates upstream applications from the complexities of downstream document distribution. This simplifies and expedites the delivery of new services without application changes. In essence, it decouples many functions from the application and moves them into a device- and platform-independent service layer ("printing as a service"). This lets applications focus on content creation and enables you to choose/ change the appropriate delivery format and destination at any time. You can logically view this service layer as an extension of your organization's existing IT service catalog or a key building block in your future "everything as a service" digital platform. This single middleware architecture also:

-Eliminates redundant print servers and multiple application-to-destination connections
-Simplifies administration through centralized management and control

-Reduces cost

-Provides end-to-end visibility of print/document-related business processes to help IT staff easily identify and resolve problems with applications, systems, networks, or devices.

Because an output management system connects disparate applications and processes to hardcopy and softcopy destinations, it is a key enabler in automating and optimizing document-intensive business workflows.

Another word that's getting more traction these days (and one I really like) is holistic. In terms of information technology usage, this buzzword

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refers to consistent solutions, procedures, policies, and service levels across the entire enterprise. Nice concept, don't you agree?

When you mix "holistic" with "output management," you get a standardized solution that offers consistent functionality and user experience from platform to platform. That's something you cannot achieve with a disparate group of tactical point solutions. The net result of deploying a holistic output management solution is lower cost and improved business agility, employee productivity and competitiveness in a fast-moving, ever-changing global economy.

That's two more buzzwords to add to our list: "IT standardization" and "agility." Sorry for that, but they really are relevant to our discussion. Let me explain. IT standardization is a strategy for minimizing IT costs within an organization by keeping hardware and software as consistent as possible and reducing the number of tools you have that address the same basic need. Today, IT organizations are standardizing on many software and hardware components, but output management is often overlooked. It shouldn't be.

By nature, standardization drives down cost and increases employee productivity. It also leads to greater simplification of your IT infrastructure, which leads to improved agility. Agility is closely related to simplicity. The simpler

the business processes, the more agile the business is. And the simpler the IT systems, the more agile (in general) the IT systems are. In an architectural context, it effectively reflects the functional coverage of IT architecture. Repurposing well-designed components and systems for changed purposes and conditions can be accomplished quickly and consistently, if the underlying structures (both physical and logical) properly cover the various problem spaces.

Said another way, complex systems/processes are more prone to failure and difficult to change, taking you in the opposite direction of agility. So, please take some advice from the famous educator, author, and businessman, Stephen Covey, who encouraged us to "begin with the end in mind." Then, work backwards to figure out what you need to do. Here's a hint — don't overlook the far-reaching benefits of a holistic output management system. And keep these buzzwords handy for future discussions with managers, colleagues and vendors.

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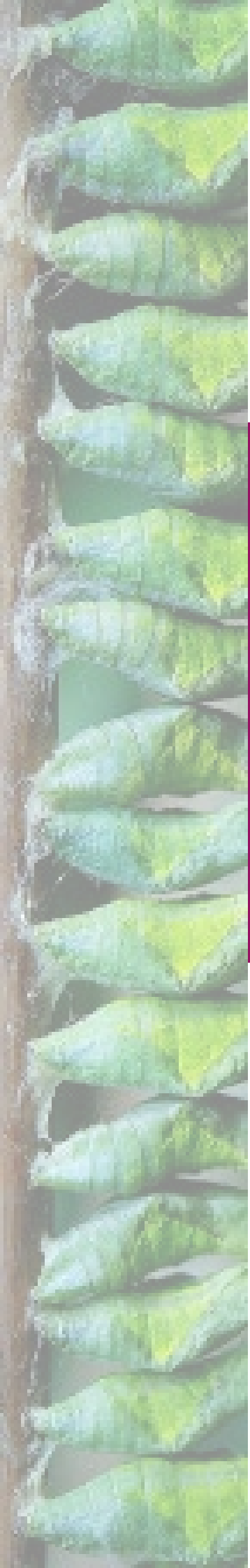
"Without change there is no innovation, creativity, or incentive for improvement. Those who initiate change will have a better opportunity to manage the change that is inevitable."

William Pollard

Alfredo Gatti @NEXTVALUE

ALFREDO GATTI
Managing Partner
NEXTVALUE

There must be a reason why today the most preferred keywords related to IT and chosen by the CIO's are standardization & simplification, as well transformation and agility. Keywords and their meanings are subject to change over time, mostly reflecting the "likes" and the "pains" of people in their jobs. CIO's are facing more pressure every day — business requires a most suitable usage of digital technologies to improve innovation. Organizations need to preserve and to enhance the value-for-money of their IT services and, at the same time, to remain nimble. In this ranking of keywords, Output management looks less recognized, even if embedded in the above mentioned above. Mostly used in the past to reference the enterprise's approach to the printing, with the rise of the cloud computing it assume the meaning of standardized and effective services aimed at delivering personalized contents to precise recipients. The Output services generate cost efficiency and they decouple the contents in output from the changes of infrastructures and applications. They bring business flexibility and better customer experiences at the same

time, being a breakthrough step of the "IT as a Service" roadmap. Surprisingly of not, Output management becomes more important practice for the CIO's, a key part of their overall strategy to transform the entire IT infrastructure into a Software-defined Infrastructure. Output Management by Levi, Ray & Shoup, Inc (LRS) has grown and become highly scalable and reliable over the years, as far as the company applied the knowledge and abilities gained from several experiences and business cases all over the world. LRS provides a competitive edge to customers, whist it continues to commit for better solutions and to prepare for the future. Any decision maker looking for a system to manage productivity should consider LRS's suite of products and services.

Alfredo Gatti

Digital and IT Transformation: a daily challenge

Digital revolution is reshaping the world where businesses thrive and operate, and it is no news. As in the late 19th century, a massive technology shift took place thanks to the rise of electric power, reshaping organizations with new, more efficient layouts. However, this rise in productivity was not so conspicuous in the first place, as clearly pointed by a paper from Capgemini, "Organizing for Digital, why Digital Dexterity Matters", "Productivity surged as a consequence of organizational change, not just the emergence of a new technology". Thus, almost thirty years were necessary for productivity to surge, only after a prominent shift in factory organizational design due to the introduction of electrification. What is happening now with the rise of digital technology is not so different from history: Digital Revolution is the new Industrial Revolution, and Digital Transformation, the use of technology to improve radically performance or reach of enterprises, is far from being a myth or a cool buzzword; it is instead a great opportunity for innovation. Anyhow, it is also representing a threat for those organizations, which are particularly resistant to change, whose rigid structure find difficulty in adapting to the fluid world of tech start-ups: the current speed of technological and organizational developments across global markets is favouring organizations with less history, organizational layers and physical constraints than traditional enterprises. As reported by Thomson Reuters, only 63% listed in the S&P 500 a decade ago are still in the index, whereas the remaining companies lost traction during the years.

Time for change is now and a digital transformation strategy is already implemented within the enterprise, according to the 53% of the European panel composing the research "Digital Transformation in Europe. What's next", conducted by NEXTVALUE in collaboration with CIONET International at the end of 2015. Nevertheless, only the 17%, the "Established Digital Leaders", is convinced that their organization has already reached a good level of digital maturity, thanks to the right mix of strategy, implementation and capabilities and skills. On the other hand, 47% of the respondents across ten different European enterprises consider themselves "Laggards" in creating a successful transformation of their companies according to digital paradigms. A variegated landscape is so depicting the Digital Revolution.

So, why a survey on the specific topic of IT Transformation and Output and

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Print Management?

Successful business transformation takes time and considerable effort across many organizations to replace old systems, services, processes, and methodologies with new, better ones. In order to make fundamental changes in the business, the IT organization must transform the underlying infrastructure, applications and services. IT plays a key role as the backbone of the business, by supporting all critical business processes.

The businesses often ask their Chief Information Officers or IT Directors a more prominent role within the organization, by driving innovation projects along with greater productivity and a Technology department more responsive to the rapid change, while maintaining stability and efficiency of the core IT services.

Most CIOs and senior IT managers are running IT initiatives to support the innovation and agility demands of their businesses. They have created an IT environment of standardized services to support common functions across all applications, sometimes called a holistic approach. This simplifies IT, reduces operational costs, increases efficiency and provides a platform for innovation and agility that is demanded by the business.

Major enterprises have also added quickly and easily an Output and Print management service to support this initiative.

Output and print management has been added as a service for all back-end business applications, legacy applications, front end desktop and client systems from mobile to mainframe, to follow the document journey from creation to final delivery, including electronic documents and printing.

The infrastructure and processes that support output and print management has in most organizations grown organically with tactical solutions implemented to "fix" the growing needs of the business and as a result are complex, expensive and often a major barrier to innovation. This barrier provides an obstacle to transformation initiatives to reduce costs, support innovation and agility, and to introduce new projects like cloud services, virtualization and mobility.

In the quest for faster and reliable execution and continuous innovation, NEXTVALUE, in collaboration with the Italian community of CIONET and LRS, enquires moods and perceptions of CIOs and IT Directors of the most prominent Italian enterprises. From the concept of Innovation to how they perceive themselves and their own organization, to current market scenario and benefits of an independent Output and Print Management service.

PANEL COMPOSITION AND RESEARCH METHODOLOGY

NEXTVALUE conducted the survey during the month of November 2015, thanks to the cooperation offered by a panel of 107 Chief Information Officers, Chief Technology Officers, Chief Operating Officers and IT

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Managers [Figure 1].
The online survey made possible to obtain accurate information from the direct voice of the protagonists of technological innovation.
Industry stratification of enterprises belonging to our panel is shown in [Figure 2].

FIGURE 1 PANEL COMPOSITION BY ROLE
(% of all respondents – Panel=107)

54% CIO /IT Director
34% IT Manager
4% CTO
2% COO
11% Other
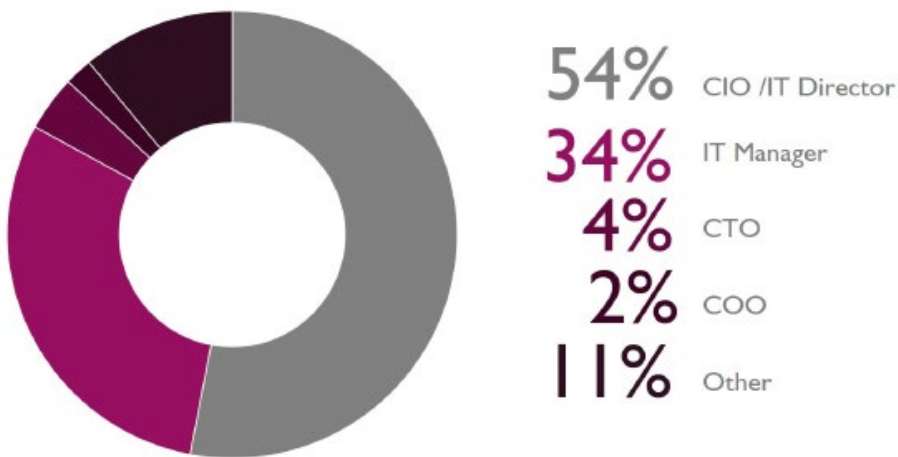
Source: NEXTVALUE® March 2016

FIGURE 2 PANEL COMPOSITION BY INDUSTRY
(% of all respondents – Panel=107)

31% Manufacturing
17% Wholesale & Retail
11% Banking & Fin. Services
10% Utilities
5% Telco & Media
4% Healthcare
4% Insurance
4% Transportation & Log.
2% Pharmaceutical
1% Government
11% Other

Source: NEXTVALUE® March 2016

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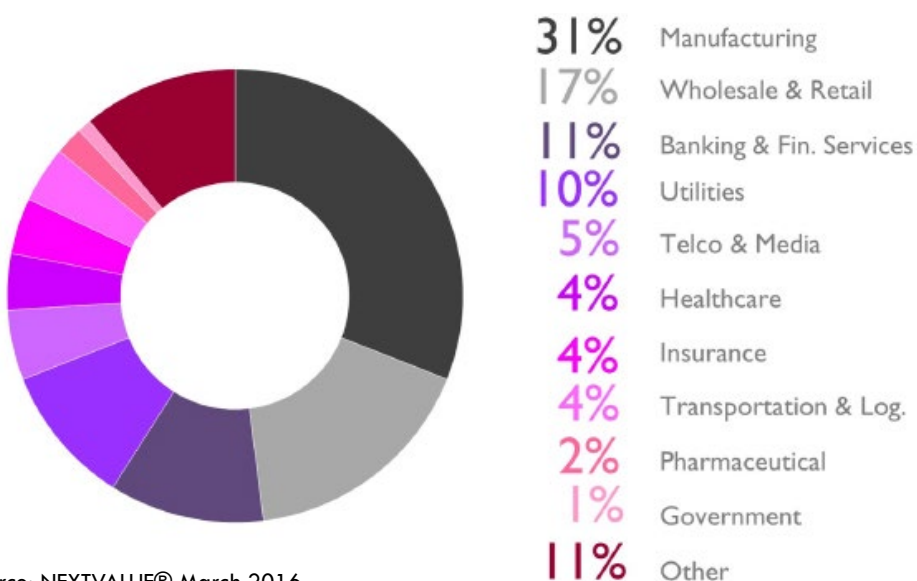
Panel composition is in line with distribution by industry of the leading Made in Italy companies, as evidenced by the conspicuous percentage representing the manufacturing sector.

The Panel forms a relevant sample of Top and Medium Large enterprises in Italy, as clearly demonstrated by the 75% of companies with a corporate annual turnover larger than 250 million Euros. [Figure 3]

In particular, the CIOs and IT Directors members of CIONET (www.cionet. com), the first European business community with more than 5,000 CIO members in different countries, which only in Italy represents more than 530 CIOs and IT directors of Top and Medium Large enterprises, actively participated to this research. As usual, we would like to thank them for the market vision and the support, which they entrust to us. We still want to highlight that all distributions percentages relates only to respondents' behavior and do not therefore imply the automatic extension of the observed phenomena to the entire universe of reference.

ON BUZZWORDS AND KEYWORDS

In the world of Digital and Information Technology, many are the buzzwords that enterprises, vendors and professionals use to talk about current trends in the market. Just like any other trends, a broad list of these particular words, acronyms and phrases are subject to change over time, as also trends modifies according to the revolution (or failed revolution) they achieved

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FIGURE 3 PANEL COMPOSITION BY CORPORATE TURNOVER
(% of all respondents – Panel=107)

75% > 250 Million €

10% 100-250 Million €

7% 50-100 Million €

2% 10-50 Million €

6% 2-10 Million €
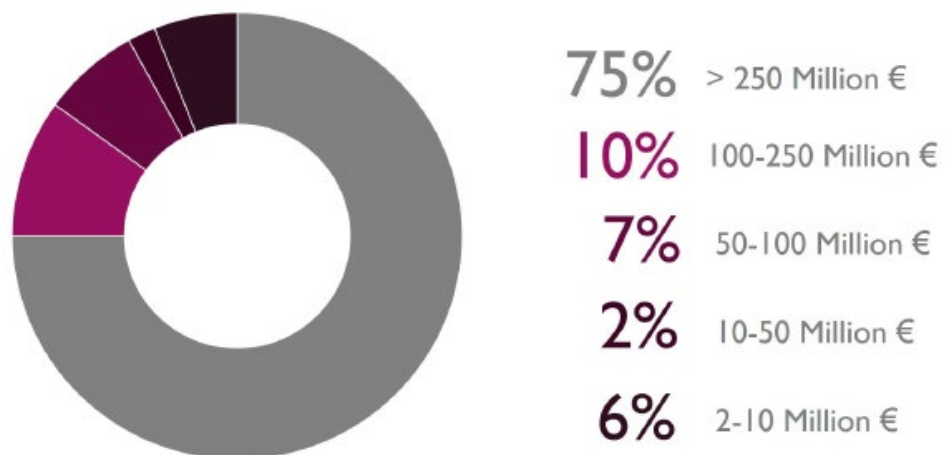
Source: NEXTVALUE® March 2016

in business, industry or human history. A selected numbers of prominent keywords was offered to the respondents of our Survey, and by encouraging them to choose the one they like the most we were allowed to draw a scheme of which of these buzzwords is prominent, both in general terms and according to industry categorization.

In [Figure 4], we show the preferred "IT related" keywords chosen by our respondents: Standardization and Simplification (30%) and Transformation (25%) accounts for more than a half of preferences.

Of course, this does not sound as a surprise. The growing need to transform the business whilst saving costs and simplifying the current structure is a pressure CIOs face every day. The business asks them to innovate the company by proposing the use of new technologies or by assisting other functions, like Marketing, in the creation of new digital projects. At the same time, the new competitive scenario requires nimble organizations and structures that however preserve and enhance the value-for-money of the core IT services.

In short, IT is requested to be more responsive to new requirements and drive greater innovation at higher productivity levels, so the business can respond with faster execution of key business initiatives.

IT Standardization is a strategy for minimizing IT costs by keeping

FIGURE 4 POPULAR KEYWORDS IN THE WORLD OF IT AND INNOVATION

Q: What keyword do you instinctively like the most?

(% of all respondents – Panel=107)
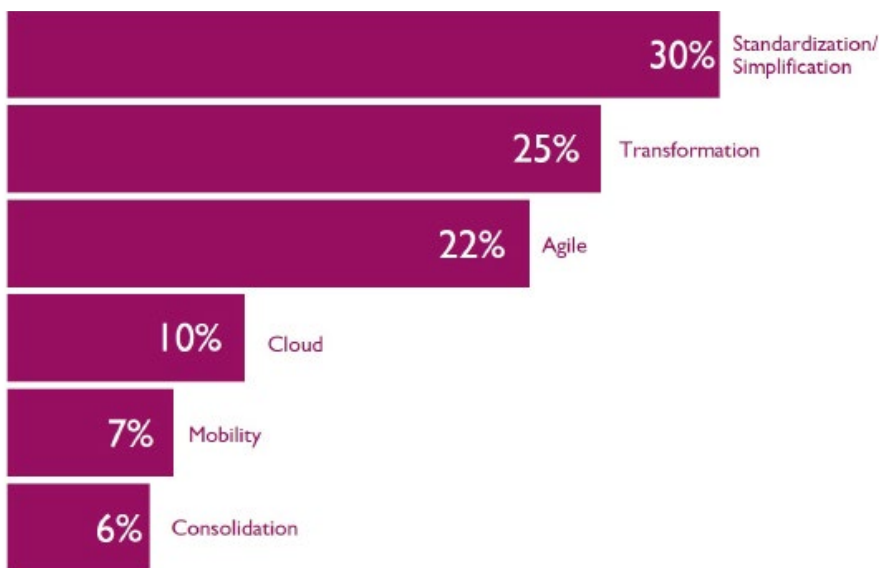
Source: NEXTVALUE® March 2016

hardware and software as consistent as possible and reducing the number of tools the organization have to address the same basic need. Main goal of simplification is to drive down costs and to increase employee productivity, while leading also to a greater simplification of the IT infrastructure.

Reliability, scalability and availability of information systems remain however fundamental as the base on which agility and flexibility has to be built.

Standardization is typically preferred when cost efficiency is the motivation and/or when there is a requirement for interoperable IT components and process interfaces. The cost motivation is straightforward and is particularly appealing to organizations that are subject to cost pressures in their own market. Selecting standardized technology can yield immediate savings.

Unsurprisingly, the third keyword indicated by our panel is Agile (22%), often a direct effect of a simplification of the IT infrastructure. Going agile is one of those "nightmare" that are plaguing the professional life of IT Directors in the latest years. Agility is a common business term that could mean from a faster and more orchestrated release management, to a broader view of, namely, simplifying business processes. Whereas business agility is related to how fast the business respond to opportunities or threats, IT agility is about how IT enables business agility, or how fast IT will deliver the required effectively and efficiency. Indeed, complex systems

and processes are more prone to failure and difficult to change, taking the organization exactly in the opposition direction of agility.

Cloud (10%) is still one of the favorite keywords for IT leaders, as it drives innovation and business/IT transformation through its flexible computing and business model. With Cloud Computing, IT services are delivered "on-demand" on the Internet on a pay-for-use, or as-a-service basis. From storage, server, operating systems and data storage, as-a-service offer now comprehends from cybersecurity tools and Big Data analytics to printing services.

Mobility (7%) and consolidation (6%) are the keywords our panel like less. The lack of interest in mobility is a countertrend with regard to the majority of buzzwords in the digital market, which involves some way the use of mobility both inside and outside organizations, to improve the user experience and the productivity of employees.

Mobility could anyway transform into a big pain for IT professionals: BYOD initiatives can often pose cybersecurity threats due to users' distractions or inaccuracies or create Shadow IT phenomena. Mobility can be necessary, but at the same time it is quite understandable how an unpopular keyword could be.

Similar considerations can be made for IT consolidation: the reason to consolidate IT infrastructures out of remote offices are wide-ranging, from server, software and overhead cost reductions to eased scalability

and compliance. At the same time, consolidation projects are not easy for time required and the scale of involved stakeholders, from executives to all categories of end users. Consolidation equal budget reductions, but could become a long, complicated and perilous process.

All these considerations regard our panel in its entirety. However, dedicated drill downs to singular industries could be useful to understand how respondents pertaining to different sectors perceive and feel market and technological changes within their organizations. On this regard, we chose to restrict our focus to the three most prominent industries in our panel, as previously shown in Figure 2: Manufacturing (31%), Wholesale & Retail (17%) and Banking (including Financial Services) and Insurance (15%), as depicted in Figure 5.

Manufacturing
The preferred keywords for our Manufacturing panel are, unsurprisingly, Agile and Standardization/Simplification, both at 31%. Why unsurprisingly?

Business and technological agility is fundamental to respond quickly to customer needs and market changes whilst strictly controlling cost and quality. This consideration is valid for all industries, anyhow becoming dominant for an industry subject to customer shifting desires as Manufacturing. The very term "agile" was born in manufacturing in the early 1990s, nonetheless it took hold in software development.

Manufacturing support technology that allows marketing, design and production to share a common database, i.e. of parts and products, and data sharing in general has

FIGURE 5 INNOVATION KEYWORDS IN THE WORLD OF MANUFACTURING, BANKING AND RETAIL
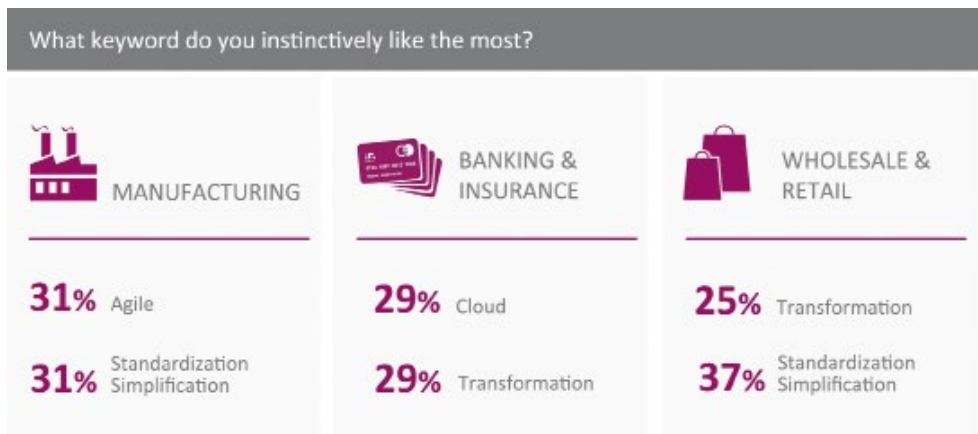
Source: NEXTVALUE® March 2016

become an enabling factor to create an agile manufacturer.

At the same time, agility could not be possible without the standardization and simplification of systems to back up agile and flexible production process. Shifting to a modularized infrastructure after standardization brings increased flexibility, rapid introduction of new products and the ability to meet customer needs more closely.

The drive to achieve cost efficiency through standardization can be seen in all stages of technology developments. In the design stage, selecting standardized technologies can increase interoperability and reduce complexity in system design. In the deployment stage, standardized products can enable a more predictable operating environment that is typically less costly to manage. In the operational stage, use of more standardized technologies may increase access to skilled personnel. Interoperability is an increasing concern for many organizations in manufacturing, especially those that operate in markets where eco-systems and partnerships are critical factors or those markets in which merger and acquisition activity is common.

Banking and Insurance
Transformation (29%) and Cloud (29%) are the most popular keywords among our Banking and Insurance panel.

The financial services sector is one of the most affected by digital disruption, a situation that is forcing banking and insurance to rethink their operating models. A rigid and costly business model based on a capillary network of branches is no more the best to compete in the digital world, as confirmed by the gradual downsizing of brick-and-mortar customer touch points from the major banking groups.

Banking and insurance in the digital age seems to require a profound reset of how banking staff reacts to customer needs. This means thinking customer first, rather than by channel and understanding that organizational silos pose significant obstacles to creating new solutions for customers.

Financial institutions are already changing their perspectives, modifying their structure and system toward a more flexible and lean organization.

That is when our second keyword, Cloud, also resonates with importance. Fewer physical branches and more mobile services imply the need for a flexible IT platform that is able to integrate external cloud services.

The flexibility of cloud-based operating models lets financial institutions experience shorter development cycles for new products. This supports a faster and more efficient response to the needs of banking customers. Since the cloud is available on-demand, less infrastructure investments are required, saving initial set-up time.

Cloud computing also allows new product development to move forward without capital investment and it enables businesses to move non-critical services to the cloud, including

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software patches, maintenance, and other computing issues. As a result, firms can focus more on the business of financial services, not on IT complexities.

Wholesale & Retail

The combined industry panel of Wholesale and Retail is looking for more efficient and simple processes, as our respondents' preference toward Standardization and Simplification (37%) should imply.

As for manufacturers, standardization and simplification of systems are pivotal to increase flexibility and integration within complex and interconnected environments, from production to logistics also for B2B and B2C distributors.

At the same, digital disruptions challenge retailers with the increased competition of myriads of small and agile web competitors, with high inventory turnovers.

Without effective product scarcity, and with shoppers less limited to options in local stores, traditional retail models break. Retailers with high fixed-cost structures (due to significant brick-and-mortar assets and inventory costs), which compete using only inventory at hand, are increasingly losing out to competitors with lower fixed-cost structures and extensive product assortments.

In this complex and evolving environment, retailers are fundamentally reassessing both their roles and the way they create value for consumers. The retailers that will be most effective in today's marketplace will likely be those that fundamentally rethink the retail experience, developing business models that blend physical, virtual, and community experiences.

Retail organizations need a digital approach across the supply chain to evolve into an omni-channel retail enterprise. At the same time, the extended supply chain should be responsive to match demand with inventory.

Like manufacturers, retailers and wholesalers transform their operating model, and conversely their IT services, toward agility and flexibility.

BUSINESS TIPS:
WHY OUTPUT MANAGEMENT IS IMPORTANT TO DRIVE BUSINESS AND IT TRANSFORMATION?

In the past, IT organizations approached the subject of printing as an afterthought. In most organizations, the majority of printing comes from users that create documents from a variety of personal computing devices.
To make this happen, IT organizations usually created a homegrown, ad-hoc infrastructure that evolved over time with little planning or coordination from different IT departments. It usually consists of many servers running different operating systems and a vast array of connections between this output infrastructure, the upstream applications, and the downstream hardcopy and softcopy destinations.
Because of the complexity of the infrastructure, it is expensive, prone to failure, and difficult to maintain. However, this issue is not often perceived as critical within the enterprise, often because of organizational silos and resistances to change, with very department leading their own game.

That is why Output Management is important to drive Business and IT Transformation. A standardized print service layer generates benefits similar to the intrinsic advantage of Cloud Computing, though with different modalities. Cloud drives cost efficiencies by consolidating and eliminating print servers, lowers labor costs (regarding configuration, operations, support, management and monitoring), deliver new services faster without the cost and risk of application changes and improve employee Mobility and productivity by providing a consistent user experience and functional capabilities independent of application or computing platform.

A holistic approach to Output Management support IT Standardization via a single, independent print service architecture, enabling business process automation and optimization through intelligent document bundling, eliminating error-prone manual processes and establishing process standardization governance and compliance with audit, accounting and reporting capabilities. Consolidation of systems and information centralization is possible through the printing as a service layer.

Moreover, deploying automated and standardized processes improves business flexibility, thus building a more Agile enterprise.
Do you recognize the keywords from Question 1?

DEFINING INNOVATION

We asked our panel to define another common buzzword: the very meaning of Innovation, within their companies, on a basis of a list of the most common definitions of this often-abused substantive [Figure 6].

Of course, the concept of innovation is diverse, depending mainly on its application. For a company, it would generally mean increased revenues, access to new markets or increased profit margins.

For the 54% of the panel Innovation is equal to "Doing something new that creates value or for which customers will pay for".

This statement is quite similar to the concept of Product Innovation: a new product, or a traditional product with new features, hits the market and clearly encounter unmet needs of the consumer. Quite similar is also the second choice from the list for our respondents: "Introducing something that needs to be better than what was before".

That is, for a total 87% the concept of Innovation in their companies is not equal to a drastic change or a new paradigm into their market segment that modifies the business model, but to a more pragmatic incremental innovation.

Another 33% indicates Innovation as "A change that creates a new dimension on performance", a definition

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FIGURE 6 DEFINING INNOVATION

Q: What does Innovation mean to your Company?

(Multiple choices - % of all respondents – Panel=107)

%	Definition
54%	Doing something new that creates value/customers will pay for
33%	Introducing something new that needs to be better than what was before
33%	A change that creates a new dimension on performance
22%	A catalyst to the growth of the Company
21%	Re-arranging the old in a new way
17%	Finding a solution which fixes existing problems and unmet needs
14%	Converting ideas into numbers
12%	Implementing revolutionary products or technologies which take greatest risks because they create new markets
12%	Producing outcomes that are both original and of commercial value

Source: NEXTVALUE® March 2016

related to Process Innovation, which regards the changes in the product or service production process. Process Innovation produces benefits relating to increase in productivity and cost reduction.

Only for the 22% of the respondents Innovation is "A catalyst to the growth of the company", closer to a change in paradigm or business mode disruption.

On the other hand, Digital Transformation is a radical innovation that is completely reshaping business models. Is an incremental innovation sufficient to compete a drastic change in the market of reference?

As for previous question, we seg-mented our panel according to the most represented industry, Manufacturing, Wholesale & Retail and Banking & Insurance. As shown in [Figure 7], there is no particular difference from the preferences indicated by the total Panel and the Panel restricted to the Manufacturing sector. Innovation in Manufacturing companies is a Product or Process Innovation for the companies in our panel. Not surprisingly, products are still the primary focus for many industrial manufacturing companies.

For instance, the Industrial Internet, or Internet of Things, through the exploitation of sensor technology and RFID

FIGURE 7   DEFINING INNOVATION — MANUFACTURING

Q: What does Innovation mean to your Company?

(Multiple choices - % of all respondents — Panel=% of respondents pertaining to Manufacturing Industry)

52%	Doing something new that creates value/customers will pay for
41%	Introducing something new that needs to be better than what was before
41%	A change that creates a new dimension on performance
28%	Re-arranging the old in a new way
21%	A catalyst to the growth of the Company
21%	Finding a solution which fixes existing problems and unmet needs
14%	Converting ideas into numbers
10%	Producing outcomes that are both original and of commercial value
3%	Implementing revolutionary products or technologies which take greatest risks because they create new markets

Source: NEXTVALUE® March 2016

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tags, could deeply reshape the way companies resources and track parts and obtain valuable insights on how customers use equipment, thanks to the analysis of the data exchanged, or the production of standardized objects and inventory management.

Top innovators in the industry are however jumping out mere Product Innovation, focusing also on new value offerings, such as expanding services.

As for Wholesale & Retail, respondents to this market segment attributes greater importance to Process Innovation (62%, "A change that creates a new dimension on perfor-

mance") before Product or Service Innovation (50%) [Figure 8].
IoT is, again, considered the top disrupting innovation for wholesalers and retailers as well are betting on interconnected devices like smart tags and beacons to a more detailed analysis of their customers' journey.

Whereas for Banking & Insurance, the results are quite similar to Manufacturing and the total panel [Figure 9]. Technology is upending workflow and processes in the financial services industry.
Tasks once handled with paper money, big computers, and human interaction are now being completed en-

FIGURE 8   DEFINING INNOVATION - WHOLESALE & RETAIL

Q: What does Innovation mean to your Company?

(Multiple choices - % of all respondents — Panel=% of respondents pertaining to

Wholesale & Retail Industry)

62%	A change that creates a new dimension on performance
50%	Doing something new that creates value/customers will pay for
25%	A catalyst to the growth of the Company
19%	Introducing something new that needs to be better than what was before
19%	Re-arranging the old in a new way
12%	Converting ideas into numbers
12%	Finding a solution which fixes existing problems and unmet needs
6%	Implementing revolutionary products or technologies which take greatest risks because they create new markets
6%	Producing outcomes that are both original and of commercial value

Source: NEXTVALUE® March 2016

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tirely on digital interfaces.

Almost every type of financial activity, from banking to payments to wealth management, is being reimagined by fintech startups, some of which have garnered blockbuster investments, and similar considerations can be made for the Insurance sector.

As we will see in the following paragraphs, members of "the old guard" are still evaluating how to benefit from the rise of digital and, more importantly, how to avoid obsolescence.
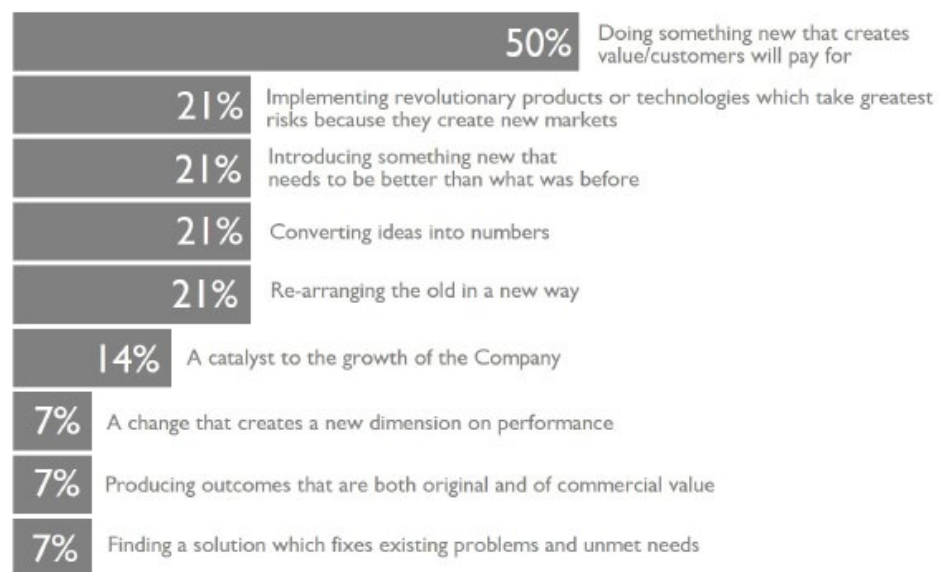
Obsolescence, a fear for organizations and a pain for technology leaders, which crosses all industries.

DESCRIBE YOURSELF: CIOS' PERSPECTIVES

How IT Leaders perceive themselves in their professional life? We asked our panel the hard task to describe their current position and professional way of life in one word, given a selected list of four keywords: Brave, Disrupting, Inquisitive and Sustaining [Figure 10]. Around 36% of the panel describe himself as "Sustaining", that is to support or bear up from below the weight of a structure; in our case, the structure is at macro-level the organizational structure of company, at a micro-level the IT structure of the company.

FIGURE 9 DEFINING INNOVATION - BANKING & INSURANCE

Q: What does Innovation mean to your Company?

(Multiple choices - % of all respondents – Panel=% of respondents pertaining to Banking & Insurance)

|	
50%	Doing something new that creates value/customers will pay for
21%	Implementing revolutionary products or technologies which take greatest risks because they create new markets
21%	Introducing something new that needs to be better than what was before
21%	Converting ideas into numbers
21%	Re-arranging the old in a new way
14%	A catalyst to the growth of the Company
7%	A change that creates a new dimension on performance
7%	Producing outcomes that are both original and of commercial value
7%	Finding a solution which fixes existing problems and unmet needs

Source: NEXTVALUE® March 2016

The term quite resemble the ancillary, yet fundamental, role CIOs and IT Directors cover in their organization, providing the fundamental technological furnishing means or funds, i.e. the IT services. Unfortunately, another definition of "Sustaining" is represented by to suffer, or endure, something without giving way or yielding. A quite true depiction of the ongoing challenges that the IT function is facing in terms of balancing efficiency and strict budgets, increased productivity and innovation, as required by the business. The role of the IT Director has become more complex and demanding due to market and technological disrup-

tions, and our respondents clearly feel the growing pressures over their shoulders.

Nevertheless, an equally interesting 25% perceive themselves as both "Inquisitive" and "Brave". These definitions represent the innovative side of the so-called "CIO+"; CIOs are now also Chief Innovation Officers, Heads of HR, Chief Supply Chain Officers, and Heads of Shared Services to name just a few. As pointed out by Peter High, Forbes columnist who first coined the term in 2012, "Cever IT executives recognize that this puts them in an ideal position to identify themes from across the organization and suggest single solutions

FIGURE 10 CIOS DESCRIBING THEMSELVES

Q: How would you describe your company?

(% of all respondents – Panel=107)

36% Sustaining

25% Inquisitive

25% Brave

14% Disruptive

Source: NEXTVALUE® March 2016
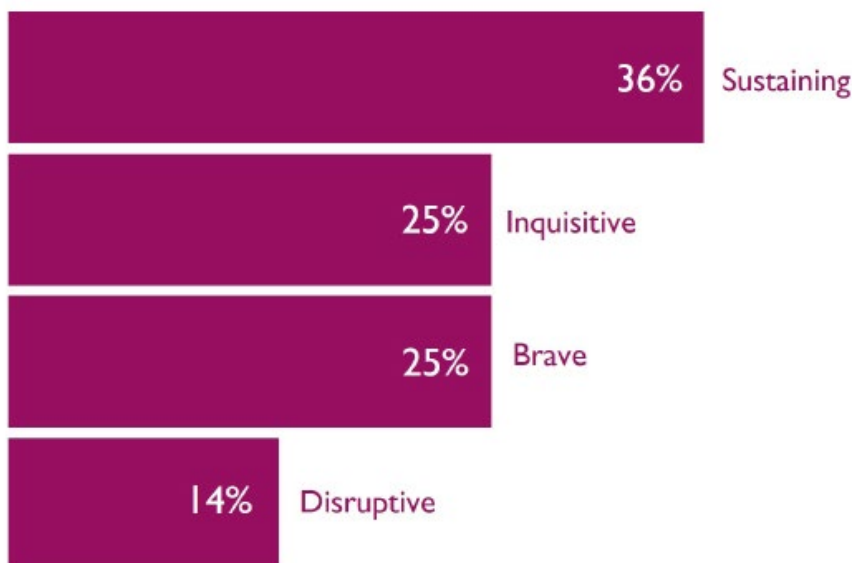
to address multiple needs while fostering greater collaboration across the company". Given this assumption, it is understandable how a Chief Information Officer could see himself as an ideal mixture of both being eager for knowledge, curious ("Inquisitive") and possessing courageous endurance ("Brave").

However, only 14% of respondents feels to be disruptive, an agent of radical change.

Social, Mobility and the Cloud are changing society and disrupting businesses. The CIO is in the rare position to lead the creation of disruptive business models give the prominence of technology across businesses.

Yet this 14% is understandable, since a Chief Information Officer could be often responsible of the technological innovation but at the same time, it is in charge of providing stable,

secure and reliable services, adjectives that constitute the exact contrary of a "disruption". Many CIOs prefer to focus on incremental improvements that are more likely to pay off than risk limited resources on a long shot.

Manufacturing

Our respondents from the manufacturing industry perceive themselves mostly as being "Sustaining" (34%) and "Inquisitive" (28%).

They "sustain" their organizations through market and demand shifts, but they also probably endure daily difficulties and problems in providing reliable service and advice for their organizations, whilst helping innovation. Efficiency, effectiveness and regulatory mastery are more important now than ever in the industry.

Still, they are also curious in searching "new way to do old things", or very new solutions, open to sug-

FIGURE 11   CIOS DESCRIBING THEMSELVES IN MANUFACTURING, BANKING & RETAIL

How would you describe yourself?

MANUFACTURING	BANKING & INSURANCE	WHOLESALE & RETAIL
28% Inquisitive	36% Inquisitive	31% Inquisitive
34% Sustaining	36% Sustaining	50% Sustaining

Source: NEXTVALUE® March 2016

gestions from their peers and colleagues. The manufacturing CIO has long been associated with managing new technology implementation, strategic IT planning and keeping tabs on the latest solutions that could boost productivity.

Manufacturing IT Leaders cover also the role of Chief Inquisitive Officer: they are the executives who need to shape more right questions, perhaps more than some single-minded answers. Because in today's complex marketplace, leaders need to have complexity and systematic mindset, led by questioning.

Banking & Insurance

In the Banking and Insurance industry, 36% of our respondents claims to be Sustaining as well. Sustainability is a prerequisite for the financial industry, as well as compliance and risk management.

Chief Information Officers and IT managers often face the challenges associated with the need to preserve sensitive data and information, by creating norms and regulations and giving a proper training to non-IT users in order to minimize internal data, network or technology breaches. They must also deal with external regulatory requirements and manage high-fixed costs infrastructures.

Moreover, another 36% of our restricted panel consider themselves "Brave". A bravery needed in an industry where new digital incumbents threaten a business model that screams tradition.

Brave Bank and Insurance CIOs straddle the world of legacy systems and lead innovation of new applications and services, also by enabling access to internal data with the proper controls in place to manage risk and network security. The IT department bravery partners with sales and marketing to determine direction together and brave IT leaders are spending more time in the C-suite, planning the future.

Wholesale & Retail

As for the Manufacturing restricted panel, our respondents from the Wholesale and Retail industry depict themselves mostly as Sustaining (50%) and Inquisitive (30%). However, in this case Sustaining distinctly prevails over Inquisitive.

Who can blame them? Wholesale, and especially Retail CIOs must ensure legacy systems that keep the business running are maintained, while also developing a clear path to deliver an innovative, omni-channel shopping experience.

Nevertheless, mitigating security threats posed by sophisticated cyber criminals has made data security a top priority. That is where the sustaining part comes into place.

Meanwhile, the IT is asked by the business to support new mobile strategies and to personalize the customer experience, while avoiding privacy pitfalls.

CIOs know well that technology is a big part of the silo problem, as point-of-sale (POS) systems, e-commerce platforms, and order-management applications have served up unsyn-

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chronized and disparate systems. Integration and sophisticated strategies around cross-channel fulfillment, replenishment, and allocation are on their daily agenda.

And this is, most probably, where the Inquisitive part comes into place: as "inquisitive" is a proxy for "curious", technology professionals in Wholesale and Retail are eager to find new ways to innovate their organizations while providing stability.

## DESCRIBE YOUR COMPANY: ORGANIZATION PERSPECTIVES

After asking a brief poll on our respondents' profile and behavior, on the other hand we asked them to define the organization they are working for, with adjective from a given list: Conservative, Innovative, Resilient and Visionary [Figure 12].

A 38% of the panel describe their organization as "Resilient", elastic, flexible and able to endure and recover from changes undergoing in the market. Resilient companies can be paired with the Sustaining CIO from the previous question: together they represent a solid but flexible company, not particularly disruptive but efficient in modifying its structure according to big disruptions in the field, in a few words, an enterprise that is built to last.

FIGURE 12 CIOS DESCRIBING THEIR COMPANY

Q: How would you describe your company?

(% of all respondents – Panel=107)

38%	Resilient
31%	Innovative
24%	Conservative
7%	Visionary
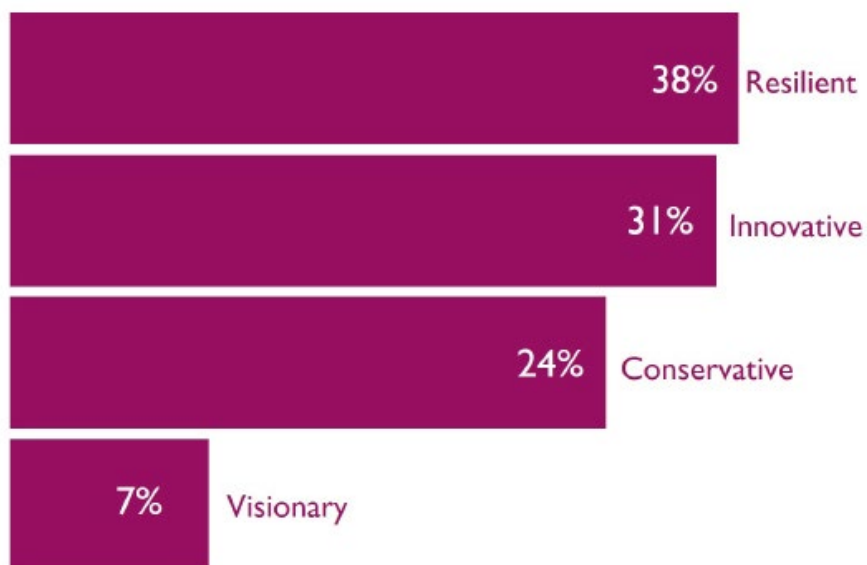
Source: NEXTVALUE® March 2016

Nevertheless, a close 31% perceive their company as being "Innovative", able to introduce something new or different to distinguish itself from their competitors. Innovative companies pair most probably with Inquisitive and Brave CIOs; together they are able to create an environment where disruption is not only faced but also nurtured, taking some risks for a greater future return.

A further 24% of respondents consider "Conservative" their organizations. Stability and tradition are often a key trademark for many Italian "Made in Italy" companies (especially in the manufacturing sector), nevertheless conservative organization show also rigidities and obstacles to change.

A too rigid approach to external disruptions can reflect in diminishing value in the long term, whilst suffering the competition of more adaptable competitors.

However, being conservative means also being compliant to internal and external rules and norms, a "must have" that organizations cannot avoid. Protecting information and ensuring business continuity become more and more important when digital is extending the virtual boundaries of enterprises.

Unsurprisingly, only 7% of the total panel chose the word "Visionary" to describe their company.

A fanciful, but not practically workable business idea characterizes visionary organizations.

When a clear mission and robust a strategy and implementation support the vision, these companies are likely to boost performance and growth.

However, the path of the visionary is often hard, given the many different factors that contributes to final success, or failure.

FIGURE 13 CIOS DESCRIBING THEIR COMPANY IN MANUFACTURING, BANKING & RETAIL

How would you describe your company?

MANUFACTURING	BANKING & INSURANCE	WHOLESALE & RETAIL
38% Conservative	29% Conservative	37% Resilient
31% Innovative	36% Resilient	25% Innovative

Source: NEXTVALUE® March 2016

Every organization, as categorized before, has its own advantages and disadvantages; key result is to find the right balance between stability and disruption, tradition and innovation, with regard to the specific disruption and technology for each industry of reference.

Manufacturing

Our panel of respondents coming from the manufacturing industry categorizes its organization as being Conservative (38%) or Innovative (31%), as shown in [Figure 13].

Manufacturing companies can be considered "conservative" organizations by nature, especially when you produce tangible products: digital tools cannot replace plants and factories.

As for innovation, players in a wide range of industries are deploying digital technologies in different ways to drive value.

Innovation possibilities in the manufacturing sector thanks to technology are driving also the interest of Internet companies as Google, with pilot projects on drones, robotics, healthcare and automotive.

The availability of digital data, the automation of production processes, the interconnection of value chains and the creation of digital customer interfaces is transforming business models and reorganizing entire industries.

Banking and Insurance

As with the total panel, our restricted panel for Banking and Insurance

perceive its company mainly as Resilient (36%) and Conservative (29%). Resiliency has a specific importance in the context of financial systems. The concept of resilience is often associated with the ability to spring back, or recover from a shock.

This capacity to recover quickly when difficulties occur is certainly important, however, from the viewpoint of regulators and customers, an arguably more vital aspect of resilience is the ability to avoid difficulties arising in the first place, thereby preventing any loss of availability.

This is where Conservative comes into place. The complex environment of norms and regulations where banking and insurance institutions operate favored the creation of a rock solid IT structure, which strongly focuses on business continuity and the protection of sensitive information (i.e. bank accounts).

On the other side, financial institutions can be considered conservative, as their business and operating model is also quite rigid in relation to market trends and disruptions. It is real that banks are investing heavily on innovation but, at the same time, they still have to develop new platforms while overcoming legacy infrastructures.

Web competition on price for the insurance systems, new fintech startups and mobile payments are now undermining some of the benefits of a conservative organizational structure.

Wholesale and Retail

Our respondents from the Wholesale and Retail industry perceive their companies mainly as Resilient (37%) and Innovative (25%).
Business resilience in distribution involves refining processes and building trust among employees, suppliers and partners, and driveing consistency among the different customer touchpoints.

For the IT side, it means minimizing disruptions from temporary systems outages or facility damages to maintain the business up and running. In deed fact, retailers and wholesalers base most of their B2C and B2B customer loyalty thanks to the efficiency of their operating model.

However, in the last years traditional retailers invested heavily in innovation, to keep up with a more polarized competition from smaller online retailers and growing informed customers thanks to the Internet.
E-commerce, Personalization, omnichannel strategy and improved customer experience are among the key trends in retailers' current investments.
In this complex and evolving environment, retailers are reassessing both their roles and the way they create value for consumers. The retailers that will be most effective in today's marketplace will likely be those that fundamentally rethink the retail experience, developing business models that blend physical, virtual, and community experiences.

Technology is the backbone of these projects, providing both a reliable and stable service and the implementation of innovation.

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IT TRANSFORMATION: OUTPUT AND PRINT MANAGEMENT BACKING UP INNOVATION

IT Transformation can be defined as a complete overhaul of an organization's Information Technology systems. The IT Transformation can involve changes to network, architecture, hardware, software and data access and storage.

Usually, the goal of IT transformation is described as to change the IT department from being a reactive, inflexible organization to being a more pro-active, flexible part of the business that can respond quickly to changing business requirements.

As any other large-scale organizational change, to "rip and replace" IT implies also modifying the softer side of the company, as workflows, business rules and, ultimately, corporate culture.

A key driver of IT Transformation is one of our keywords in Question 1, Standardization. Hardware, software and application consolidation, including legacy migration, are common features of IT Standardization.

However, middleware deserves the same level of attention, as investments in this area turns out to be an essential and vital part of enabling innovation processes and implementing a versatile, resistant system, integrated with the Cloud infrastructure. An output management system is often considered middleware because it captures documents from appli-

cations running on various platforms and delivers them to a variety of hardcopy and softcopy destinations. In terms of the overall logic flow, it sits "in the middle" and insulates upstream applications from the complexities of downstream document distribution.

In essence, it decouples many functions from the application and moves them into a device and platform-independent service layer ("printing as a service").

A standardized printing service can enhance IT productivity, increase business agility and improve service and user experience without giving away security and compliance adherence.

However, enterprise output and print management is often forgotten or neglected as a key driver to reduce costs and save for innovation. We asked our panel if Managed Print Services (MPS) and Pull Printing projects between the end of 2015 and the end of 2016 are uderway or if they are planned for 2017[Figure 14].

For actual projects, a stark dichotomy between those who do not declare projects (38%) and those who declare a wide scale adoption across the organization (30%) is present.

Since an enterprise approach to MPS is the most rewarding in terms of return on investment, this could explain how adoption of the service limited to single business units or divisions remain close only to 12% and 16% for 2015/16 and 2017 respectively.

The "Don't know" percentage of respondents is interesting in defining also those who never considered the need for an approach to Enterprise Output Management for innovating and standardizing corporate systems.

To deepen our understanding of the difference between those who have developed (or are going to develop) MPS and Pull Printing projects and those who, instead, does not declare projects, we can analyze Figure 15 and Figure 16. The share of the panel declaring the implementation of projects indicates as a fundamental prerequisite (78%) the integration with all Business Appli-

cations. Enterprise application integration is one the fundamental point on the IT Transformation agenda, as it improves greatly business agility through the reduction of inefficiencies, systems standardization and vendor independence. A valid and flexible enterprise output management system should integrate easily with new projects and business initiatives, such as mobility, visualization and legacy systems modernization.

An interesting 24% is interested in a safe and secure printing service. Knowing whom, when and where is printing is at the basis for a secure document output management, to avoid important data and informa-

FIGURE 14 MPS AND PULL PRINTING PROJECTS

Q: Is your Company facing MPS (Managed Printer Server) and Pull Printing in the period between the end of 2015 and the end of 2016? Will your Company face these projects in 2017?

(Panel: 107 Top and Medium Large enterprises in Italy)

Source: NEXTVALUE® March 2016
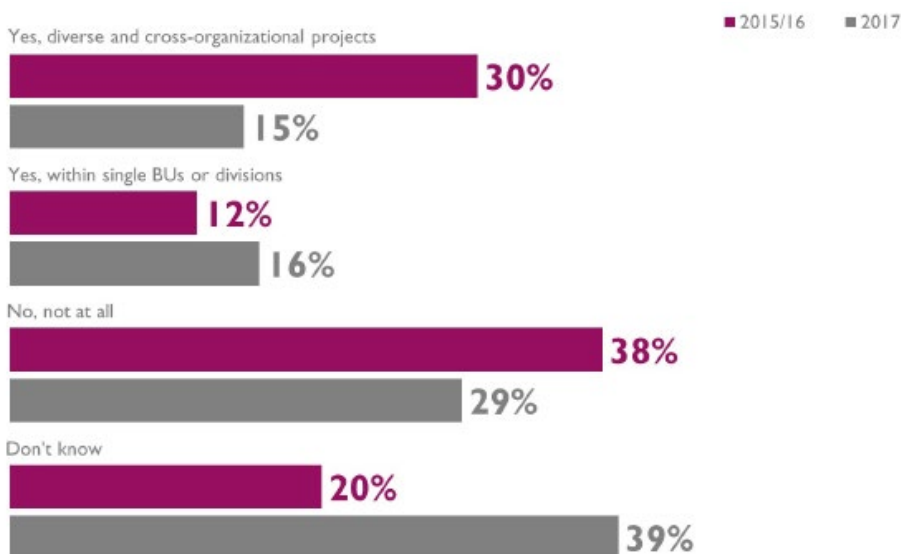
tion leakage to unauthorized users. Regarding compliance, print reduction thanks to printing policy and pull printing support is helpful in improving Corporate Social Responsibility, whereas compliant document processes automation also contributes to reduce costs, improves agility and increases adherence to norms, reducing the risk of errors.

Our respondents who are facing the implementation of document output management projects also require Platform Independence (22%) as a key feature.

Printing as a service and output management enables to view "print" as a single middleware architecture that captures and delivers documents from all applications and platforms to a variety of hardcopy and softcopy destinations.
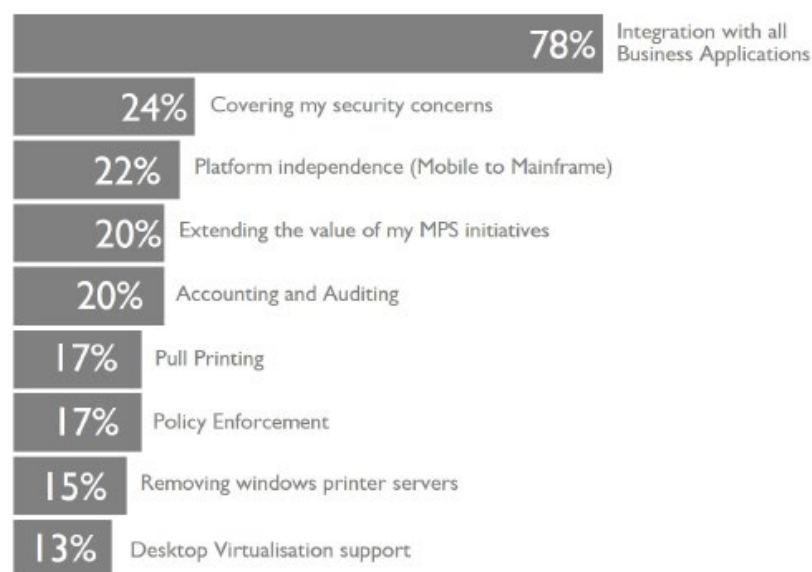
The output management middleware architecture provides consistent functionality, service levels and user experience across all applications and platforms in the form of a "service layer" which insulates applications from the complexities of document distribution and simplifies the delivery of new services without application changes.

This service layer is an extension of organization's existing IT service catalog. Thus access from digital devices and from the cloud is guaranteed

FIGURE 15 OUTPUT MANAGEMENT REQUIREMENTS - PROJECTS DECLARED
Q: What do you want for your Document Output and Print Management?
(Panel: % of respondents who declared MPS projects)

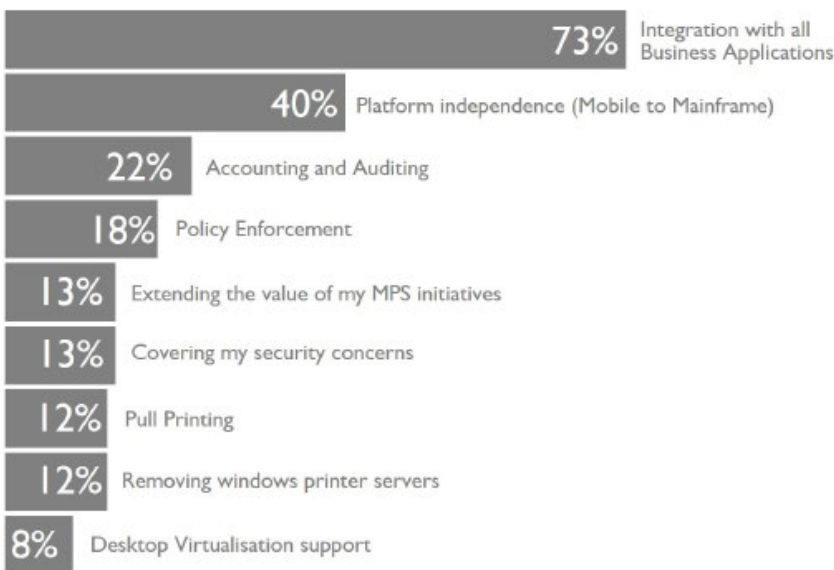|	
78%	Integration with all Business Applications
24%	Covering my security concerns
22%	Platform independence (Mobile to Mainframe)
20%	Extending the value of my MPS initiatives
20%	Accounting and Auditing
17%	Pull Printing
17%	Policy Enforcement
15%	Removing windows printer servers
13%	Desktop Virtualisation support

Source: NEXTVALUE® March 2016

and secure, anywhere, anytime.

Our panel also indicates accounting and auditing (20%), along with "extending the value of my MPS initiatives" as fundamental requirements for their Output Management projects.

Audit, accounting and reporting capabilities for documents relates to the security, risk and compliance side of document life cycle management, a seemly growing concern for those who already deployed their enterprise output management.

At the same time, the perceived need to extend Managed Print Service initiatives shows a space for improvement for these projects, and that the issue of document output management and optimization is not overlooked. If we consider, as in Figure 16, the percentage of respondents who have not declared projects for Output Management, we can find a striking resemblance for the first answer of choice, integration with all business applications (73% of the panel) thus confirming a growing need for system and service integration for businesses.

A common, hardware-agnostic infrastructure across the entire organization delivers hardware cost savings, consolidating and eliminating print servers, reducing the cost of hardware, software and associated IT re-

FIGURE 16 OUTPUT MANAGEMENT REQUIREMENTS - NO PROJECTS DECLARED
Q: What do you want for your Document Output and Print Management?
(Panel: % of respondents who did not declare MPS investments)

%	Requirement
73%	Integration with all Business Applications
40%	Platform independence (Mobile to Mainframe)
22%	Accounting and Auditing
18%	Policy Enforcement
13%	Extending the value of my MPS initiatives
13%	Covering my security concerns
12%	Pull Printing
12%	Removing windows printer servers
8%	Desktop Virtualisation support

Source: NEXTVALUE® March 2016

sources.

However, Platform Independence is up from 20% of those who are implementing output management projects to 40% of those who are not. Printing as a service is probably more fundamental for those who have not yet implemented it and feel the need to promote data and document integration within their company.

It is also notable how, if accounting and auditing are still perceived as key requirements (22%), the need to cover security concerns is nevertheless confined at 13%, while policy enforcement is in the top three of our respondents' choices with 18%.

For those who do not declare Output Management projects, agility, integration and standardization are among the top priorities. On the other hand, for those who have already included Document Output and Print Management initiatives into their transformation projects, security and accountability are another fundamental layer on the path to innovation.

BUSINESS TIPS:
ENTERPRISE OUTPUT AND PRINT MANAGEMENT FOR INDUSTRIES

Manufacturing
When it comes to producing and shipping goods, even the smallest inefficiencies can add up to large cost overruns. Because documents often control the flow of automated business processes, guaranteed document delivery is an important, but often overlooked, factor in an organization's success.
Failures in printing barcodes pick lists, shipping orders, and other critical documents can disrupt entire manufacturing and distribution processes. A comprehensive output management strategy helps to minimize document errors and improve business efficiency, whilst harnessing information for competitive advantage and reducing costs. Thus, a manufacturing organization can streamline critical document delivery, opening the door to better customer service and growing profits.

Documents drive many complex workflows in the manufacturing environment. However, assembling the necessary documentation can itself be a complex process, especially when various customs paperwork and declarations sheets must be included based on the articles being shipped.

A Document Process Automation solution can simplify the process of producing and gathering the necessary documentation while eliminating the need for costly manual document processing.

Banking and Insurance
Banks, financial providers and insurance companies are some of the most document-reliant organizations in the world. Unlike manufacturers or other companies that produce tangible products, a written statement or signed contract is often the only physical link between a service provider and its customers. These same documents also contain valuable information used during compliance audits and other regulatory actions.

The more important are documents for a business, the more important the output management infrastructure becomes for the document life cycle management, particularly in improving customer service and in being compliant to norms and regulations.
Regardless of the size and network reach of a financial institution, the real bonds of the customer relationship are formed at branch level.

For a company with thousands of branches, this means thousands of remote servers to be purchased, configured, and supported, whereas application that drive the business usually reside in the central datacenter, where it can be easily managed and supported. Of course, this could cause a lot of costly process complexities and possible inefficiencies.

An enterprise output server can reduce the need for print servers and other infrastructure in remote branches. The solution seamlessly connects to application servers running in central datacenter and routes documents directly to printers in branches.

Due to their role in the global economy, financial institutions face some of the most stringent compliance audits of any industry. Those who regulate banks, insurance companies and other service providers scrutinize the internal and customer-facing documents for proof that the institutions can back up their commitments. Instant access to information requested by regulators can make the difference in improving the annual audit processes.

Wholesale & Retail
Controlling the flow of information and making sure it is secure is critical to retailers and wholesalers. To be certain that the right information along the extended retail supply chain, will reach the right people in the right format and at the right time is vital for these enterprises. Failures in printing barcodes, pick lists, shipping orders, and other critical documents can disrupt the distribution processes and effect the overall performance.

From production reports to bills of lading, pick tickets, and barcode tags, documents play a crucial role in the operation of any distribution center and while many companies spend untold millions on supply chain applications, they often fail to consider how the information from these systems is delivered to the intended recipients. When hardware or network problems lead to document disruptions, the delays can cause missed service level agreements (SLAs) and reduced profits.

Therefore, when a value chain depend on reliable document delivery, a solid enterprise output management greatly contributes to ensuring the optimization of business performance.

CHAPTER 2

What's next

Innovation, business volatility and increased competition are among the elements forcing businesses to reconsider their structure and processes. Cloud, mobile and social technologies disrupts business models toward digital, whereas transforming the IT organization to meet market-changing needs of the market is now high on C-level agenda.

The IT department faces challenges as optimizing for speed and guarantee users quality, security and control. What is the future of Information Technology? A trend among business analysts see in the so-called "Bimodal IT" the future of corporate technology. Core systems and fundamental services are delivered with the "Traditional IT" mode, to guarantee stability and efficiency, whereas the "Experimental IT" mode, characterized by agility and speed, provides organizations the flexibility necessary to adapt to market changes, outsourcing ancillary services into the Cloud. Then, would IT cease to provide all of the entire spectrum of services, becoming more a broker and orchestrator of third party services?

What about the new role of the CIO? Would it become a "Chief Innovation Officer" who evaluates digital technologies and marketplace innovations to adopt in the organization? Or a "Chief Integration Officer" who is in charge of delivering a seamless, secure and flexible interoperability between all corporate systems and processes? Will he become more and more the executive arm of the CEO and a trusted advisor for the Board?

On the other hand, will Chief Information Officers lose traction to other figures in the path toward innovation, such as Chief Digital Officers or Chief Technology Officers?

Not always professionals completely agree with analysts and advisors, and this is true also for the concept of "Two speed IT" or "Bimodal IT". What is presented on paper as a panacea to every organizational and technological problem is not so often implemented (or so easily implementable) for organizations. We asked our respondents their feelings and perception on common technological keywords and on the state of their companies, to reveal "the truth behind the myth".

As common sense reveal us, often the truth lies halfway. Respondents to our survey are facing a tough period in sustaining their companies to internal and external changes, but innovation and disruption also find their place. Our respondents perceive themselves as both "sustaining" and "inquisitive", whereas their organizations could be resilient but also innovative.

In this transformation process, one of the most critical aspects is the management of new business applications. In most cases, while the new applications are designed taking into consideration the digital transformation process, on the contrary access to data necessary for the business resides in an infrastructure

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not yet ready to operate successfully in the digital environment.

IT leaders must face the difficult task to integrate and reconcile traditional legacy systems (hardware, middleware and software) and new, innovative technologies. The introduction of digital business platforms within organizations is redefining different service layers toward a more flexible environment.

Every CIO may ask to himself: is IT responsive and proactive enough to find answers and solutions in case of emerging chances? Does IT have a platform which is scalable, secure, resilient and well interconnected?

Information Technology is now the rate limiter for change, the IT infrastructure that was implemented to deliver business automation in the 20th Century, now impedes business agility in the 21st Century. Digital Business platforms represents one of the last efficient approach to reconcile the different systems within an organization. Exactly as a physical platform is the founding base to sustain buildings, digital platforms provide companies a rock solid foundation where to build on a "virtual bridge" between different businesses, and to develop new products and services on the platform to favor the joint creation of value. SaaS, PaaS and IaaS Cloud Technologies represents the founding base on which to build a digital business platform, especially for companies that do not possess enough resources and capabilities to develop an in-house technology platform. Open source technological paradigms and source code reuse enable innovation through agile and flexible development processes; in particular, members of the digital ecosystem as developers, partners and

even end users can design and share customized applications with strict time and resource constraints.
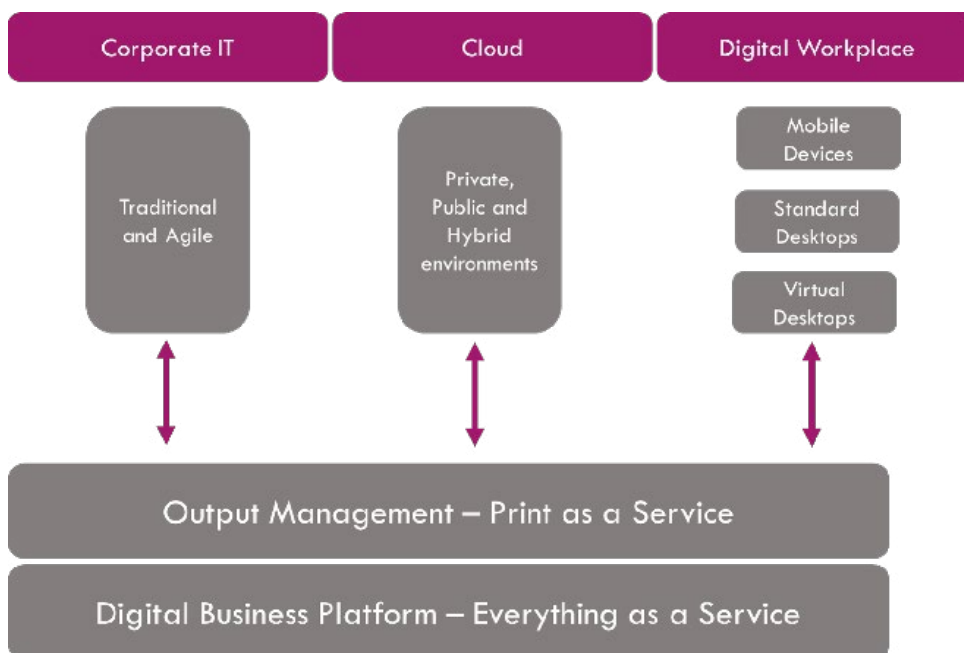
Mobile platforms join Public Cloud and Open source technology in composing and assembling predetermined modular software into innovative applications and business models.
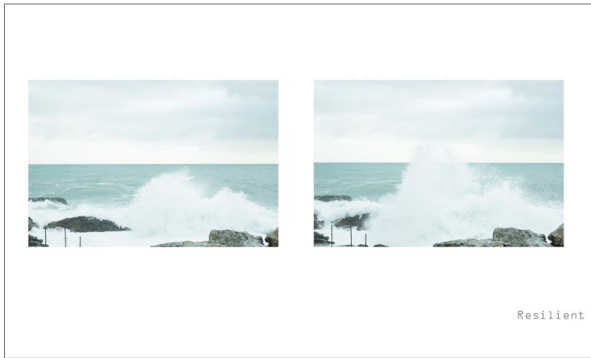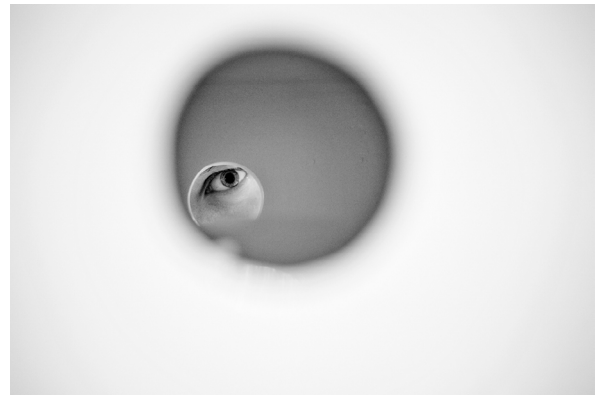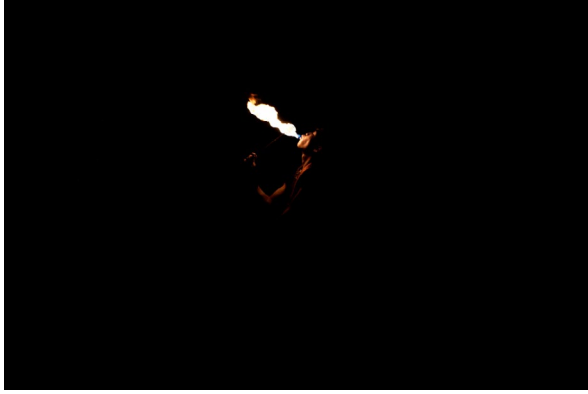
The gradual shift to a platform-driven enterprise simplifies organizational complexities and favor innovation within the organizational structure by looking at the enterprise as a set of interconnected platforms that address everything, from people to technology. At the bottom of the "building" lies the core, technical platform, which is ideally comprised of the technological building blocks and architectures. The technical platform consists of a set of fundamental services where additional layers (aka platforms) rely on, from additional servers to increased storage. On this highly modular service layer concept, open information and technology architectures provide "everything as a service". This is where "printing as a service" comes into the picture. As previously reported, "print" can be viewed as a single middleware architecture that captures and delivers documents from all applications and platforms to a variety of hardcopy and softcopy destinations. This very extension of IT services become critical for document-related business processes, where print plays a critical role (and even in a highly digitalized world sometimes print is still unavoidable, at least due to compliance adherence, e.g. for contracts). From legacy applications that require a print capability to delivering application output from the cloud, to the security of document delivery and the commitment to meet the needs of an increasingly mo-

bilized workforce, a printing as a service layer provide a single architecture across all corporate platforms, applications, data formats and logical and physical destinations [Figure 17].

As planning for future digital platforms, print and output management are a further opportunity for IT standardization and transformation. When renovating core systems, obtaining innovation when building on legacy systems can be tough and printing systems constitutes no exception.The transformation to an independent Output and Print management service provides continued improvement support to IT transformation programs. Document processes are decoupled and managed, regardless of the application or the output channels and devices.

Output Management helps performing innovation within organizations, by simplifying and integrating changing processes and cutting costs that can be invested for major transformations. Even if an organization is not searching for a new, disrupting model, Output Management back up the much needed long-term effects of declining the cost curve of IT, one of the largest capital expenditure within enterprises.Ultimately, successful CIOs will understand how to unwind layers of legacy systems and infrastructures to reduce costs, leverage internal data for new revenue-generating applications, and provide the agility to scale technology services up or down based on business demand. And to do not forget about their print layer.

FIGURE 17 OUTPUT MANAGEMENT AND THE PLATFORM-ENABLED ENTERPRISE

Source: NEXTVALUE® March 2016

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#LRSphotocontest

Resilient