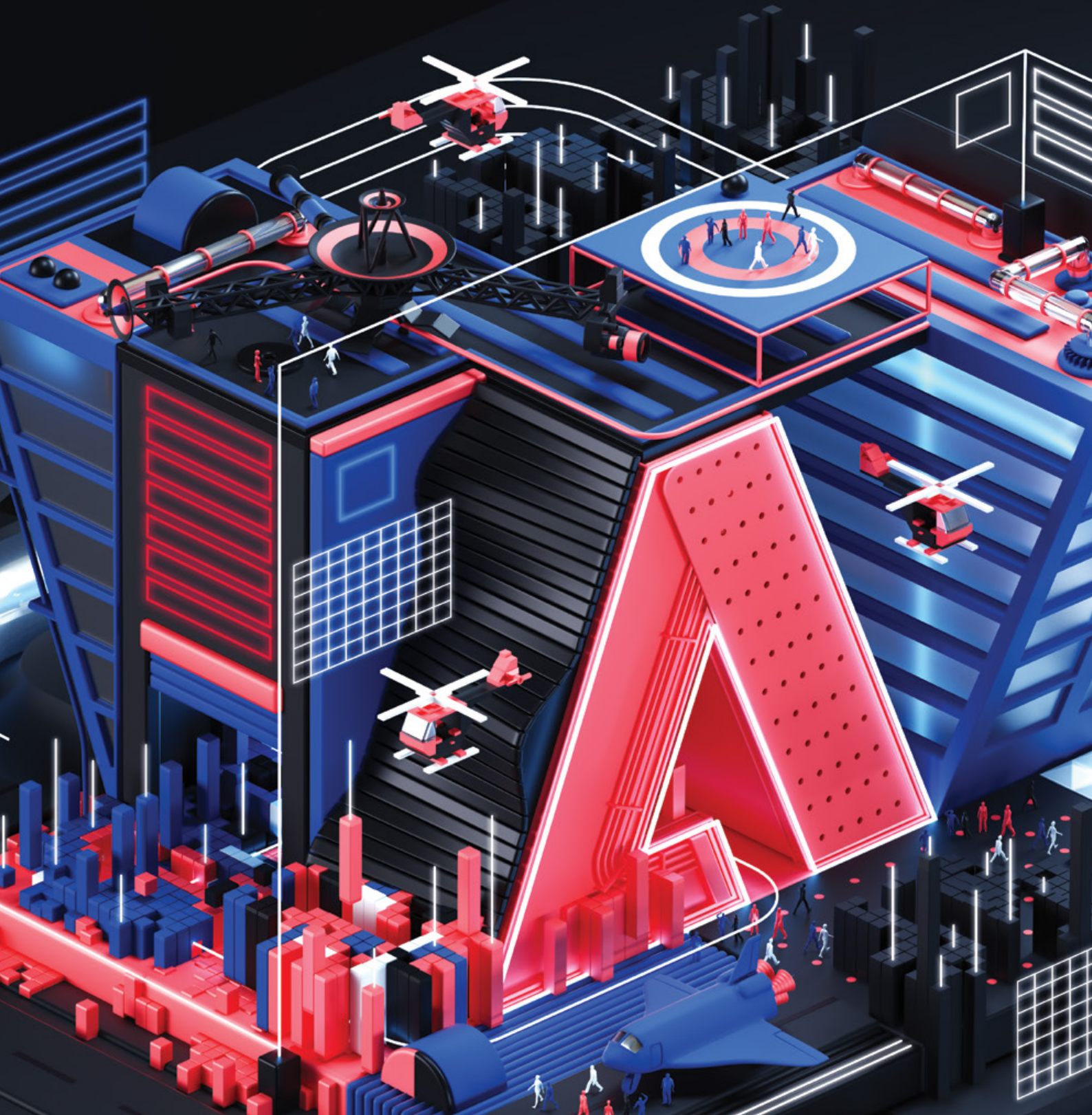# It Starts with People

Adobe Australia Submission to the Australian Government Department of Industry, Innovation and Science

'The Digital Economy: Opening up the Conversation' Discussion Paper

December 2017

# Executive Summary

## Context

Adobe has just celebrated its 35th birthday. Since 1982, we have been a business centred on, and dedicated to, creativity. More recently, we have expanded into the data side of creativity – measuring when and how creativity works. We believe strongly that the emerging digital world is going to be people and creative led, with technology providing the supporting act. In our estimation, the next five to 10 years will see a rise in automation in almost every sphere – but, this automation will be in conjunction with humans. It will assist and augment, suggest and supplement.

With this in mind, we have positioned this paper a little differently. Our intention is to highlight the larger trends and their human effects, and then indicate how these might be applied to the context of a citizen-first digital economy. We are strong technological optimists, and believe that the opportunities for a better society and greater equality for all are worthy goals, and ones where technology can assist.

## Overview

Governments are designed to be representative of the people and Australia is comparatively digital-savvy with a high take up of digital devices (Australia has one of the highest smartphone penetration rates in the world according to Deloitte's 2016 Global Mobile Consumer Survey). The digital age that has erupted with the arrival of the Internet, mobile phone and social media has changed the behaviour and expectations of citizens with unprecedented speed and scale. Citizens are more informed, more inter-connected, and more likely to engage with media at a global rather than local level.

Most critically, the speed of change in digital is accelerating. The last few years have seen commercial organisations in Australia and globally engaging in 'transformation' as a response to the most rapidly evolving business and technological environment in history.

Consequently, government must recognise that it alone cannot lead the digital conversation because it is too diverse, complex and fast moving – even in areas that government might previously have regarded as primarily their domain. Citizens now have the power to move more quickly, be more educated about the issues, and to communicate their views via social media. Further, they can do this with greater speed and reach than government.

This is not to be defeatist, but rather, pragmatic. An engaged citizenry is vital to government, and the global trend of low voter turnout surely indicates the fatigue that many feel with governments that are unable to show relevancy. A stand out example of an engaged citizenry working in harmony with government is the recent success of the same-sex marriage plebiscite in Australia, where citizen opinion was voiced, policy formed and legislation enacted.

The goal then should be for government to consult widely, and move swiftly. It must also demonstrate through its behaviours that digital is a core competency. As technology gets more complex, the digital literacy gap between the innovation in industry must not widen further from government capability. Machine learning, blockchain, autonomous vehicles, gene therapies – all are immensely powerful, society changing tools. Government must ensure that in addition to regulatory and security conversations that it is also finding ways to be open, innovative, and motivating around these technologies.

## Be bold

Government needs to continue to work hard to provide digital experiences for citizens in order to foster, encourage and grow strategists, thinkers, project leaders and so on, who can think about these challenges. In order to ensure that it can recruit top-tier public servants, internal employee experiences must be industry leading, which is a function partly of how well government embraces digital.

Adobe respectfully recommends that the Australian Government fling wide the doors. Embrace all of digital with all its possible failings and uncertainty. Balance 'governance' and leadership. Know that digital has already occupied all corners of Australians' lives, and will only continue to do so with increasing power and reach.

As such, the Federal Government needs to consistently think about digital for Australian citizens and digital for its education, healthcare, transport, infrastructure, employment, tourism, environment, agriculture, mining and manufacturing sectors to ensure that it supports the next generation of ingenuity and the can-do spirit that makes Australia so unique.

A digital economy will flourish anyway, not because it is stimulated by government, but because it it now the path of least resistance for getting ideas to market. A government can and should be part of the conversation, but to do so they must be seen as relevant, informed and capable. That is evidenced by offering their citizens excellence in their digital experiences, as well has having progressive policy for digital excellence.

## Points of focus

Adobe recommends four key areas for Australian Government consideration. These are exactly the same recommendations we make to commercial customers, and ones that we feel must be enacted as a package rather than as separate moving parts:

1. Prioritise digital transformation.

2. Focus on citizen and customer experience.

3. Leverage meaningful data.

4. Embrace people and skills.

As such, we have structured this submission around these four key areas. At the beginning of each section, we have included the questions from the Government's Digital Economy Consultation Paper that have been addressed in that section. Some of the questions are addressed across multiple sections of our response.

## Transformation puts the citizen at the centre
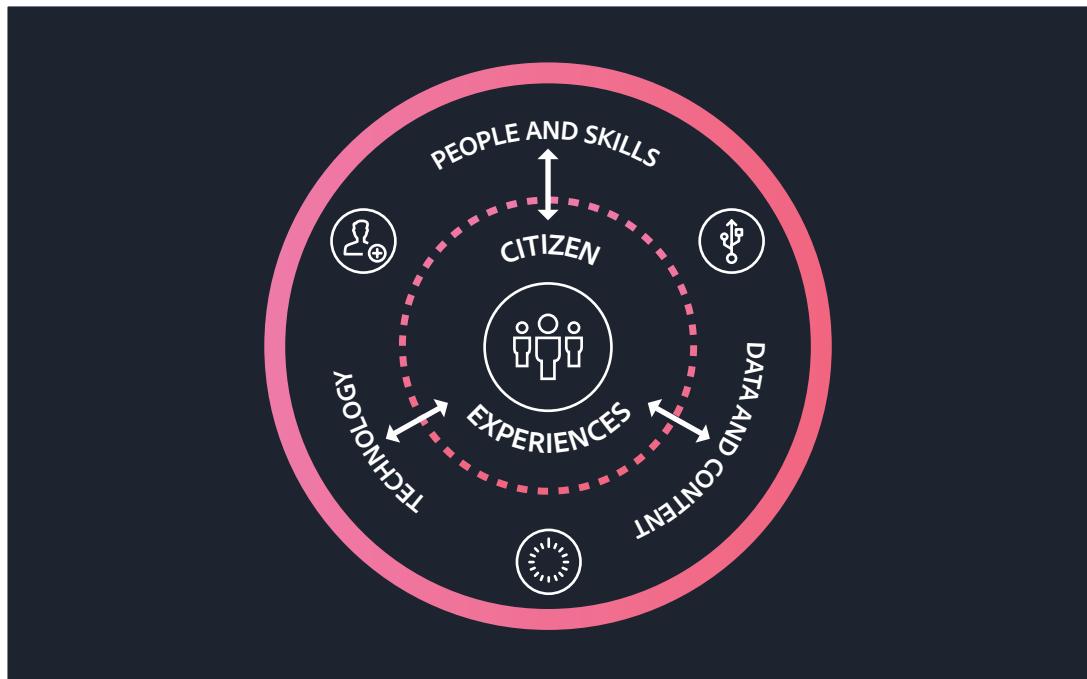


Whilst these represent the main areas, we recognize of course that this is a large, complex discussion. We would welcome spending time with government to explore further at the appropriate time.

# Prioritise Digital Transformation

# Digital economy consultation paper questions addressed

**1**  How are advances in digital technology changing the way you work, your industry and your community?

**2**  What is your vision for an Australia that thrives in a digital economy? Where would you like to see Australia in five, 10 and 20 years' time?

**3**  What is the role of government in achieving that vision?

**4**  What key disruptive technologies or business models do you see? What do you predict is on the horizon in five, 10, 20 years' time?

**6**  What opportunities do we have to accelerate the development of technologies that will underpin Australia's digital economy?

**7**  What opportunities do we have in standards development and regulation to:
–– enable digital entrepreneurship, innovation and trade?
–– mitigate the risks associated with digital disruption?

**14**  What is holding Australian businesses back in terms of benefiting from digital technologies?

**15**  What would help Australian businesses to embrace digital technologies?

**16**  What efforts are you or your organisation making to respond to digital transformation? Why?

**17**  What opportunities do we have to use digital technologies to improve linkages into export markets and global supply chains?

## Why transformation is misunderstood

Transformation is complex, multidimensional and stressful for those it affects. Many regard transformation as the changing of technology structures in an organisation, from an 'old' to a 'new' way of operating, perhaps as part of a shift to the cloud.

As such, transformation has been thought of in project terms – something to be undertaken, completed and overseen by technologists.

A more progressive view is that transformation is a whole-of-organisation shift in attitudes, mindset, capabilities and operation. This sounds grandiose. However, the trailblazers have discovered very quickly that improving technology is in fact a response to customer needs and competitive environments. That need to improve the tools leads to a comprehensive review of business process, which in turn causes skilling and structural re-thinking. Further, it becomes an ongoing process, in response to continuously changing conditions for the customer.

The goal is not to pursue transformation as an exercise. The primary focus should be citizen and customer experience, as an ongoing and ever improving function of the organisation. Transformation is what happens when that shift occurs. And transformation affects technology, people, leadership, innovation, culture, and process. Technology tends only to be the catalyst.

Many, if not most, medium to large commercial organisations are in the midst of their transformations. Small businesses, ironically have less work to do, as they are less bound to structure and process.

## Transformation applies unequivocally to government

Government must continue its focus on transformation and strive to be an exemplar. There is as much need for government to transform as there is for the commercial sector. The principles are the same and some common best practices are now commonly embraced, meaning government can move quickly and with confidence.

It may seem that transformation is optional. We would argue that it is not. The bar is moving fast and high. The benefits experienced by citizens – as customers of banks, airlines, retailers and others – are now regarded as the baseline for both digital and physical interactions. It is now the citizen who is in the driver's seat, deciding what time of day, what channel, and what service they want. Increasingly, people are seeking to access services in new ways, skipping the office visit or telephone call altogether.

With the explosion of touch points and ways to communicate, the public today is more connected than ever before with government. That connectivity means the pressure is on government decision makers to provide online and mobile-friendly services that are comparable to the private sector, if not better.

Transformation must also be thought of in conjunction with the people and skills discussion that occurs later in this paper. Customer and citizen experience is the goal, but staff are the cornerstone. If there is care and consideration given to the employee experience, the flow-on effects for citizen experience will be large, and, employees will feel much more empowered. Why try to engage citizens using staff who themselves may be disengaged?

## The transformation opportunity is large and the benefits substantial

In Australia the annual volume of government transactions in the decade to 2025 is expected to remain static but the proportion of those completed online is expected to rise from 490 million to 810.6 million, according to Deloitte Access Economics' Digital Government Transformation Report commissioned by Adobe in 2015. This shift to digital platforms represents a substantial windfall for government. The same Deloitte Access Economics report about digitising transactions in Australia revealed that an average in-person transaction costs the government $16.90, while an average online transaction costs merely $0.40. These cost savings can be translated into new initiatives or even reduced taxes.

*average in-person transaction costs the government $16.90, while an average online transaction costs merely $0.40*

The growth of and demand for digital demonstrates that excellent digital services are not only cheaper for government but also more popular among users. At all levels in Australia, governments are making real progress in digital transformation and this pays dividends for citizens, businesses and for the governments that deliver these improved customer interactions, which also increases the level of trust in government.

When agencies invest in systems and structures that support digital growth, the possibilities are endless. While bureaucratic roadblocks and a lack of funding continue to limit IT as well as regulatory advances, CIOs are expected more than ever to find solutions. The right digital systems can make the difference. Agencies that have

spearheaded digital transformations are providing new, exciting services to the people, improving user experiences, and saving time and money.

There are many opportunities for government to take advantage of this digital transformation. But first, government needs to determine what it will take to transform. That includes removing the roadblocks in agencies and departments, transcending IT and regulatory barriers, speeding up decision-making and most importantly, determining the steps that need to be taken to accomplish this.

Government agencies are facing new pressures from all directions to adopt solutions that will streamline workflows and save money. From policy and process to rising citizen expectations, here are a few factors that we see are making change inevitable. Government can benefit from digital transformation in three areas:

## 1. The return on investment

Government mandates and public expectations are not the only factors driving digital transformation. In the face of mounting pressures, CIOs across the country are also recognising the benefits of transforming their organisations. The digital transformation dividends are clear.

1.  Agencies can significantly decrease cost and overhead spending through a lighter, more streamlined infrastructure that requires less IT involvement.

2.  Decreased development and support required, which helps expedite content deployment and agility, resulting in improved citizen experiences.

3.  A government working with modern tools and processes reduces staff churn and can legitimately aim to attract high quality staff.

## 2. Citizen advocacy - Brand matters to government too

Improving user experiences is the easiest way to improve brands. People are more likely to engage and recommend digital services if they have had a positive experience. This is the case in both the public and private sector. As outlined in this Adobe Blog Post Quality Customer Experiences Build Trust, Revenue for Financial Services, there is a positive reinforcement effect on both experience and cost when citizens relate their positive experiences, causing others to try an easier and cheaper-to-service channel. It also facilitates trust in the service provider, such as the government, if the experience is positive and simple. This trust can be fostered through positive digital interactions, which reflects more broadly on the brand perception of government. Therefore, it is

vital to develop a customer-centric mentality and to think about how, where, and when users will want to engage with government.

## 3. Investing in humans - Shifting the focus away from technology

As discussed above, technology is foundational to transformation. However, the right technology, coupled with the right strategic principles means that more organisational energy can be directed to its people. That translates directly to more satisfaction, less staff turnover, improved retention and ability to hire more easily. For citizens and customers, a shift of effort away from technology ownership and management allows greater freedom in generating the right content and interpreting the data.

These three areas are cyclical. Generating excellence of experience via tools and process causes citizens to move in greater numbers, and with greater satisfaction, to cheaper channels. Employees have more opportunity to be creative, and this completes the cycle of improving the experience.
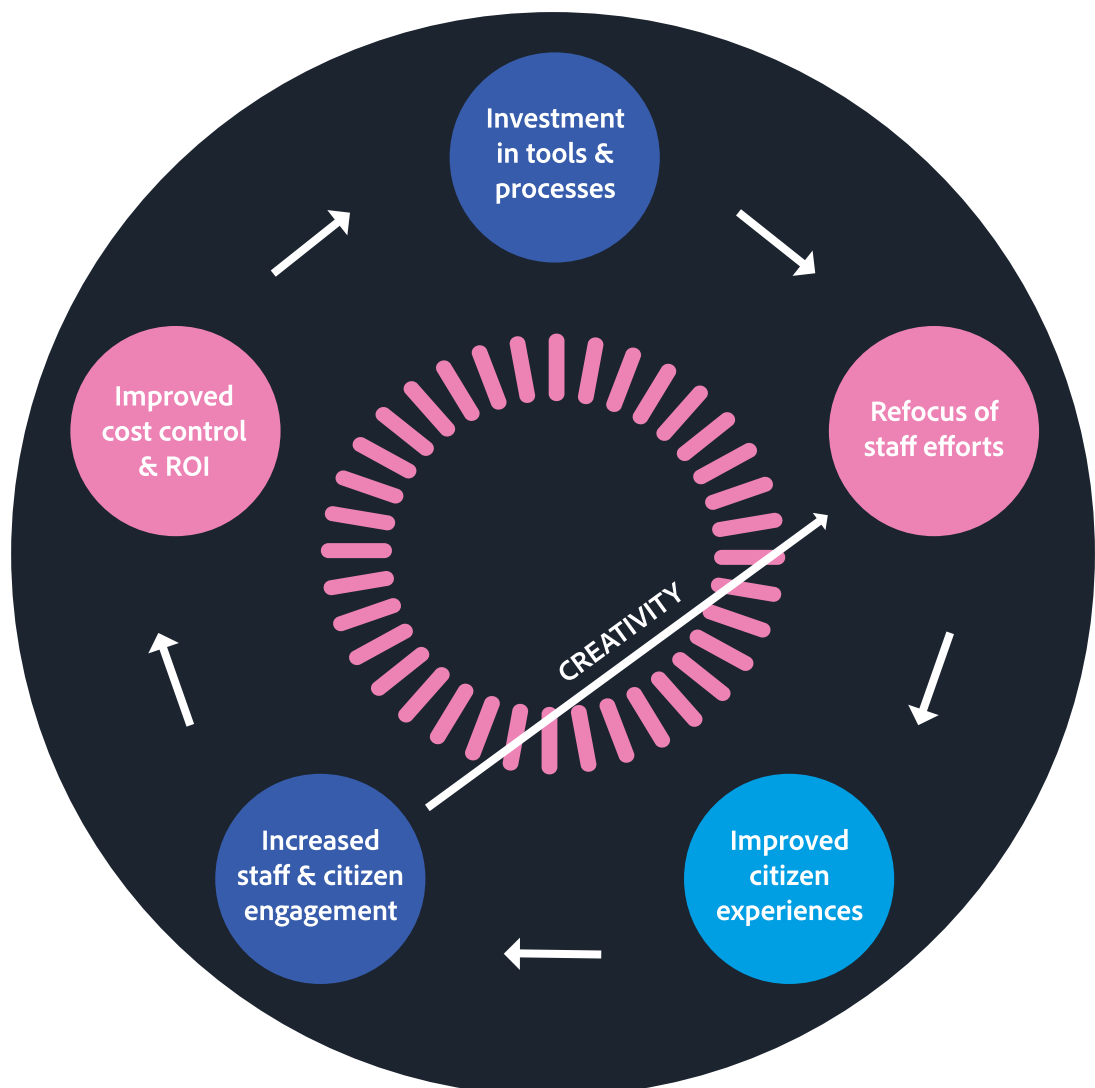
# How to transform

Firstly, a word about our experience: Adobe sees and advises on transformation every day in businesses large and small, from all sectors in countries all over the world, including government. From thousands of customers, patterns of practice emerge. Whilst the specifics of every organisation are different, the commonalities of the digital challenge and responses are clear.

In addition to advising enterprise and government worldwide, Adobe has been undergoing its own transformation for a number of years, most notable in the shift from selling boxed software (e.g. Photoshop) to offering a cloud solution for our creative tools. That has led Adobe.com to be one of the leading e-commerce platforms in the world, and seeing enormous savings and revenue improvements. As mentioned in Harvard Business Review earlier this year (How Investors React When Companies Announce They're Moving to a SaaS Business Model), Adobe's stock price tripled within four years of this transition. This success does not have to be limited to the private sector. Rather, it is directly analogous to government avoiding the costs of citizens visiting offices in favour of using digital.

Successful digital transformation is within reach — all that is needed is the proper foundation. With the right tools and processes, an agency can transform public sector customer experiences by expanding digital capabilities, consolidating redundant services, and reducing costs. Following are the key lessons we have gleaned from our global experience.

Surprisingly, transformation focuses less on the software and technology aspects than might be expected. Technology is a foundational, supporting baseline. Clear strategy is very important, but above all, the understanding of the 'why' questions encapsulated in vision and values are the most important. Only when leaders and staff are attuned to the 'why' does sustainable transformation tend to be successful. Bear in mind that employees already tend to have very low engagement with their work. According to Gallup's 2016 report, The State of the American Workplace – 33 percent of employees in the United States are actively engaged. 16 percent are actively disengaged, and the remaining 51 percent are not engaged, 'they are just there'. While these findings are from the United States, the pattern is analogous globally and across sectors.

What then, is the likelihood of transformation being successful, without a focus on staff?

## More than strategy

| Vision and values | | Governance | Culture | People, skills, structures | Process |
| --- | --- | --- | --- | --- | --- |
| Strategy | | | | | |
| Strategic initiatives | | | | | |
| Tactical execution | | | | | |
| Technology | | | | | |

In order to ensure the appropriate focus, it helps to categorise the actions for transformation into Culture, Strategy and Execution:

## Culture

- **Ensure the 'why' is clear** – Time spent to clarify and communicate the vision and values of the organisation is not wasted. This may include a 'bottom up' approach where staff input is sought – but this comes with the expectation that the input will be actioned. Beware of taking too long to do this exercise. Most organisations know 'why', but are not practiced in expressing it. The effort then is to make it succinct and real.

- **Harness the cultural benefits of agility and ambiguity** – Agility is the directed practice of short-term goals met by dedicated teams working in a highly transparent way. Agility is also the wider mindset of breaking out of slow, hidebound ways of working. Being agile can apply as much to finance as it does to technology.

  - In parallel, become comfortable with ambiguity. Certainty is hard to come by and frequently inaccurate in hindsight. With ideas and technology moving so fast, being willing to accept continuous uncertainty becomes a vital skill. This does not mean that solutions should not be sought, but when combined with agile thinking, large and multifaceted issues can often be addressed. Paralysis or delay due to scale, complexity or risk aversion is not a viable approach.

- **Encourage self and team awareness** – Using instruments like Gallup Strengths Finder can be very enlightening, and help staff understand themselves in a more structured way. It may highlight areas for staff where they can contribute in new ways, and which may fit better than their current role. It shows commitment by the organisation, and can increase trust.

- **Recognise the value of creativity** - Achieving success requires empowering employees to think outside the box and creating a work environment that rewards creativity. (See section 'Embrace People and Skills').

## Strategy

Adobe is constantly engaged in various degrees of strategy work for our customers around the world. Through our assessments, we find a number of common problems:

- Strategy is either not defined, 'in progress' or consists of a complex document prepared by an outside agency.

- Strategy cannot be clearly or consistently expressed by leadership or staff.

- Strategy is confused with initiatives, and is subject to frequent change, leading to further confusion.

- There is little organisational practice at defining, communicating and delivering strategy.

In our view, strategy should be thought of as the destination. Imagine an ocean swim. The finish line is a lighthouse in the distance. The strategy then, is to swim to lighthouse within a given time. Strategic initiatives might include checking direction every three strokes, or changing stroke every 10 minutes to prevent cramp. Tactics are the minutiae of the moment-by-moment situation, such as responding to a cross current, or avoiding another swimmer. Both strategic initiatives and tactical execution are completely aligned with reaching the lighthouse.

We find that for digital strategy, many businesses over complicate the process of definition, as well as the documentation. We feel a strategy should be achievable on a single page and consist of four or five pillars. Also, digital strategy is often quite simple, because organisational maturity levels tend to be low. Following is an example of how a strategy could look for a sample customer.

# Sample customer - Strategic pillars

## Sample customer intends to:

**Customer First**
Put the customer at the centre of all experiences, whether physical or digital, as the guiding principle for decision making, whilst recognising the need to balance against revenue, cost and ROI.

**Engaging Content – "Content is our Backbone"**
Offer high quality, engaging content that reflects the creativity and vision of the brand.

**Omni Channel – Especially Mobile and Social**
Engage audiences and customers consistently across all digital channels, with particular focus on mobile and social channels and content.

**Data Driven Insights Into Action**
Use data to inform direction, and guide action. Combine insights supported by data with appropriate content to segment, personalise and optimise customers and their experiences.

**Establish and Improve Process**
Recognise that digital fluency requires strong processes, governance and structure. Establish, maintain and improve working practices as a priority.

# Execution

- **Go fast** – the opportunity costs of digital are punishing. A six to 12 month process for scoping, or vendor selection or funding approval and procurement simply means this is time lost during which customer and citizen expectations have increased further. The question of speed is really one of risk – and this must be balanced. However, the pendulum is swinging, and a digital government must be able to react more quickly.

- **Choose platforms, not solutions** – strong technology platforms, with preintegrated data and robust APIs are the smart approach to managing the

delicate balancing act of features, scalability, vendor ownership and data usefulness. (See section 'Leverage Meaningful Data').

- **Become a mobile champion** – as smartphone usage continues to grow, the public sector must respond accordingly with websites and applications that provide effective communications tools for all citizens. Keep a mobile-first mindset to stay ahead of the game.

- **Secure the content** – with so much at stake, it is critical that agencies keep their digital content secure. CIOs are recognising that traditional network security is not enough to keep their content secure. That is why they are turning to content security to better protect data.

- **Get efficient** – in today's connected world, agencies can convert archaic processes in the physical world into actionable experiences in the digital world that are more streamlined, engaging and efficient by moving to the cloud, using eSignatures, and digitising forms and documents.

# Prioritise Transformation – Section Summary and Conclusion

- Transformation is a priority, and must focus on people and technology, with people as the driver.

- Transformation is not optional, and despite the difficulties present, offers clear people, citizen and cost benefits.

- Clarity of strategy coupled with agility, and tolerance for ambiguity form useful cornerstones for reference during transformation.

- Technology choices must consider the immediate feature needs and longer-term requirements to manage vast data sets in conjunction with machine learning. The right balance for these is a platform-based approach.

# Focus on Customer Experience
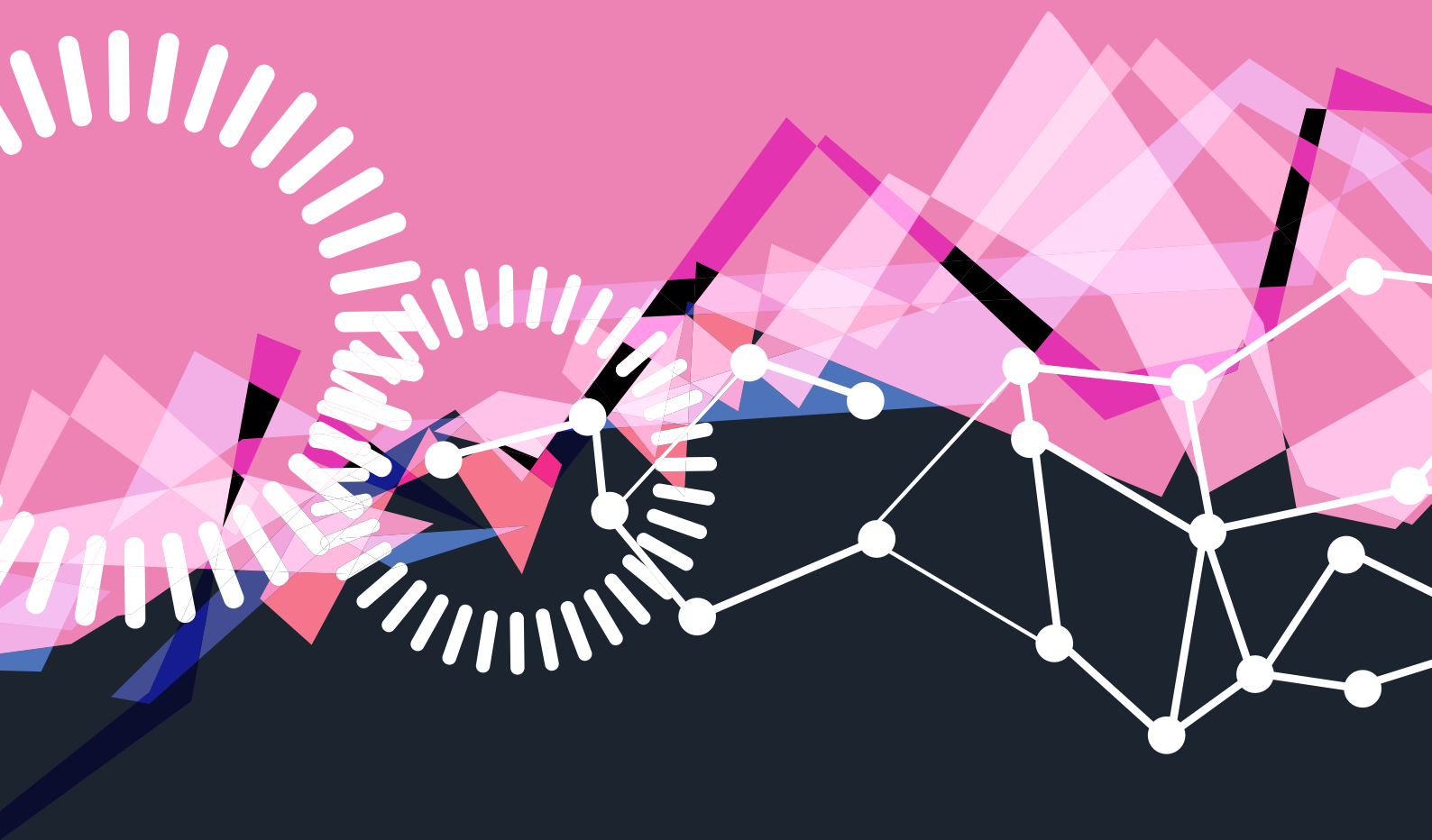
# Digital economy consultation paper questions addressed

**1** How are advances in digital technology changing the way you work, your industry and your community?

**2** What is your vision for an Australia that thrives in a digital economy? Where would you like to see Australia in five, 10 and 20 years' time?

**3** What is the role of government in achieving that vision?

**6** What opportunities do we have to accelerate the development of technologies that will underpin Australia's digital economy?

**15** What would help Australian businesses to embrace digital technologies?

**18** What opportunities do small and medium-sized businesses have to embrace digital innovation to drive customer value, improve their services and unlock their potential?

**21** What opportunities do we have to bridge the 'digital divide' and make the most of the benefits that digital technologies present for social inclusion?

**22** What opportunities do we have to ensure digital technology has a positive impact on the cultural practices and social relationships of Australians?
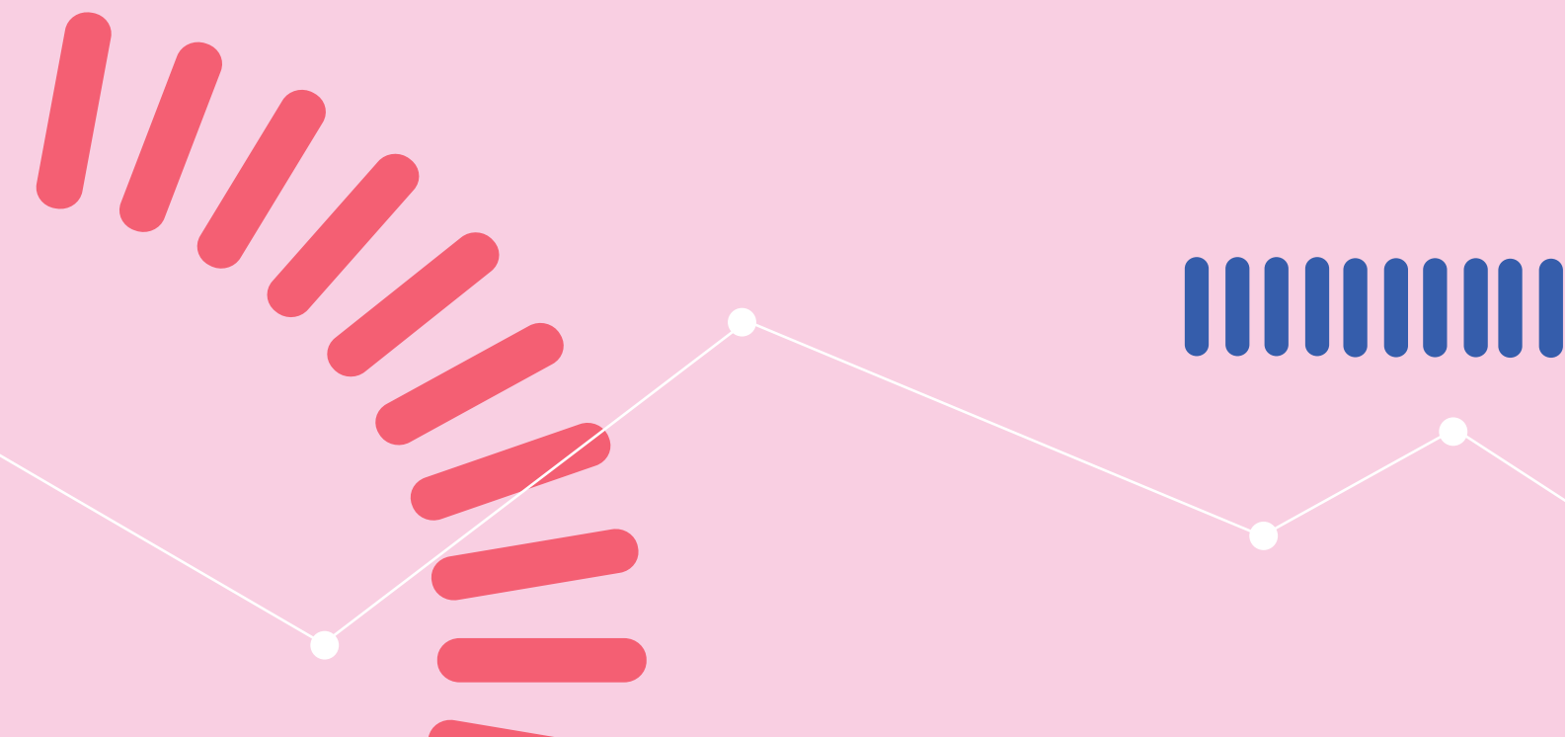
# Why customer experience is important

The private sector has led the charge in digital innovation—and set a high bar for the public sector. Citizens now expect more personalised and interactive experiences everywhere they engage—including with government agencies. As Marshall McLuhan pointed out in the 1960s ([Understanding Media: The Extensions of Man](#)), 'the medium is the message'.

Consequently, a citizen flitting between apps and websites on their phone simply does not make allowance for the fact that a public sector website will behave differently from the superbly designed, hyper-optimised retail experience they just finished. The government experience is on the same device, perhaps just a browser tab away – so why does not it behave as well as the retail site? Citizen and customer experience is becoming an arms race.

Emotions count. Brand new global benchmarking research commissioned by Adobe that will be published in early 2018 shows that citizens globally are increasingly equating a positive online experience with how that experience makes them feel. The design of a website, for example, ranks first in this report in terms of impact on a positive citizen experience. Design is not just about aesthetics, but rather it directly impacts functionality and accessibility.

For Australia specifically, the 2018 survey of over 1000 respondents will show that citizens feel the government should focus more on creating a holistically attractive, easy and enjoyable experience, one that makes them want to use government services online.

For the Australian Government, effective design of a website is an opportunity to engage citizens in a more meaningful way, adapt services to individual needs, improve compliance and improve overall trust and attitudes toward government.

In addition to cost savings per transaction, significant convenience and time saving benefits for citizens and lower transaction assistance required, an efficient and customer focused process also yields greater compliance benefits for government as well as increasing trust in government.

Simply put: How can a government that does not interact and transact competently with its citizens expect to be able to have a legitimate voice in a digital economy? Customer experience is the visible product of digital commitment and successful transformation efforts.
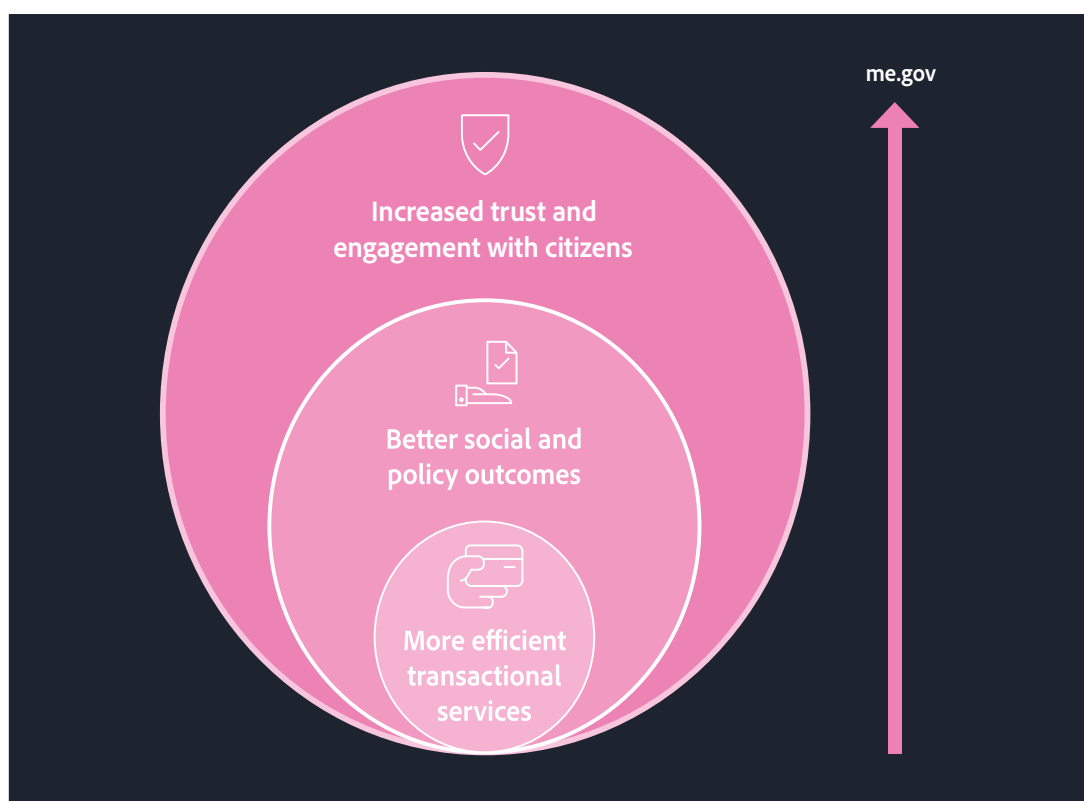
# Understanding the digital journey of government

For many governments, the journey of digital transformation began well over a decade ago: from the earliest programs that aimed simply to provide information on websites; to the online delivery of transactions such as tax, benefits and licensing; to the latest initiatives that seek to provide citizens with personalised digital experiences.
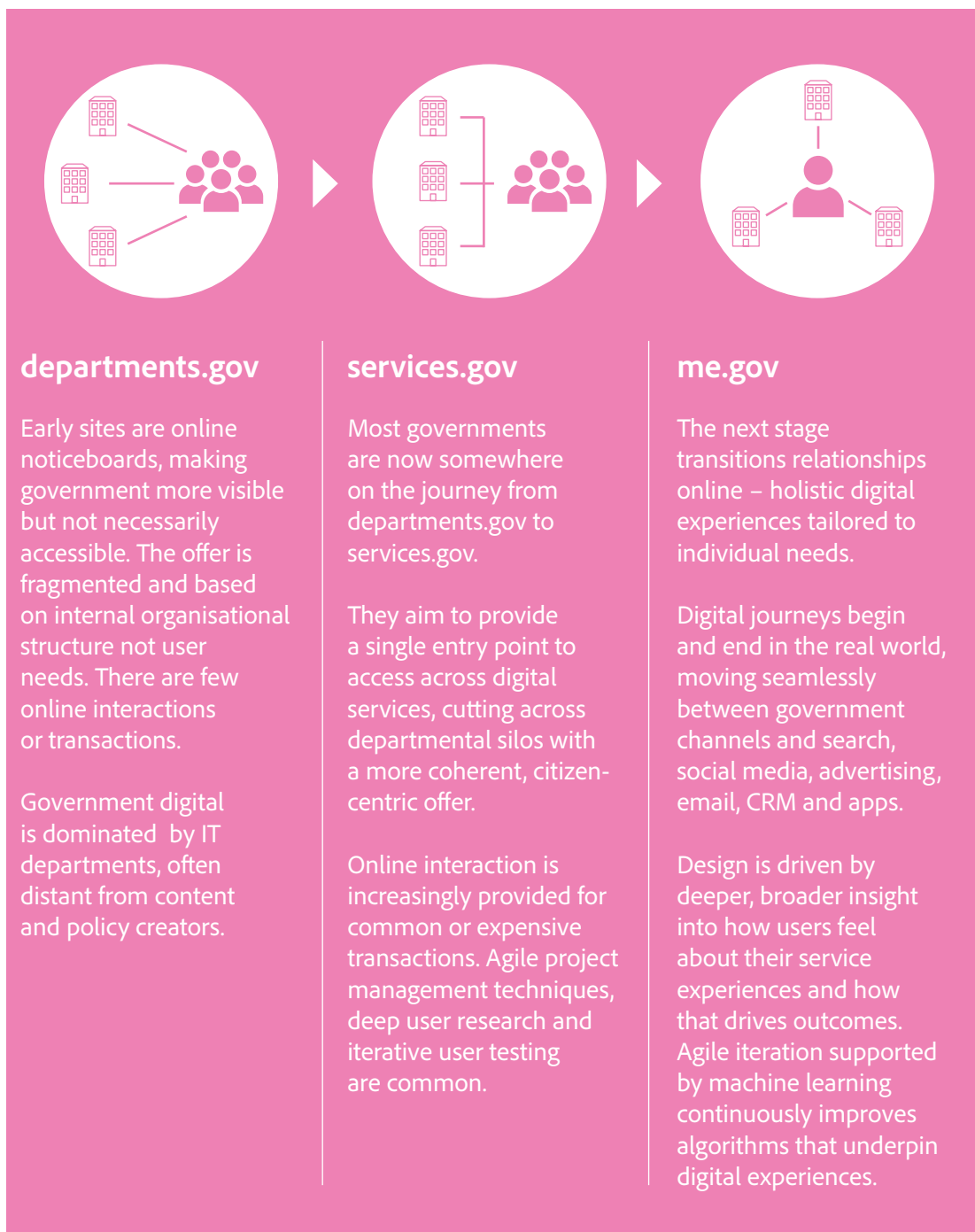
At each stage in the journey we see governments becoming more sophisticated in how they seek to engage with their citizens online and a growing sense of ambition for how digital can enhance the varied relationships between citizens and state.
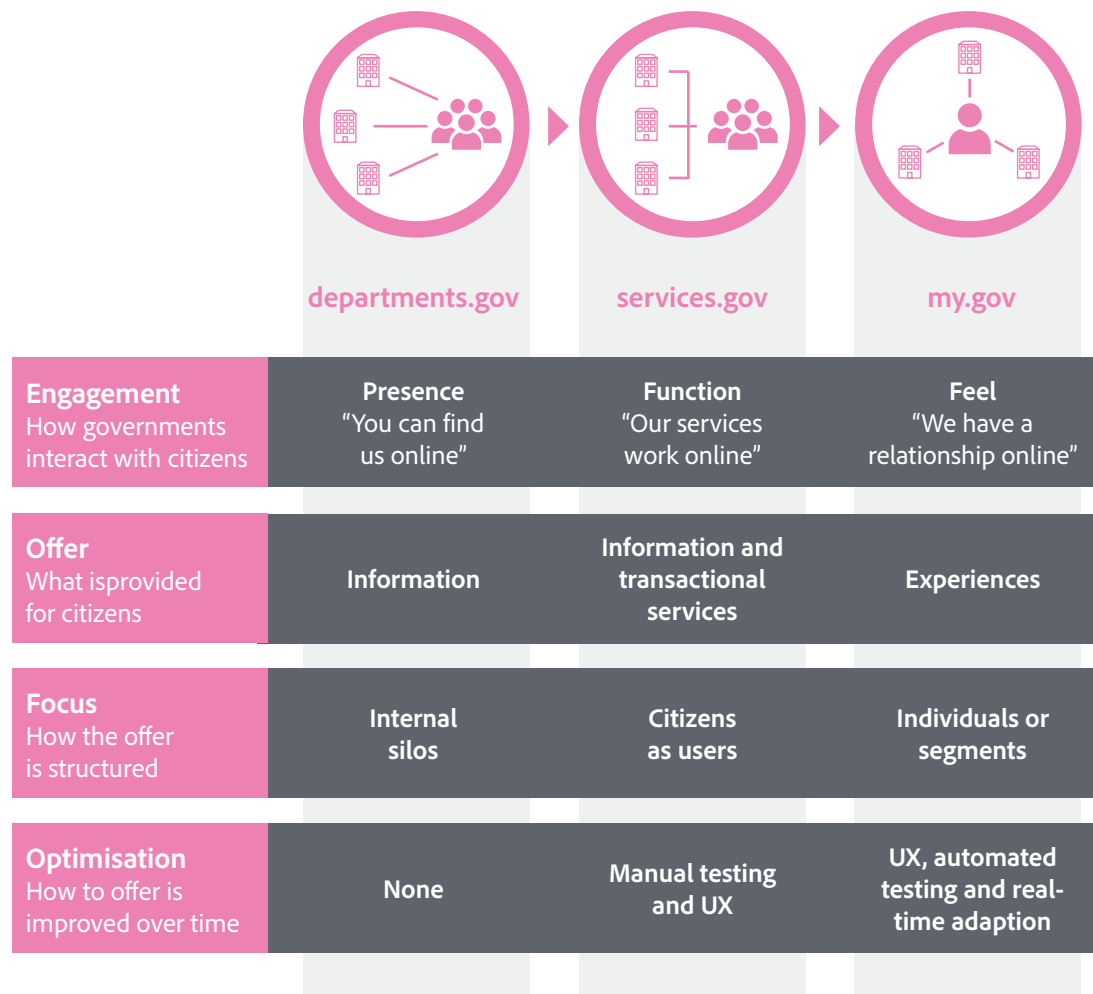
In partnership with Adobe, WPP produced a report on digital government that calls this next phase 'me.gov' with the following key highlights:

·       Digital will become the nexus for relationships between citizens and state.

·       Public services provided in-person, on paper or by phone will move online.

·       Issues of satisfaction, trust, reputation, inclusion and identity will be shaped by digital experience.

·       Functionality (does it work?) and quantity (speed, cost) will be important but so too will the quality of experience: how does it make users feel?

me.gov

Increased trust and
engagement with citizens

Better social and
policy outcomes

More efficient
transactional
services

Governments have always looked to control costs but now also need to meet rising expectations of online service fuelled by the experiences citizens have as consumers. The eCommerce trajectory - from function to brand experience - offers useful approaches for the public sector, as demonstrated in the diagrams below from WPP's 'me.gov'. However, the balance of governmental drivers will differ across countries and shape a variety of digital outcomes.

### departments.gov

Early sites are online noticeboards, making government more visible but not necessarily accessible. The offer is fragmented and based on internal organisational structure not user needs. There are few online interactions or transactions.

Government digital is dominated by IT departments, often distant from content and policy creators.

### services.gov

Most governments are now somewhere on the journey from departments.gov to services.gov.

They aim to provide a single entry point to access across digital services, cutting across departmental silos with a more coherent, citizen-centric offer.

Online interaction is increasingly provided for common or expensive transactions. Agile project management techniques, deep user research and iterative user testing are common.

### me.gov

The next stage transitions relationships online – holistic digital experiences tailored to individual needs.

Digital journeys begin and end in the real world, moving seamlessly between government channels and search, social media, advertising, email, CRM and apps.

Design is driven by deeper, broader insight into how users feel about their service experiences and how that drives outcomes. Agile iteration supported by machine learning continuously improves algorithms that underpin digital experiences.

| | **departments.gov** | **services.gov** | **my.gov** |
|---|---|---|---|
| **Engagement**<br>How governments interact with citizens | **Presence**<br>"You can find us online" | **Function**<br>"Our services work online" | **Feel**<br>"We have a relationship online" |
| **Offer**<br>What isprovided for citizens | Information | Information and transactional services | Experiences |
| **Focus**<br>How the offer is structured | Internal silos | Citizens as users | Individuals or segments |
| **Optimisation**<br>How to offer is improved over time | None | Manual testing and UX | UX, automated testing and real-time adaption |

# The four components of creating a great citizen experience

A great customer and citizen experience requires four key components. They need to be compelling, personal and useful. In addition they need to be available at every touchpoint. With these qualities, government can create a real connection with citizens, which enable improved transparency and builds trust.

## 1. Compelling

Citizens who communicate online have constantly evolving needs and expect relevant, even personalised, content from websites. There is no one definition for compelling content, but generally compelling means content is relevant, inspiring, accessible, trustworthy, and intriguing. Perhaps one of the easiest ways to know if content is truly compelling to citizens is that they are motivated to share it with others. To engage citizens, it is critical that public agencies quickly identify what content is relevant and compelling to them—which can be measured by bounce rates, time spent on page, and shares on social, among other metrics. Armed with this knowledge through

website tracking and testing, agencies need to continually evolve their sites and target the appropriate content to different citizens.

## 2. Personal

To engage customers along every step of their journey, providers must know exactly how they are interacting with true content. So, the provider needs to collect and analyse a lot of data. These insights can be used to test and fine-tune content continually so it is always personalised and relevant. When the make-up of an audience is understood, targeted content based on common characteristics like frequent visitors or citizens of a particular age group can be effectively delivered.

## 3. Useful

The content must be the exact information the citizen is looking for in the time and the place that they need it, and it must be information that can help them achieve whatever goal they had in mind when they started interacting with the digital platforms. If a person came to a government site looking for a specific name or form, and left without that information even while taking in other content, that interaction or content was not necessarily of use to them.

## 4. Available at every touchpoint

As citizens move through their journeys with a government entity, what are relevant changes at every step? It is all about context. Here is where analytics can really help, since citizens' digital actions can be analysed and translated into behavior patterns. Location-based services can provide relevant context as well. And, most importantly, single transactions must be accessible across all channels available to customers. For instance, they might start the transaction on a phone, continue it on a tablet or laptop, and finish it on a desktop. All channels must work.

# Improving customer experience through internal processes

Each year, Forrester's Federal Customer Experience Index Report measures how customers feel about their interactions with 15 federal agencies in the US. In 2016, Forrester suggested several ways in which agencies can improve their customer experience:

## 1. Determine which drivers to focus on first

Conduct a detailed analysis of which specific drivers most affect customer experience (CX) quality, then graph the importance of each driver against the agency's performance on the driver to decide which are most urgent.

Adobe's experience suggests that these drivers are often common. Typically, they include full mobile compatibility, form simplicity and state saving, and accuracy of site search, particularly with reference to form discovery.

## 2. Insist that every CX proposal explains how the project addresses the drivers

This will force stakeholders to base their approaches on actual data, customers' perspectives, and real customer needs, ensuring decision-makers receive high-quality proposals.

## 3. Fund the projects that will boost performance on the drivers

Evaluate proposals on how many of the most urgent drivers they address, how clearly they demonstrate the ability to improve performance, and how much the projects will cost.

Customers/citizens want to engage with government quickly and conveniently, through the channels they already use. The key is to make government offerings widely accessible, and deliver on promises every time.

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## Important questions to ask on the customer-centric journey

**1** Do you understand how your citizens want to interact with you, what information they want, and how they want to receive it?

**2** Do you know if citizens receive a consistent, positive experience across all channels?

**3** Do you measure customer satisfaction of your product, service, or program? If so, what do you do with that information?

**4** Do you build that back into improvements in your products, services, and/or programs?

Getting rid of preconceived ideas of what it takes to transform an agency or department into a customer-centric one may be the most important factor in increasing chances of success. Remaining flexible, developing an enterprise-wide mindset, and making course corrections along the way will keep everyone on course toward a successful transformation.

Paradoxically, it is worth bearing in mind that government interactions can be extremely stressful. Consequently, it may be that the reassurance of a telephone or face-to-face encounter is necessary for some citizens. Digital therefore may not be the answer in all circumstances, and it is important to recognise that citizen experience is also about choice, rather than imposition, of the channel.

# Digital government and the accessibility challenge

Successful digital services are ones that are so effective and efficient that they replace, rather than replicate, other channels (including assisted digital experiences) for as wide a range of demographics as possible and allowing different groups to maintain their autonomy. Achieving this requires:

- **Inclusion** – as many people as possible are able to assert their identity digitally. Citizens with accessibility needs are among those who have most difficulty securing a digital identity. Facilitating their adoption of a digital identify is key to digital inclusion.

- **Accessibility** – the services that are then available must be as compelling and accessible as possible so that as many people as possible, including demographics with accessibility needs, are able to "self-help" rather than resorting to assisted digital services. Users with accessibility needs often encounter particular difficulty completing forms to access government support they need.

Adobe has made it a mission to develop digital tools that are accessible for all users. We work to develop new accessibility features in our products and programs while encouraging developers to produce rich, engaging content that is also accessible. As a global leader in the software industry, we believe that different abilities should never limit opportunities. Technology enables a significant increase in equality of access so we will continue to develop software solutions that can be used by as many people as possible, while working with governments around the world to ensure that people of all abilities are able to access and obtain the government services they need.

# Focus On Customer Experience – Section Summary and Conclusion

Improvements in citizen experience can have a massive impact on the perceptions of government and the services it provides. Further, improved citizen experience is the key measure by which government service delivery and the investments made in systems upgrades is assessed, so it is key to ensure that digital experiences for citizens are seamless between corporate and government services:

- Improving customer and citizen experience is the goal of transformation.

- Citizens expect their government interactions to be of high quality.

- Experiences need to be compelling, personal, useful, and available in all channels.

- Customer Experience (CX) is a discipline that can be measured and improved. Clear focus on the specific aims ensures progress.

- Citizen experience includes choice of channel, including more traditional interactions.

- Accessibility to digital for differently abled citizens must not be overlooked.

# Leverage
# Meaningful Data

# Digital economy consultation paper questions addressed

**4** What key disruptive technologies or business models do you see? What do you predict is on the horizon in five, 10, 20 years' time?

**5** What communication services, and underlying data, platforms and protocols, does Australia need to maximise the opportunities of the digital economy?

**7** What opportunities do we have in standards development and regulation to:
–– enable digital entrepreneurship, innovation and trade?
–– mitigate the risks associated with digital disruption?

**8** What digital standards do we need to enable Australian businesses to participate in global supply chains and maximise the opportunities of the digital economy?

**9** What opportunities do we have to build trust and community confidence through resilience to cyber threats, online safety and privacy?

**10** What roles should government, business and individuals play in protecting the community in a digital economy?

**11** What integrity and privacy measures do we need to ensure consumers can protect their data?

**12** What are barriers for business, particularly small business, in adopting cyber security and privacy practices?

**13** What integrity measures do the Australian Government and the private sector need to take to ensure business–consumer transactions are secure?

**19** What are the key new growth industries that Australia should be tapping into? In what technologies and sectors should Australian businesses take the lead, and where should we be a 'fast follower' of international trends?

Data has been a buzzword in the last few years and its promise is well known – more insights into patterns and behavior, and the ability to take actions based on these.

Many organisations are finding the leap from gathering and storing data, to using and benefiting from data very challenging. Most commercial organisations are in this position, and many do not labour under the same constraints as government when it comes to privacy, security and data exchange.

The goals are clear: use the data to improve the customer experience, streamline processes and forms, and help identify what content works in what context. Until recently, most of the effort has gone into the management of the data, rather than its use.

# Extracting value from data

We are beginning to see a positive change in the problems of extracting value from data. Three elements, working together are making using and managing data easier:

## 1. Platform and APIs

Data needs to be amalgamated in order to be analysed, and then made useful. A pattern has emerged whereby organisations have collected data organically. Often this has occurred as their systems have small upgrades overtime, and begun to store or display more data. Before long, there is a lot of very useful data being captured, but in many systems with many owners. Data warehousing attempted to solve this issue, and to some extent they have been successful. However, data warehouses require significant investment in infrastructure and people.

The next phase of the evolution has been some sort of service layer to attempt to bring all the data from different places together, and then perform analysis of it. This approach has resulted in many API calls to many systems, and some highly customised (and therefore fragile) architectures being built.

Managing and using data is an endless challenge. Data volumes, data complexity, data sources and data security are constantly changing. The warehousing and service architecture approaches can not keep pace, and more importantly place great risk on systems and staff as they try to manage 'business as usual' and features. For example – a service layer architecture attempting to combine data from four systems will have at least four major API schemas to keep track of. If any one of the four vendors update their APIs, then not only does that API need to be regression tested, but so do all the flow on effects with respect to the other systems. In short, an environment has been created that is unique to the organisation, and so requires dedicated resources to

maintain or improve. Worse, none of the four vendors can easily be held to account because of the uniqueness of the environment.

In order to address these issues, we at Adobe have taken a platform approach. We have taken the best of the data warehousing and service architecture concepts and incorporated them into a platform. We find this has many advantages and helps overcome the fragility and risk outlined above. The data needed to combine analytics, audience segments, personalisation algorithms, content selection for a/b testing, and much more, is all pre-integrated into the platform. No longer does the IT staff have to build and manage the complex data interactions, nor run endless regression testing. That work is all handed to the vendor, who has a vested interest – and the resources and expertise to ensure it works correctly. This approach removes the 'custom' nature of the architecture – there will be many others using the same code-base.

Below is an outline of the Adobe Platform showing 'core services' architecture with integrated data and machine learning (Adobe "Sensei").



There are two further reasons why the platform-based approach is so critical. The first is the ability to respond in real time to customer journeys. When personalising the experience, it is important to be able to read the signals (e.g. location/time/number of previous visits/last pathing etc), and use those to instantaneously determine what content should be shown. To achieve this at scale takes a fast and fit for purpose

architecture. Once again, this is not something organisations should be attempting for themselves, especially as the number of visits, the amount of personalisation and the complexity of the signals is increasing so rapidly.

Finally, the platform approach lays the foundations for machine learning. It is reasonable to suggest that machine learning is the missing tool that will help realise the promise of insights from data. These algorithms will run constantly to extract patterns, and highlight opportunities. A data environment that has effectively been 'home built' is very likely to be lacking when asked to support these machine learning tools. The Adobe platform is already using more than 50 machine learning tools, with more being added. We group these together under the name 'Sensei'. Developing machine learning algorithms also requires large data sets, so once again, a platform approach that has access to more than 100 trillion anonymised data points in Adobe's case is a distinct advantage.

## 2. Use cases / ownership

At the process level, the value of data is frequently overshadowed by the idea of 'ownership'. Because (as illustrated above) the data comes from different systems, with different business and technical owners, there is a reluctance to relinquish control, for fear of inappropriate use, unintended messages being sent, or polluting of the source data.

This is where data warehouses were thought to be helpful. By copying and ordering the data into a separate place, it could then be used as needed. Systems and business owners would still control 'their' data. Sadly, the effort required to find, clean, import and store this data tended to be too onerous compared to the value.

One of the key problems in this scenario had been the lack of clear understanding about what the data was useful for. Essentially it assumed that once the data was available, the insights would naturally follow – a 'build it and they will come' approach.

**The opportunity cost of not generating insights into citizen journeys and behaviour is too high**

We believe there is a better way. Data use cases start with the outcome and work backwards. By knowing how and why the data is to be used, it becomes possible to collect just the data necessary and then apply that to the customer experience. Especially when combined with a platform approach, this technique results in small, agile and repeatable uses of data, without the overhead and delay of needing to create a full and complete data layer. It is less worrisome to data owners because it is much less difficult for them to understand what data is needed and how it will be used. And small but regular victories using data generate confidence and boost morale.

A final comment on this, it may still be necessary to have a data warehouse. It is critical however, that building the warehouse first and generating insights second is not the approach taken. The two must occur in parallel. The opportunity cost of not generating insights into citizen journeys and behaviour is too high, given the sophistication they are experiencing elsewhere.

## 3. Algorithms

Algorithms have been mentioned above. As cloud computing becomes both more powerful and cheaper, and data sources more diverse and granular, the ability to understand and predict citizen needs becomes easier. It can be argued that all of the big data conversations of the last few years have been leading to the point where algorithms are finally able to assist the human analysts in ways that are genuinely practical.

It is worth understanding what is meant by an algorithm in this context. Simply put, it is a series of instructions that result in an output. A recipe is an algorithm, as is Pythagoras' theory. Algorithms become useful for customer experience because they can take into account so many variables, and process a result quickly. Looking at the paths taken through a website by thousands of visitors, and analysing the patterns for similarity and exceptions is something that a human could do, but would take a very long time and be prone to error. An algorithm can do this accurately all the time, and never suffer from efficiency reductions through boredom.

In combination with the integrated platform approach, and ready access to data, algorithms are becoming a very potent tool for understanding customers with even greater clarity. And, of course, algorithms are the stepping-stone to machine learning and artificial intelligence.

The next major technology inflection is machine learning. Already it is seeping into customer experiences in every realm from voice assistance to mapping to shopping chatbots. It has potential for every business and government, and although early days in 2017, is not something that any business or government can ignore.

Machine learning depends on three things:

- Large data sets against which to train.

- Very powerful compute and storage infrastructure.

- Engineers who can develop the initial algorithms.

Businesses and governments cannot, at this stage, attempt this successfully themselves. As a consequence, they need to look for vendors who can offer machine learning as part of their platform. Businesses and governments are better served this way – treating machine learning as an outsourced function, just as they might with supply chain logistics or anything else that is not part of their core business.

Machine learning will be the enabler and accelerant for many of the advances in this physical to digital crossover. The source data is rich and complex, and the potential solution set high. Machine learning will help cut through this and find viable improvements more quickly. One example is power management in data centres where machine learning has already been used to find as much as 30 percent improvements.

We at Adobe have a strong understanding of this area as we have these solutions in market. Adobe's Sensei technologies are already in use with many of our customers. Sensei is a collection of assistive, intelligent tools, which use large data sets and machine learning to provide 'smart' assistance to users in all three of Adobe's cloud offerings. In each case, the goal is to provide the user with an easier, faster or more creative result than would have been possible from just human input alone.
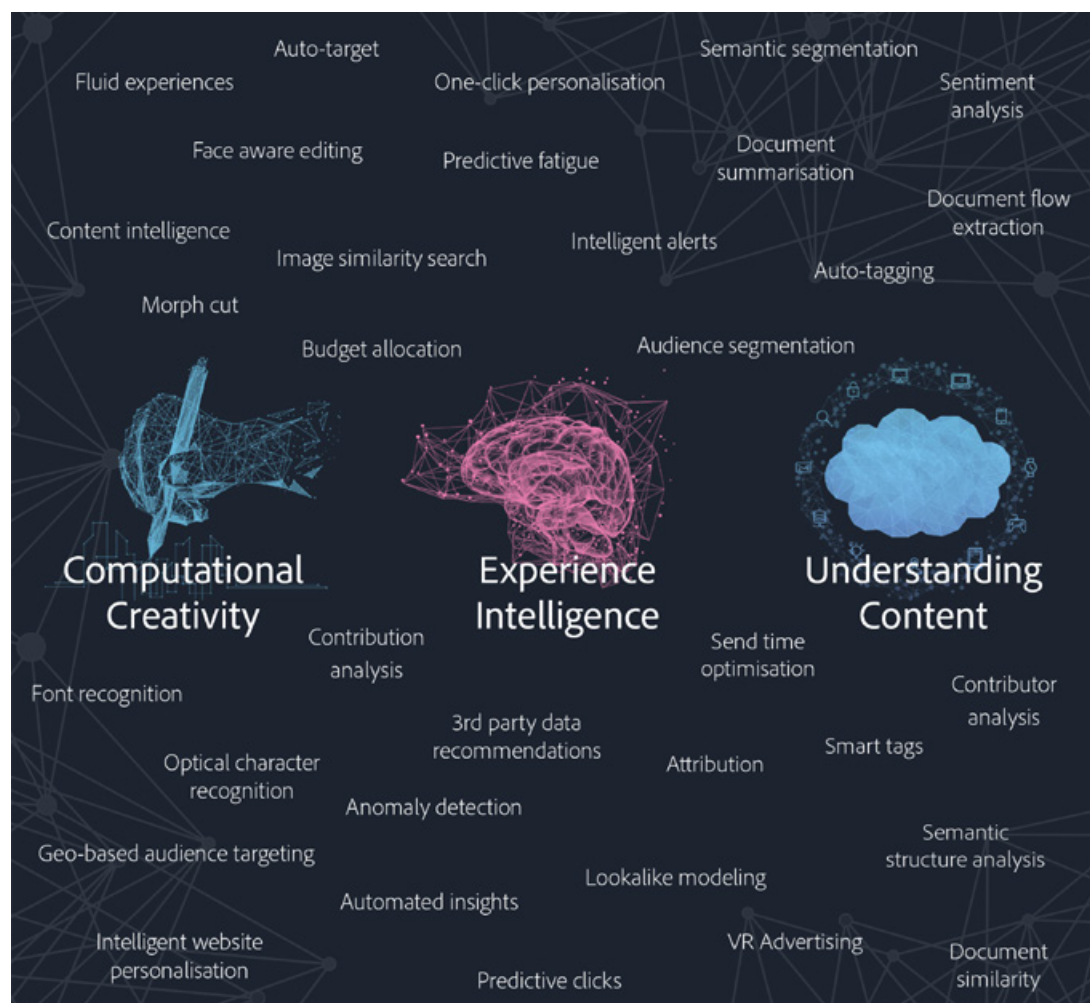
Worth noting here too is the combinatory effects of some of these technologies. Autonomous vehicles, smart cities, personal robotics and so on are all a mix of these technologies working in harmony, with machine learning as an enabler to each.

## Leverage Meaningful Data – Section Summary and Conclusion

Data, insights, algorithms and machine learning covers a large and complex area to tackle. The keys are:

· **Leverage the combinatory advantages of a platform approach** by choosing platforms where data is pre-integrated, and designed for future scale. There will likely still need to be some integrations, but aim to keep these to a minimum.

· **Pursue a 'use case' based approach** that prioritises outcomes and results ahead of rigid structures and data ownership. Generating momentum means learning more quickly what works and what is needed. This is critical!

· **Understand that the data discussion is a stepping stone to algorithms** and machine learning. That may feel like science fiction today, but is already bearing fruit in the commercial sector. Large vendors, including Adobe are already making the benefits of machine learning available.

As a result of these three recommendations, a practical action is to engage with vendors and ask for their input and expertise. There is no value in attempting to solve large data problems alone, and with increasing data volume and complexity, management and use of data is not going to solely be an in-house core competency.

Finally, any collection and use of citizen data must include careful consideration of data privacy and security to ensure they are protected. A section follows below on the challenges and recommendations on data privacy, and Adobe's position with regard to privacy and security.

# Section Addendum

## Privacy and security

Adobe is committed to the consumer's right to privacy, and recognises the importance of transparency and honoring consumer choice. We are committed to designing our products and services with privacy in mind from the outset.

Brands, much like government have the responsibility to be transparent and give consumers visibility into what data is being collected and how it is being used. Every company has a responsibility to keep consumer data safe, and their long-term reputation as a trusted brand will depend on that.

It is critical that as new products and services are developed, consumer privacy and transparency has to be the underlying consideration rather than an afterthought. Adobe believes it is imperative to think and design today with tomorrow's privacy in mind. In order to responsibly leverage the potential of data and machine learning, security and privacy must be observed every step of the way. Especially for government, citizens will happily accept more efficient services and better service experience, but only if security and privacy are ensured.

In fact, privacy and security must be a consideration from the design of all new systems and processes for their expected life.

As an example of our participation in the privacy policy sphere, Adobe has been preparing and supporting the European Union's recent General Data Protection Regulation (GDPR), which will go into effect early next year. The GDPR harmonises and modernises data protection requirements, and we are already seeing that GDPR-inspired privacy regulations are cascading into other regions and countries, including Australia.

While there are many new or enhanced requirements as part of the GDPR, the core underlying principles remain the same. The new rules have a broad definition of personal data and a wide reach, affecting any company that markets products and services to individuals in the EU.

Generally speaking, from Adobe's perspective there are three key stakeholders in the data privacy regulatory environment; the citizen's rights as data subjects, the role of a data controller and Adobe's role as a data processor. We break these down below:

## 1. Customer and citizen rights as data subjects

A key part of GDPR is letting individuals choose what happens to their personal data. Individuals can ask companies to:

- Access and correct errors.

- Delete personal data.

- Object to its processing.

- Export it.

## 2. The role as a data controller

As the data controller, companies and governments will determine the personal data we process and store on customers' and citizens' behalf. Adobe cloud solutions may process personal data depending on the products and solutions and the information sent to the Adobe account or service. As a controller, companies and governments provide privacy notices to individuals who engage with their brands detailing how information is collected and used, obtaining consents, if needed. If those individuals want to know what data is maintained about them or decide they want to discontinue their relationship, companies and governments will respond to those requests.

## 3. The role of a data processor

When Adobe provides software and services to an enterprise, we are acting as a data processor for the personal data that is requested be processed and stored as part of providing the services. As a data processor, we only process personal data in accordance with our customer's permission and instructions. Where data is in one of Adobe's cloud solutions and a customer might need our assistance with any individual requests, Adobe partners with our customer through processes, products, services, and tools to help respond.

The EU's GDPR, for example, puts increased emphasis on data collection best practices, data controller transparency, and consumer choice — all of which play a meaningful role in the customer experience. With an eye toward customer experience, the following GDPR principles will undoubtedly impact the way companies do business and earn the trust of customers.

# Adobe recommendations for handling customer and citizen data

### Reduce unnecessary data collection

Take stock of the data that is being collected. Gather only the data needed to be effective.

### Obtain appropriate consent

Determine when consent will be required and what form it will take. How can a provider deliver delightful customer experiences with consent and without crossing a line of making citizens feel uncomfortable with how their data is being used? Consider the value proposition for consumer privacy, which can help drive conversion and loyalty.

### Provide the required notice for data collection

Review and update current privacy notices, policies, and any information provided at data collection points.

### Remove unique identifiers

Consider when to make some data anonymous or pseudonymous (by replacing obviously personal details with another unique identifier, typically generated through hashing, encryption, or tokens) to help minimise compliance obligations and the risk of data and privacy breaches and claims.

### Fulfil data access and delete requests

Understand how customers will reach out to make data access or delete requests. Know how to define internal data retention and deletion policies and procedures.

# Privacy for connected devices

Consumer privacy and recognising the importance of transparency and choice – are critical considerations for brands, when considering new technologies such as connected devices and AI-powered assistants. Brands that focus on these considerations are well positioned to strengthen customer trust while taking advantage of the opportunities enabled by these new technologies. At Adobe, we follow a privacy-by-design philosophy, where consumer trust and transparency serve as guiding principles in the earliest development stages of our new products and offerings of new services.

It is important to note that while customer data privacy and transparency of their data usage along with control over how their personal information is used is imperative, just as important is the need to maintain the integrity and privacy of the algorithms used in AI and machine learning in order for companies to continue to invest and produce better outcomes for consumers.

Adobe is excited once again to have received all five stars in the Electronic Frontier Foundation's 2017 'Who Has Your Back' report. As a company, we are committed to protecting our users' rights to privacy, due process and free expression, and to be transparent about our policies and practices when it comes to government requests for our customers' information. We are delighted to have our efforts in these areas recognised by the EFF

# Adobe security

For Adobe, cyber security means both ensuring that data is **appropriately protected**, and that data can be **appropriately shared** between different parties. We contribute to the cyber security discussion in a number of ways:

- **International cyber security standards** – where national governments or regions seek to define minimum cyber security standards for certain organisations, it is important that such standards are based on international best practice, are market driven (rather than government mandated), and developed with full involvement of the business community. Examples include the EU Network and Information Security Directive, and standards developed by the National Institute of Standards and Technology in the US.

  - Region or country-specific standards (that reflect the needs of a narrow group of consulted stakeholders) may benefit certain companies in some jurisdictions, but they also tend to lower cyber security standards by insulating that region

from technology trends and solution providers from external competition.from technology trends and solution providers from external competition.

- We oppose the imposition of any special product liability or damages regime for software products, which are implicated in a cyber incident. Software, unlike tangible goods where product liability is the norm, is implemented in a highly dynamic environment where it is not possible to test for every eventuality.

- **Content level security** – most cyber security policies focus on protecting data in transit (network security) or data at rest (storage security). Adobe believes that, while important, these concepts alone are not sufficient to ensure good cyber security. Governments should encourage organisations to apply additional security measures at the level of individual pieces of content in certain situations.

  - Where data protected by content-level security is subject to a security breach, the fact that the content is itself encrypted should absolve an organisation from any obligation to notify the data breach to end users on the grounds that harm is not likely.

  - DRM solutions mean that data can be protected in a very granular fashion, enabling permissions to be set at the level of the individual. This enables critical data to keep flowing and be exploited, rather than being locked down within organisational silos.

  - The use of analytics technology can help organisations manage their security operations further for example detecting inappropriate use of content by individuals.

- **Best practice in cyber security for organisations**  Adobe has developed industry-leading approaches to protect our internal cloud services infrastructure. We also contribute to global software industry best practice for the secure development of software:

  - Our **Common Controls Framework** is a methodology that we developed in-house to efficiently understand and plan compliance with multiple different security certification schemes. We are considering making this framework publicly available.

  - As one of the oldest software companies in the world, our **software development practices** are based on years of experience and collaboration with the software development community. We have contributed to multiple reference documents on secure software development via the SAFECODE coalition.

# Embrace People and Skills
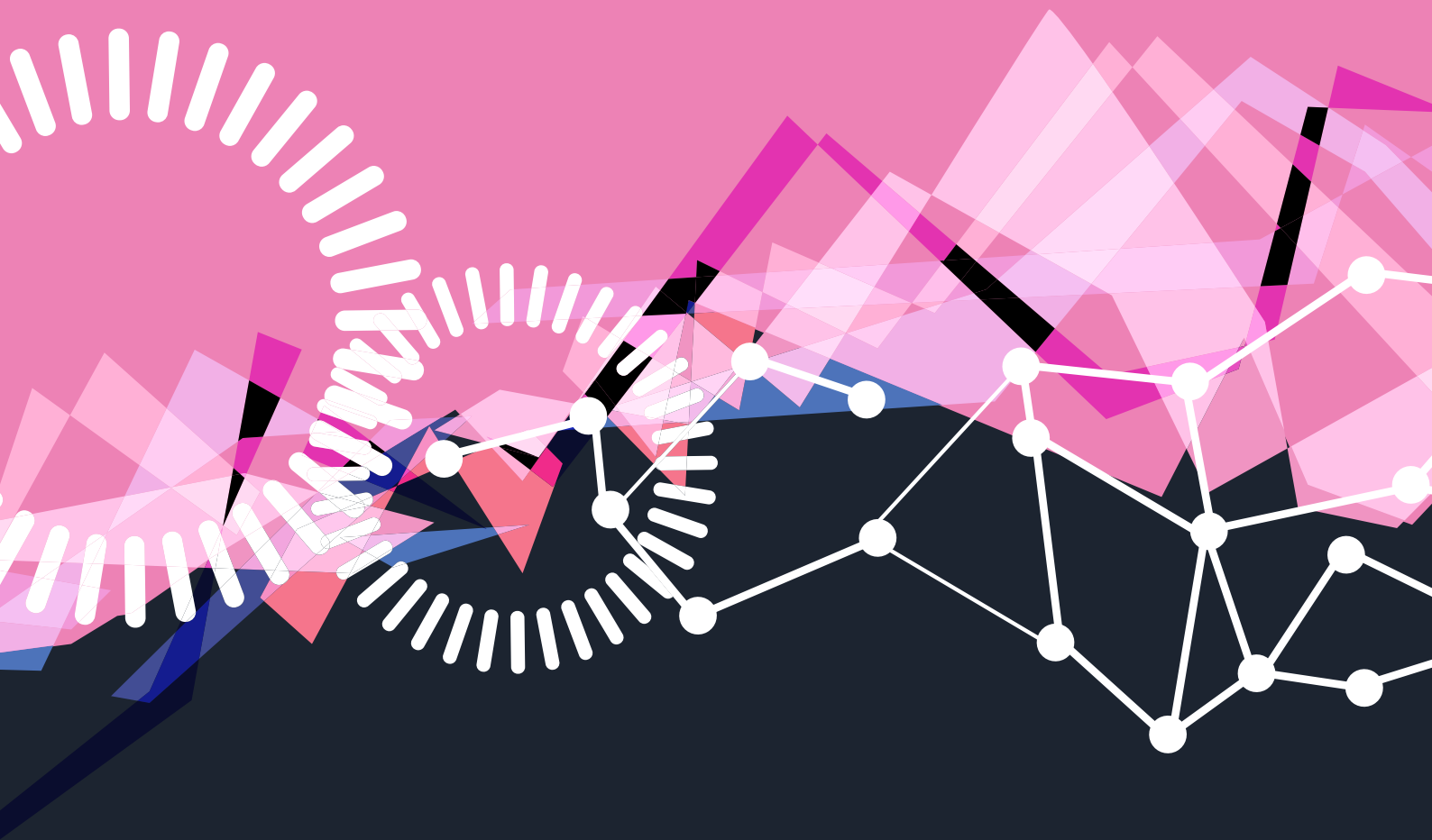
# Digital economy consultation paper questions addressed

**1** How are advances in digital technology changing the way you work, your industry and your community?

**2** 2. What is your vision for an Australia that thrives in a digital economy? Where would you like to see Australia in five, 10 and 20 years' time?

**3** What is the role of government in achieving that vision?

**6** What opportunities do we have to accelerate the development of technologies that will underpin Australia's digital economy?

**20** What opportunities do we have to equip Australians with the skills they need for the digital economy, today's jobs, and jobs of the future?

**21** What opportunities do we have to bridge the 'digital divide' and make the most of the benefits that digital technologies present for social inclusion?

**22** What opportunities do we have to ensure digital technology has a positive impact on the cultural practices and social relationships of Australians?
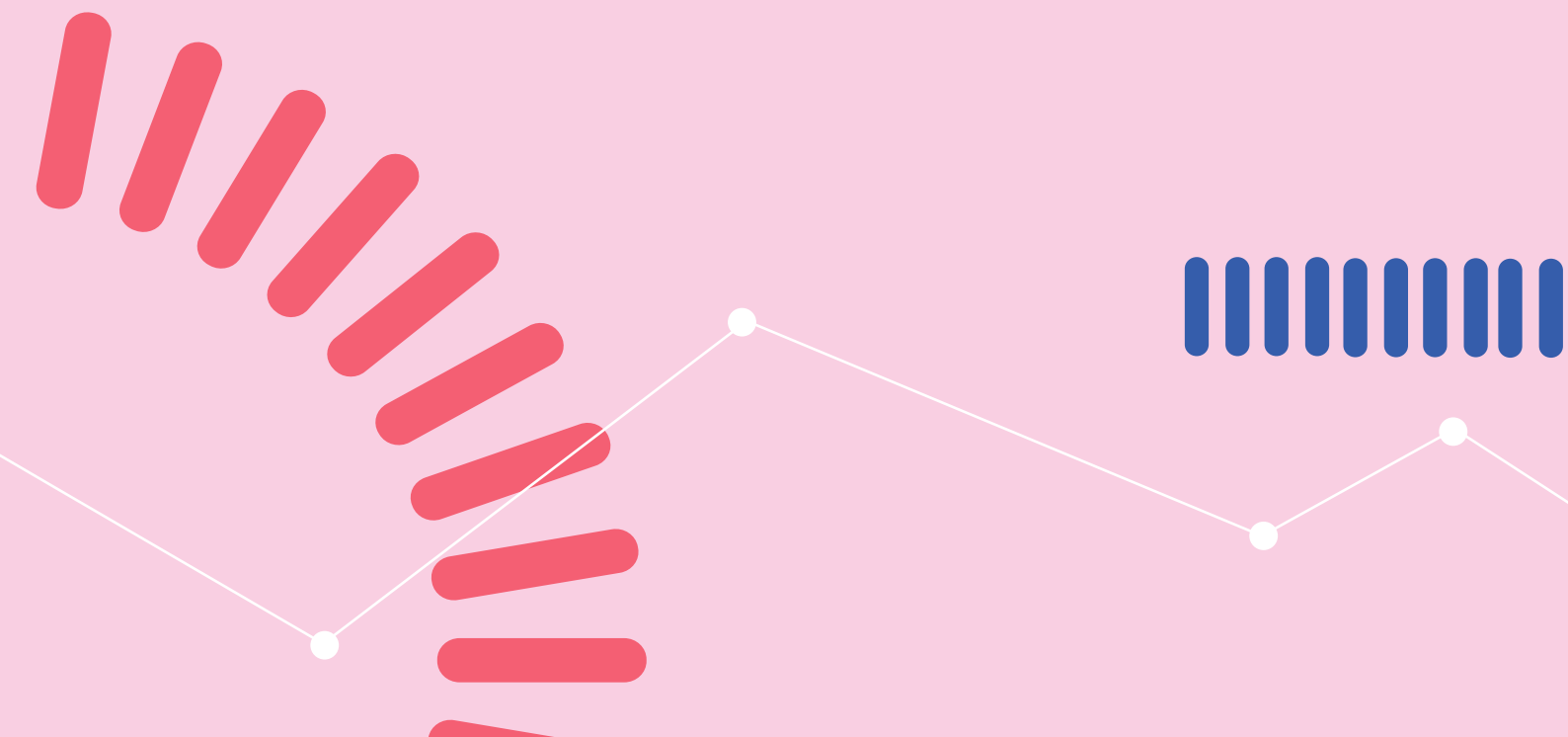
## The future of work

Adobe has an incredibly strong focus on the role of people and their skills in the workplace. We are diving deep around the world to understand how best to engage employees more effectively and shape the future of work.

As we near the third decade of the 21st century, our digital mastery is beginning to change the way we understand work. There have been a number of debates about 'the fourth industrial revolution'. Common themes include: the work of production is becoming more centralised and automated, knowledge work is rising, even in emerging economies, and the place and role of humans is changing rapidly.

*"*

*What are the necessary skills? How are they taught to an existing working population? And how do we adapt our school and university curricula quickly enough to benefit the emerging Gen Z workforce?*

It is this role of humans that is critically important to the success of a digital economy, and any digital transformation. Historically, 'work' has been sharply delineated as an exchange of time and labour for commodity. That work has often been low or medium skill, and repetitive. It is not too much of a stretch to characterise this work as something humans do because machines did not exist or could not manage it.

The future of work however, could be one where people are deeply engaged, able to work remotely or at a time that suits their other commitments, and are more personalised to their skills. It might also be in an environment that is more meritocratic, less hierarchical, and with more focus on the unique skills that humans have.

Those skills are at the centre of the discussion about how to prepare for a digital economy and digital government. What are the necessary skills? How are they taught to an existing working population? And how do we adapt our school and university curricula quickly enough to benefit the emerging Gen Z workforce?

## People are the key to success

Meanwhile, the vast majority of our customers are in the process of transformation. As mentioned above, increasingly it is understood that 'transformation' is really an ongoing and different way to operate the business, in response to the combined forces of societal change and technology. The key tools in this change are the people

themselves, in terms of their skills, training and attitudes. Concomitant is a shift in leadership styles to more coaching and mentoring, increased collaboration, and a whole-hearted embracing of the need for agility.

It is important to understand that these changes are not simply a one-off course correction due to technology. Instead, it is a more complex interplay where many forces are interacting and causing unexpected results. These forces include increasing urbanisation, climate change, the rising power of India and China and the need for a different type of education. Technology is a common thread among these topics, and is an accelerant.

The effects on businesses are profound. In the last decade alone, they have faced the emergence of mobile, Software as a Service, an unprecedented economic crisis, the rise of the millennials in the workforce, and new competitors for attention and mindshare. Transformation is then, a response to many of these factors in combination.

## What does the data say?

As part of Adobe's initiative to understand how to better engage the workforce, Adobe recently released new research revealing that more than 50 percent of office workers in Asia Pacific (APAC) rate access to cutting-edge technology in the workplace, above perks like food and slick office design. The Future of Work: APAC Study engaged almost 5,000 office workers from 10 countries across the region and examined how the roles of people, experiences and machines are transforming workplaces. A short video of the Adobe Think Tank on the Future of Work accompanied the research.

Along with highlighting the critical role of technology in building positive employee experiences, the survey indicated that organisations investing in workplace technology are more likely to be successful in the APAC market.

The survey found 89 percent of employees who rate their companies, as aboveaverage business performers also believe their companies are technology-focused (compared to 64 percent for those who said their company is a below-average performer). In fact, employees of successful businesses are over two times more likely to rate their organisation as 'extremely focused' on technology, when compared to those who rate their companies as below-average performing businesses.

Significant for Australian policy makers, while technology was cited as a top priority for APAC professionals, the survey found that nearly three quarters (72 percent) of Australian and New Zealand (ANZ) businesses are only somewhat or not at all focused on leveraging technology to enable productivity and better employee experiences.

Furthermore, less than one in five (16 percent) of ANZ professionals see technology as an enabler of automating menial tasks to save time. This is less than the APAC average (23 percent), indicating that ANZ professionals are behind when it comes to recognising the full potential of technology to overcome business challenges.

"In the current Experience Business era, smart organisations are realising that outstanding customer experiences hinge on their ability to attract the best people. As a result, businesses today must strategically invest in workplace technologies to drive productivity and deliver a compelling experience for employees," said Mark Henley, Director of Transformation and Digital Strategy at Adobe, Asia Pacific.

# How to respond

## 1. "HUMAN" skills matter as much as technical skills

**Foster EQ**

Across sectors and geographic regions, the macro challenges associated with the rise of digital are consistent. Fundamentally, the challenges are not those of technology, but rather of people. The technology is challenging, but overall is easier and more accessible due to SaaS/PaaS than at any time in the last 20 years.

Where businesses now struggle is with finding and/or training staff to cope with the accelerating and constant change. This places stress on employees and managers and demands more of their soft skills (EQ) as well as their technical skills. As a consequence, the relationship between specialisation and hierarchy is changing - that is, those who can handle change and acquire new skills quickly do far better than those who do not –including their managers - who then become more of a hindrance than an enabler.

Therefore, acknowledging and teaching soft-skills or 'third space' is a very important, and much overlooked factor in terms of extracting benefit from technology (see http://uscthirdspace.com).

**Teach problem solving alongside self-awareness**

For secondary and tertiary education, STEM/STEAM, coding, and entrepreneurship have been in vogue for the last few years. These are useful and important. However, we feel that there also needs to be an explicit focus on teaching self-awareness, communication and empathy. Corporate workplaces have been requiring these for years (sometimes codified as 'cultural fit'), but education has not actively placed these

skills in the curriculum.

Further, as knowledge working becomes more specialised, and automation increases in capability, it is becoming harder to predict what the 'hard' skills jobs of the future will require. What transformation has taught us so far is that being open, flexible, rapidly adaptive, lateral thinking and creative are essential tools. Transformation has also taught us that the majority of people involved in helping their organisations become more digitally enabled lack the training and practice in these skills.

Equipping people across the workforce with these softer skills then becomes a win-win-win. It prepares them with precisely the flexibility needed to be useful as automation increases, it helps them fit better into their organisations, and it empowers them as individuals, thus helping them be more engaged employees.

Finally on this: STEM, engineering, coding, technical training, medical and legal expertise and so on are all still necessary and are not replaced by teaching soft skills. Rather, the soft skills provide a hedging function to adapt the technical skills to the needs of an unpredictable and rapidly changing world.

## How do we approach people and skills at Adobe?

At Adobe, we have an extremely strong focus on the need for people to 'fit' and be part of the culture. This is a hard thing to quantify. Essentially, from our CEO level and throughout our company, we are looking for rounded humans who are able to communicate, join concepts to form new ideas, be open to and capable of change, and demonstrate self-awareness and empathy for their colleagues and customers.

Our talent team is very dedicated to ensuring that enough time goes into selecting the right people, and this means that the quality of the organisation remains high. Very importantly too – Adobe staff value the culture, and to some extent therefore it becomes self-sustaining – to be part of it, staff must do their bit to maintain and promote it.

We have begun some associations with several universities in Australia (Swinburne initially), to embed some of our technical skill training into university degrees. This helps seed the workforce with applicable skills and gives new graduates more opportunities.

## 2. Creativity and education are linked

A generation of digital natives has grown up surrounded by powerful information resources and the tools to express themselves digitally. We are still trying to work out how these changes will affect us, but the impact on our education systems is likely to be profound. What is clear is that the wider the gap between the knowledge and skills acquired in school and university and those needed to live and work in a digital society,
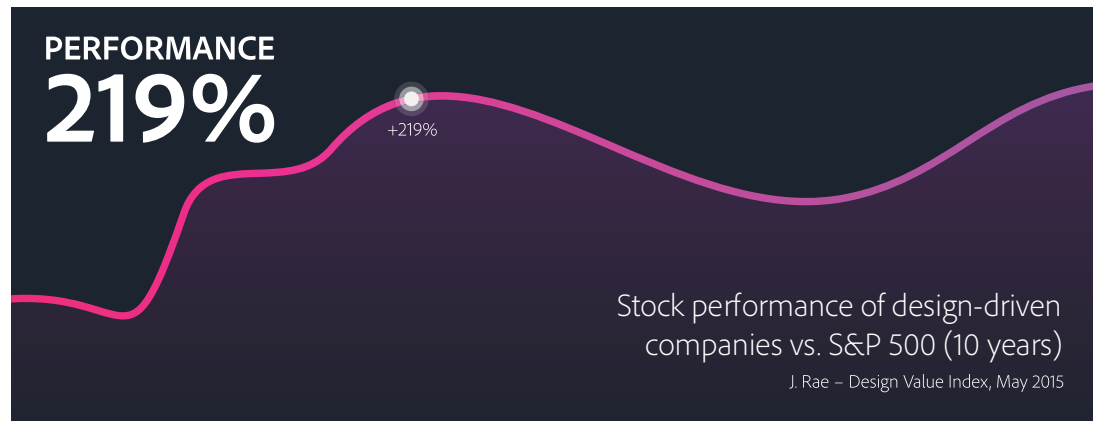
the greater the social and economic challenges we will face.

Effective participation in a digitised society requires not just that citizens be fluent in the customs and conventions of technology, but that they are familiar with the range of tools that allow them to engage with such a world and make their mark. In an age of big data, where algorithms and statistical correlations can help automate the process of intellectual discovery, the requirement for self-fulfillment via original self-expression is greater than ever. And with the challenges the world is facing today in our global economy, in our environment, and in social issues, the need for creative ideas has never been greater. Businesses and governments are crying out for innovative thinkers and problem solvers that will develop the new ideas that drive economic growth in the face of global competition.

For these reasons we believe that fostering creativity is now essential for students, for teachers, for educational institutions. In a recent Adobe study of US students, Creativity and Education: Why it Matters, 82 percent wish they had more exposure to creative thinking as students. Nine out of 10 surveyed agreed that creativity is required for economic growth. 85 percent of people agreed that creative thinking is critical for problem solving in their career.

Creativity is being mentioned ever more regularly now in association with the people and work debate. As a company who has enabled creatives for over three decades, we feel that it is worth highlighting some important aspects of what creativity is:

- Firstly, creativity is not limited to fine art or graphic design. Rather, it is an attribute that can be applied to all areas of life at home, work, university and play.

- Secondly, Adobe is strongly of the view that 'everyone is a creative' – that is, everyone has something innate that results in an output.

- Thirdly, the style and process for creativity varies, as does the tools that are used. An accountant may be able to sum a column of figures, or interpret a balance sheet with a speed and accuracy that is impossible for a concert violinist.

- Fourthly, creativity and flow states are linked. Being "in flow" results in the mental space for new ideas to spark. The concentration of being creative causes the flow state. In turn, those processes lead to heightened engagement and satisfaction.

- Lastly, it is extremely difficult to quantify the value or ROI of creativity. What we do understand very clearly, however, is that when attention and care is added to a product or process, the results are generally higher quality, more attractive, and better received. This is why design thinking is useful, and why for example, Apple products are so sought after. Some data suggest that design-led companies have stronger stock prices than those that do not.

**PERFORMANCE**
# 219%
+219%

Stock performance of design-driven
companies vs. S&P 500 (10 years)
J. Rae – Design Value Index, May 2015

## 3. A future workplace needs to emerge

Looking at the list of creative traits above, it's quickly apparent that our current working environments are not necessarily conducive to enabling creativity. At its worst, our working worlds are rigid, metrics driven, inflexible in time, place and layout, and frequently governed by continuous distraction.

Often, early attempts to innovate have focused on labs or small teams, thereby inadvertently labelling everyone else as deficient in creativity in some way. Of course, little of this is intentional. The good news is that it is not impossible to improve, simply by understanding more about the nature and value of the creative process.

A digital economy is going to need large amounts of creativity to be successful and sustainable. We must move with intention to a world of work that places greater value on human behaviour in all areas – leadership, hierarchy, and skills. The provision of Autonomy, Mastery and Purpose (from [Drive: The Surprising Truth About What Motivates Us, by Daniel Pink](#)), are keys to surviving and prospering as the age of automation gets underway.

Understanding that ambiguity and unpredictability are continuous and normal is vital because it allows leaders and managers to shift from a command and control view to one of collaboration and engagement, which in turn enables and encourages creativity. It may sound utopian, but it represents a huge opportunity to improve the lives of millions of Australians for whom digital feels threatening, and work less than engaging.

A strong digital economy will be one where citizens and government are in genuine, regular dialogue, and able to influence each other positively, because both groups understand the inflexion point that digital is offering our social, personal and professional existence.

# Working together

We welcome government involvement in exploring these changes further. Adobe would be interested in participating in a working group, under the grand coalition for Digital Jobs, exploring ways to foster creativity as a critical horizontal skill for the 21st Century.

Some of the initiatives this group could consider include:

- How to encourage creativity as a core skill within formal and informal education systems.

- Means of promoting creativity as part of teacher professional development.

- Ways to measure the effectiveness of continuous assessment and coursework.

- Opportunities to certify creativity in language that increases employability.

- How to use creativity for inclusion to expose disadvantaged communities to ICT tools.

- Metrics to measure the impact on employability of industry-recognised certifications in creative tools.

# Embrace People And Skills - Summary and Conclusion

Millions of Australians go to work each day to jobs they either actively dislike, or have only partial engagement with. Perhaps this is just a fact of life, part of the human condition. However, it is likely that automation and technology advances are going to change jobs in ways that are impossible to predict. Even highly 'analog' jobs such as driving mining trucks are being affected Many workers will need support and training, and students of today and tomorrow will need new and different skills.

A government dedicated to a strong digital economy must:

- Recognise the centrality of people as the most important factor in technological change.

- Put employee and citizen experience as the highest priority when undertaking transformation.

- Incentivise and work alongside educators to ensure curricula that promote both problem solving skills, as well as those of self-knowledge.

- Encourage creativity in all its forms to allow humans to excel, be engaged, and able to get the best from emerging automation.

# Conclusion

Australia is a unique country, at a unique time in history. With its wide brown lands, prodigious reefs and oceans, Australia is both modern and urban, as well as remote and wild. This combined geography and demography presents tremendous challenges to a government trying to build a digital economy where there is equality of opportunity for all. Even having a discussion about the potential for digital is difficult for a teacher who has to climb on the roof of her school with an antenna to get sufficient signal to collect email. While that teacher will have more reliable fast Internet soon enough, for many that is today's reality.

But if Australia is to be relevant in the hyper-charged environment of the Asian economies, it must use that remote teacher as a spur to improve. The opportunities of digital to improve all aspects of every citizen's life are so transformative that government must seize every chance it has to engage with, and become proficient in the digital dialogue.

We hope that this document has provided some practical approaches as well as wider perspectives. At Adobe, we of course have a vested interest in the technology of digital – but we have aimed here to show the broader picture – one that is robustly human-centric. It is early days for disruptive technologies, working at global scale, but already it seems apparent that the best response to almost all of the questions is one where the citizen, the customer, the employee, and the leader is given more choice, and greater consideration. Perhaps for the first time in history, digital technologies are able to take on more of the heavy lifting, freeing people, little by little to engage more with the things that matter to them.

A digital economy, with strong input and direction from government will be one where people are empowered, through education, through technology, and through government support and leadership. Adobe would be honoured to be part of that future.
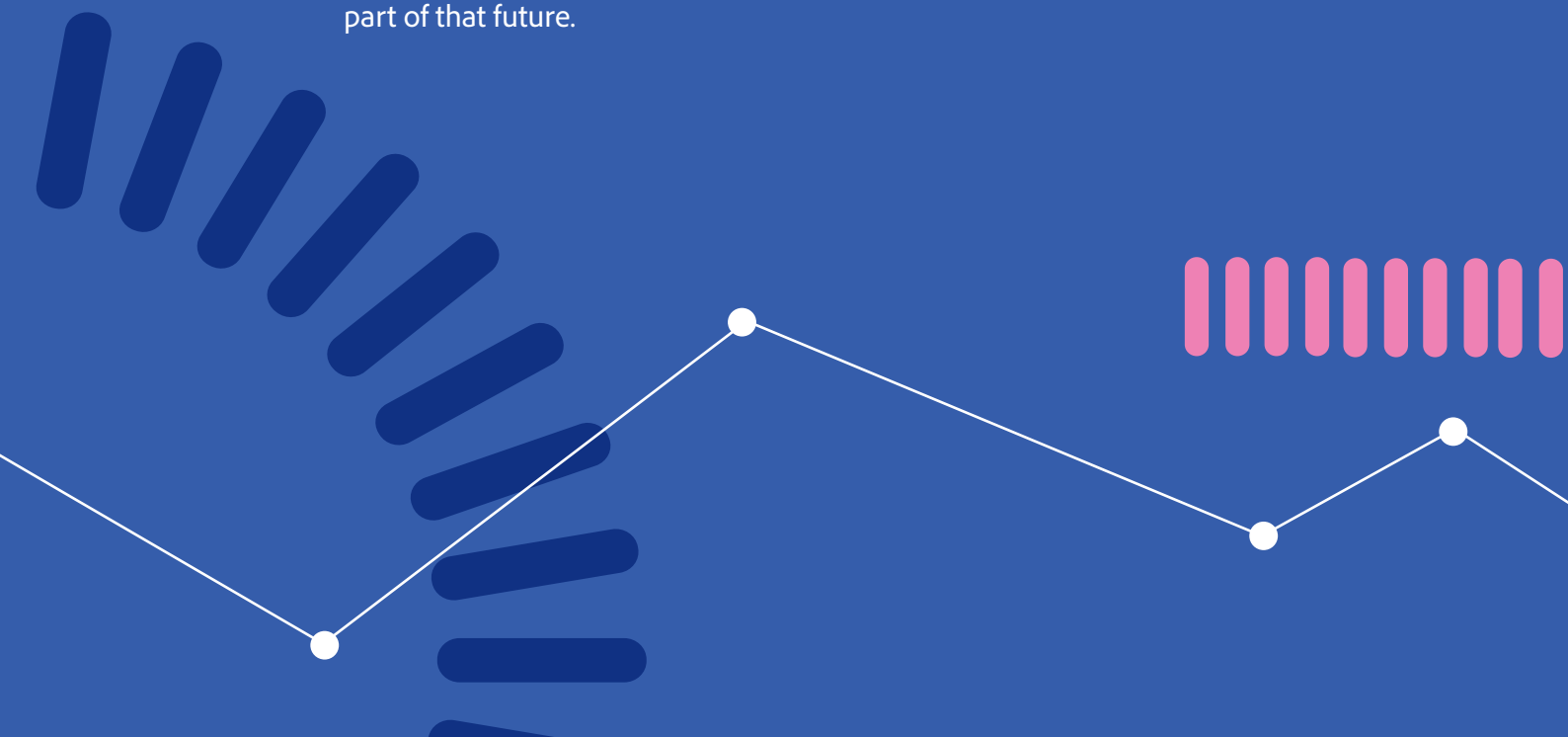
# About Adobe ANZ

## About Adobe

- Founded in 1982, Adobe is one of the world's largest software companies. Our software gives everyone – from emerging artists to global brands – everything they need to design and deliver great experiences.

- Adobe supports government, private and business customers to provide world-class digital experiences through cloud-based solutions, apps and services.

- Well known for popular products, like Photoshop and Acrobat, today Adobe is a recognised global leader in digital transformation, providing the know-how and the tools to support others through the process with user-friendly cloud-based solutions (Experience Cloud, Document Cloud and Creative Cloud).

- We're seeing strong momentum across all our product lines, evidenced by:

  - More than two-thirds of Fortune 50 companies use Experience Cloud today, including 8 of the top 10 Internet retailers, all of the top 10 commercial banks, media companies and auto manufacturers.

  - In the last year, Marketing Cloud processed over 71 trillion transactions.

  - In 2016, over 50 billion PDFs were opening in Adobe products.

  - Over 6 billion electronic and digital signature transactions are processed through Adobe Document Cloud every year.

  - Over 90 percent of the world's creative professionals use of creative products.

  - Adobe Creative Cloud mobile apps have been downloaded over 150 million times.

# Adobe in Australia

- With over 15,000 employees globally, Adobe chose to locate its Asia Pacific headquarters and Centre of Excellence in Sydney. Australia is a pivotal market for Adobe and we have invested heavily in the past four years, doubling our staff count to approximately 270.

- In the Asia-Pacific region, Adobe is led by Paul Robson who serves as President of Adobe APAC. Chris Skelton is the Managing Director for Adobe in Australia, while Adobe's government business is led by Managing Director of Public Sector Tony Katsabaris.

- Adobe works with all levels of government, prominent not-for-profits and Australian blue chip companies including 12 members of the ASX 20 and all of the 'Big Four' Australian banks to provide digital experiences that are transformational, responsive and personalised. 72 percent of top Australian CMO50 brands run Adobe.

- At Adobe, we believe that creativity is the catalyst for positive change. We partner with organisations across Australia to help us achieve such change. We have recently formed a partnership with Swinburne University, to offer a digital marketing course based on Adobe training materials. Additionally, we joined forces with the International Advertising Association for their 'Big Idea' competition, giving university students the ability to work on real client project.

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