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Transforming the Public Sector
Delivering successful public sector
transformation through innovation

GOV
LAB

Contents

Preface

The public sector is faced with increasing pressure to evolve and to offer more "customer-centric" services but constraints on the public sector can slow this transformation. As governments strive to balance priorities and the allocation of scarce resources, new approaches are needed. The public sector needs to be increasingly innovative to effectively respond to the complex challenges facing society now and into the future.

For many western governments, costs are rising due to aging populations. Citizens become dissatisfied due to services being curtailed or cut. In addition, trust in government is deteriorating in many OECD countries. Lack of trust compromises the willingness of citizens and business to respond to public policies and contribute to a sustainable economic recovery (OECD, Trust in Government).

Innovations in mobile, social, cloud and analytics are fuelling societal change and transformation. Technologies such as augmented and virtual reality, the internet of things, industrialised analytics, and autonomic platforms have the power to potentially reshape and transform every corner of the public sector. New disruptive technologies also present challenges to governments in relation to regulation.

Deloitte GovLab strives to create connections between future trends and the public sector. At GovLab we have developed a unique understanding of an increasingly complex and dynamic world. To stay relevant in future it's our belief that public sector organisations need to innovate regardless of whether they operate in healthcare, justice, education, central or local government. Innovation is necessary in areas where conventional approaches

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> Innovation in government is about finding new ways to impact the lives of citizens, and new approaches to activating them as partners to shape the future together."
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> **OECD, 2017**

do not currently work. We believe that adopting an innovation mindset can help to achieve transformational change.

Solving new, complex societal challenges, and responding to the citizen of the future, requires new ways of doing things. Deloitte GovLab brings together the knowledge, capabilities and people to help public sector organisations to innovate. We know that innovation is critical for the public sector – and that building blocks are required to be successful in your innovation journey. We hope this publication inspires you to start your own journey.

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> The potential of innovation in government is immense; however, the challenges governments face are significant.
>
> **OECD, 2017**

Why innovate?

The public sector must evolve and innovate to keep pace with a rapidly changing world

The world around us is changing rapidly

The world is fundamentally changing with massive shifts in digital technology reshaping the business world. Rapidly changing demographic, societal, economic, and technological trends are shaping our future. Citizens' needs and demands are also evolving, and governments globally must become more agile and innovate to keep pace with this rapidly changing world. Governments face huge challenges on several domains: employment, health care, housing, mobility and education, all with public finances under stress.

Trust in government is deteriorating in many OECD countries, with only 43% of citizens trusting their government (OECD, 2017). The OECD argues that governments need to be more inclusive, transparent, receptive and efficient. Trust is eroded when citizens perceive they are being asked for more, with less services delivered. As a result, governments must use innovative new methods and technologies to come up with solutions which are co-created with citizens and businesses, user-centric and give citizens and private business the opportunity to actively take part in solving society's most wicked problems. Public sector organisations must now innovate at an institutional level to respond to fast changing needs.

Economic
Currencies will take on new digital and data-based forms in the near future. Social consciousness surfaces as a common theme, with more organisations and citizens contributing to societal change and driving a renewed sense of openness, innovation and empowerment. Governments grapple with fiscal stress, infrastructure bottlenecks and rising income inequality among

citizens. But even while disparities between rich and poor persist, scarcity of basic requirements such as food, water, energy, healthcare, housing and education will begin to get addressed as technology raises the basic standards of living for many.

Societal
Society grapples with the undesirable effects—security and privacy concerns—of a hyper-connected, digital lifestyle. Governments are faced with a balancing act: using the latest technologies to meet the rising expectations of hyper-connected citizens, while still reaching those offline. Citizen-consumers, empowered by information and technology, play a bigger role in societal problem solving as well as in fighting corruption. Unprecedented advances in health care, neuroscience, technology computing, nanotechnology and learning begin to allow human

beings to expand their physical and mental faculties. However, potential innovations that enhance cognitive capacity also pose new regulatory and ethical challenges for business, government, social institutions and international organisations.

Demographic
In the near future the aging population will dominate many policy and workforce discussions in the West, while population growth will continue to slow across most developing nations. The world is in the midst of a massive, long-term shift in wealth, economic power and population growth from West to East. As Asian areas outgrow their western counterparts, new political, social and consumer constituencies start flexing their power on the world stage. Megacities burgeon across the globe, while increased global migration leads to mingling cultural identities and the rise of the truly global citizen.

Technological
Social networks will increasingly infiltrate all realms of life as individuals and governments explore new ways to tap into the power of the crowd using advanced analytics and sentiment analysis. Mobile devices of all shapes and sizes, including wearables like watches and glasses, keep millions around the world constantly connected, entertained and informed. Mobile tools revolutionise health care and education. "Exponential technologies" have a far-reaching, transformative impact across geographies and industries. These technologies represent unprecedented opportunities and existential threats but their wide-ranging impact is indisputable. Developments in "additive" manufacturing, or 3D-printing, spur a second industrial

revolution. 2020 sees robotics gain momentum and become vital components in a number of applications. From swarms of "microbots" to self-assembling modular robots to strength-enhancing robotic exoskeletons, applications using robotics cut across industries and transform the way work is done. Robots paired with artificial intelligence perform complex actions and are capable of learning from humans, driving the intelligent automation phenomenon. The centuries' long quest to develop machines and software with human-like intelligence moves closer to reality. In 2020, unmanned aerial vehicles or drones contribute to domestic policing, geographical surveys, maritime patrol and delivery of goods, among multiple other commercial and military applications. The future also promises radical improvements in augmented reality technology with the introduction of gestural interfaces and sensory feedback that fuses the physical world with digital information. As the size and cost of sensors and communication technologies continue to decline, the Internet of Things (IoT) grows by leaps and bounds. Businesses and governments struggle to integrate this evolving technology, using analytics to winnow insights from the treasure trove of data that improve delivery models in health care, transportation, security and defense, infrastructure management and many other areas. The exponential growth of the IoT could prove to be a regulatory headache, forcing governments to keep pace with the ever-changing technology.

What is innovation?

To keep pace with the changing world, public sector organisations need to innovate at an institutional level

Transformational innovation means innovating across multiple dimensions

Different to R&D and invention

Innovation is the creation of a **new, viable offering.**

Can be new to the world, or just new to this area or citizen/customer group

Ideally combines elements such as platforms, business models and customer experiences

Creating value for society and public sector organisations

What is innovation?

At GovLab, we define innovation as creating new viable offerings in the form of services, products or methods to create value for the public sector and for citizens. The term is used for both new breakthrough solutions, and for modest optimisations of an existing product or service. Public sector innovation can be divided into three broad categories; core, adjacent and transformational innovation (see figure). Organisations with the strongest track record of innovation maintain the right balance of all three types of innovation.
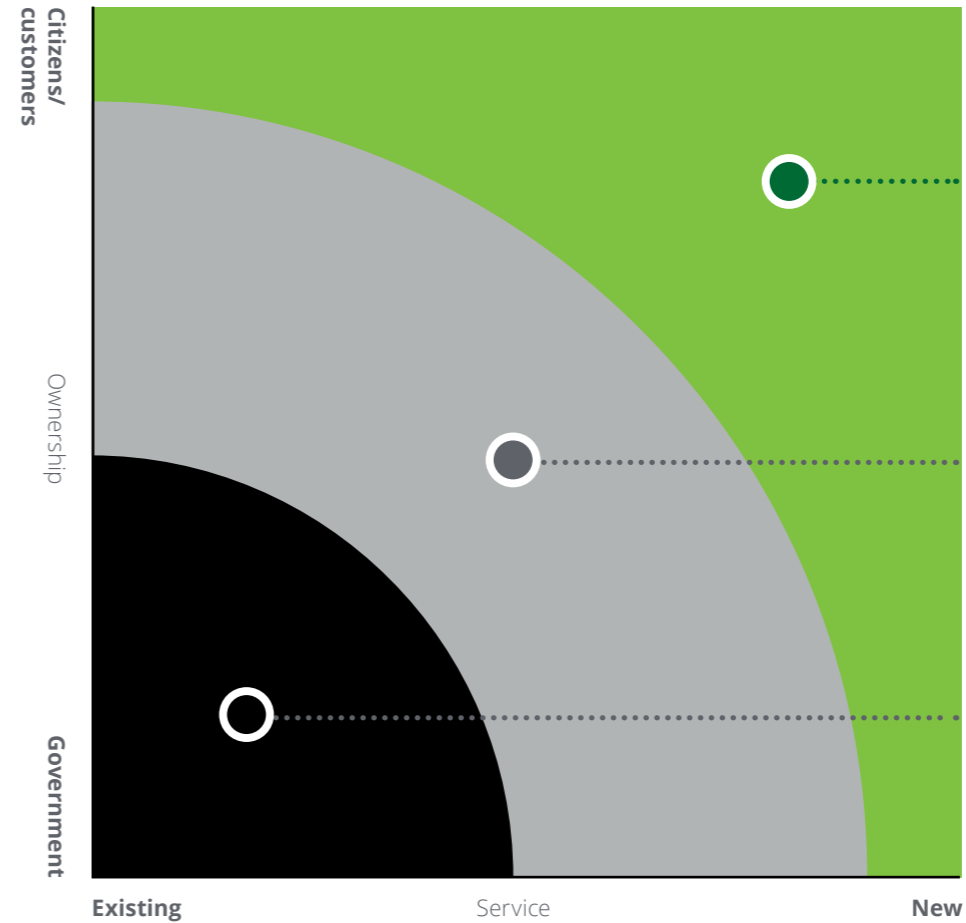
Core innovation

Core innovation initiatives involve making incremental changes to existing products and services, e.g. digitisation of existing government services. Core innovation generally draws on the organisation's existing capabilities and assets.

Transformational innovation

Transformational innovation creates completely new solutions and whole new operating models to tackle wicked problems in an entirely new way. These are the innovations that, when successful, make headlines. Examples are open-ended. Think of traffic or crowd control systems that use live data shared by citizens, or creating ecosystems to help the long-term unemployed back to work, where businesses, not government lead the initiative. These sorts of breakthrough, disruptive, or game-changing innovations generally require the organisation to develop new capabilities such as building competencies to gain a deeper understanding of customers and facilitating collaboration between citizens and businesses.

Adjacent innovation

Between core and transformational sit adjacent innovations, which can share characteristics with both core and transformational innovations. It usually involves using the organisation's core strengths and capabilities but in a new area.

Transformational innovation
Wholly new co-created solutions to complex challenges where the citizen/customer leads the development of breakthroughs, and the public sector forms part of the ecosystem

Adjacent innovation
New developed solutions, that build on existing services/ products provided by government. The public sector leads, but involves businesses or citizens in co-creation.

Core innovation
Digitisation or optimisation of existing traditional public services or products.
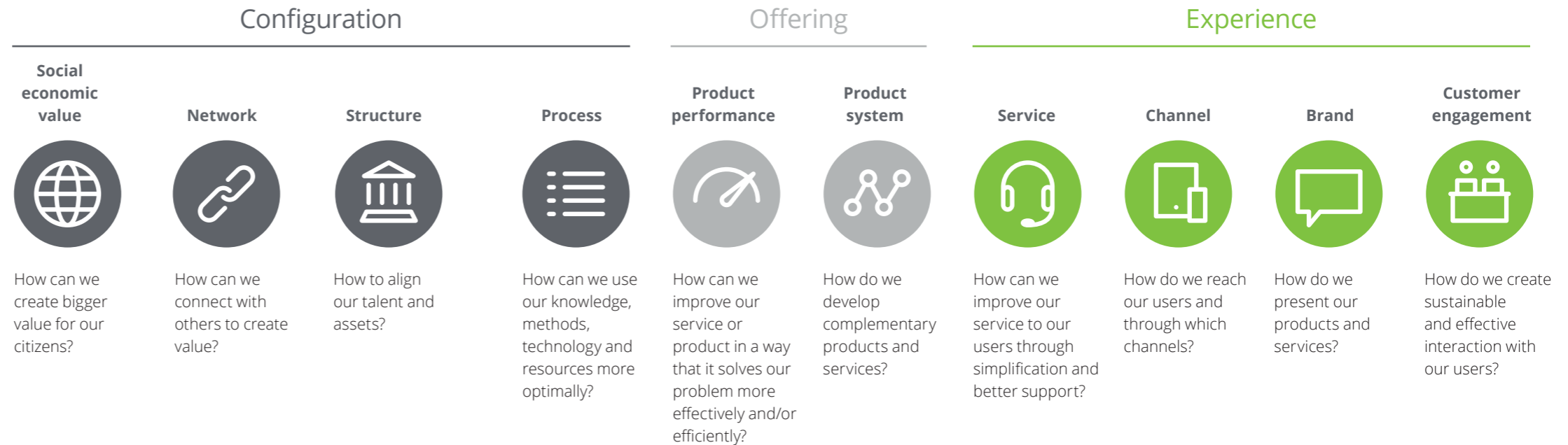
Innovation in the public sector is wide ranging, encompassing much more than just technology

Ten Types of Innovation framework

At GovLab we use the Ten Types of Innovation framework to help organisations develop successful innovations. The Ten Types framework is a tool to help identify new opportunities and develop viable innovations. It is structured into three categories, moving from the most internally focused and distant from customers, to innovations that become increasingly apparent and obvious to end users. Innovation types can be mixed and matched for greater impact. This simple system is an intuitive and useful tool that can be used both to diagnose a challenge and enrich an innovation.

What do we mean by that? Looking across the Ten Types Framework can help innovators think of ways to add to or expand the innovation, and can be used to present new angles to think about wicked problems.

Integrating multiple types can create the strongest innovations. In order to create transformational innovations, an organisation will typically innovate across combinations of the types. Adding types of innovation together make it more likely to achieve sustainable long term success. The framework is not a process; any combination of the types can be present in an innovation, and innovations can start by focusing on just one type in the framework.

Configuration

Social economic value	Network	Structure	Process
How can we create bigger value for our citizens?	How can we connect with others to create value?	How to align our talent and assets?	How can we use our knowledge, methods, technology and resources more optimally?

Offering

Product performance	Product system
How can we improve our service or product in a way that it solves our problem more effectively and/or efficiently?	How do we develop complementary products and services?

Experience

Service	Channel	Brand	Customer engagement
How can we improve our service to our users through simplification and better support?	How do we reach our users and through which channels?	How do we present our products and services?	How do we create sustainable and effective interaction with our users?

Transformational innovation: Redefining unemployment policy

Workplace Rotterdam South

In the Netherlands, as in many other countries, unemployment is a complex problem with negative costs to both the individual and society. People who are unemployed have a higher chance of suffering from ill-health, reduced quality of life, and other social challenges. In addition, the cost to the State of providing unemployment benefits and other supports can be significant.

In Rotterdam, a new solution to tackle unemployment was developed which is a game-changer for government, employers and the unemployed. The solution combines several innovations across the Ten Types of Innovation framework including social economic value, network, process, service and customer engagement.

Building ecosystems: cooperation between private business, educational institutions and government

The solution at Workplace Rotterdam South is funded through a social impact bond (SIB) which creates the foundation for co-operation. The SIB is an innovative financial model in which private investors invest in innovative programs and new policies to solve societal issues. Based on a payment by results contract, the return on investment is directly linked to reducing actual numbers of unemployed.

In a public-private partnership a social entrepreneur, a network of businesses, schools, a social investor and the government work together to achieve a positive social return and reduce unemployment. Public and private sector organisations built an ecosystem to facilitate collaboration and co-creation.

Social impact bonds demand new ways of public and private sector collaboration where government shifts from 'solution provider' to 'solution enabler'. The government is no longer in the lead, but will co-operate with the other parties to make the solution work.

Each party in the ecosystem brings something specific to the table to achieve a sustainable solution:

- the social entrepreneur selects candidates based on their motivation, not necessarily their skills;

- businesses provide centralised workplaces in which the new employees can adjust to the working day and learn necessary skills. To help them learn existing employees mentor them and local schools deliver training courses;

- the employers are compensated by social investors, and the government ultimately pays the investors a return from the savings that they have gained through this new unemployment policy; and

- the new employees gain work experience, employment and are no longer reliant on state benefit.

How does innovation happen?

Building blocks for successful
transformational public
sector innovation

Five building blocks for successful transformational public sector innovation

Innovation as a discipline

Innovation in government occurs virtually every day, from apps for tax administration and compliance to new digital ways to engage people in the decision-making process but public sector innovation is rarely transformational, and is often improvements to existing products or services.

Innovation flourishes when there is a structured approach to it. This may seem like a paradox, but without guidelines to structure the interaction and development, members of a complex organisation or ecosystem struggle to coordinate their innovative activities.

For successful transformational innovation there needs to be rules, processes and governance in place to structure where, how and with whom to innovate. That said, the rules need to be simple and should add discipline to the process to boost efficiency and increase the odds that the resulting innovations will create value.

Building blocks for successful transformational public sector innovation

Based on extensive research carried out by our colleagues from GovLab US, Doblin, Center for the Edge and our own experience, we have identified five building blocks that are of eminent importance to successfully realise transformational public sector innovation.

- Awareness and understanding with top leadership

- A clear and inspiring innovation strategy

- Governance for transformational innovation – independence and agility on the edge

- Innovation by design – a human centred approach to design, build and scale innovations

- Mechanisms to fuel and fund innovation

> 66
> Don't be fooled by the mythical importance of creativity; focus on discipline instead
> **Deloitte Digital**

Public sector organisation

Sponsorship of the top leadership

Innovation by design

A dynamic ecosystem

Open innovation platform

Independence on the edge

Innovation strategy and opportunity spaces

Venture funding

Passionate and skilled explorers
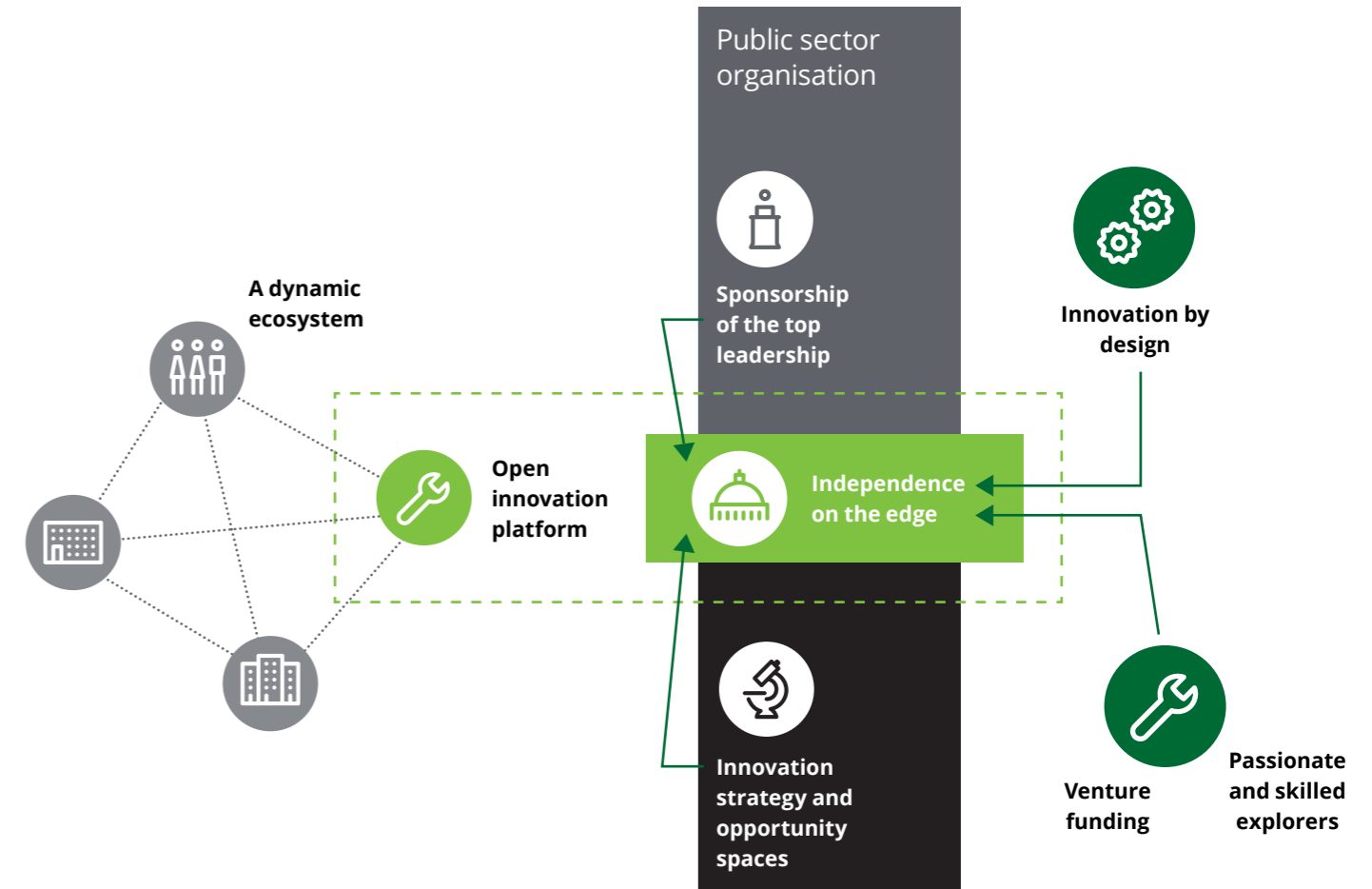
Building block 1: Awareness and understanding with top leadership

Transformational innovation generally only succeeds if it is at least partly sponsored by the top leadership of the organisation. It is important that leadership is aware of what's happening in the world around them and understand that transformational innovation is a must if their organisation wants to stay relevant in the future. Leaders who recognise the need to find new ways of engaging, shaping, and creating can create organisations capable of dealing with changing expectations and increasingly complex problems.

That also means that leaders of public sector organisations will need to evolve themselves. Traditional command-and-control leadership styles are no longer adequate for the challenges that public sector organisations face today. Effective public sector leaders see the need for new skills to meet increased expectations for citizen interaction and to cope with an increasingly complex operating environment.

In the GovLab study 'The new government leader: mobilizing agile public leadership in disruptive times' six new behaviours are described that will likely define tomorrow's innovative government leader: agile integration, quiet transparency, digital aikido, horizon scanning, rapid prototyping, and rebel rousing.

Leaders who develop these competencies will:

• **Engage:** Cultivate trust and inclusion to invite ideas from anyone, anywhere;

• **Shape:** Build agile teams that can adapt to match challenging environments and stay ahead of future needs and problems;

• **Create:** Establish platforms and avenues for generating, refining, and disseminating new ideas, solutions, and products to meet citizen expectations.

Innovative behaviours

Horizon scanning
Horizon scanning guides strategic decision making by analysing patterns across disciplines and environments and testing assumptions about current and future trends. Leaders who are good at horizon scanning develop questions tied to strategic priorities and use multiple, sometimes contradictory, hypotheses to test those questions.

Rapid prototyping
Rapid prototyping facilitates learning through experimentation and the launch of multiple prototypes in small, controlled tests. Government leaders adept at rapid prototyping may generate several potential solutions and launch them all in small pilots, to see which ones work and which successful aspects can be combined.

Rebel rousing
Rebel rousing involves seeking out and encouraging individuals who question the status quo, creating a safe environment for contrarian thinking and challenges to established practice, and setting a clear purpose while allowing for flexibility in how the purpose is achieved. Listening to "good rebels" can be a safe way to reveal problems and potential obstacles, decreasing the likelihood that leaders will be blindsided by dissenters or "bad rebels".

Agile integration
Agile integration recognises the complexities and interdependencies of public, private and nonprofit missions. Leaders adept at agile integration connect people, information, and resources and work with other organisations and private citizens to solve complex problems that defy siloed approaches.

Quiet transparency
Quiet transparency involves the willingness to question and adapt without having all the answers, and to hold open, consistent exchanges with a variety of audiences through various media. A leader's ability to be quietly transparent sets the stage for trust and engagement with teams and stakeholders .

Digital aikido
Digital aikido is the use of digital media to gauge attitudes, build influence, and motivate action through social networks - to shape and build energy on these platforms rather than resist it. Leaders can use digital aikido to assess the mood, opinions, and motivations of people within online social systems, and tailor their moves accordingly.
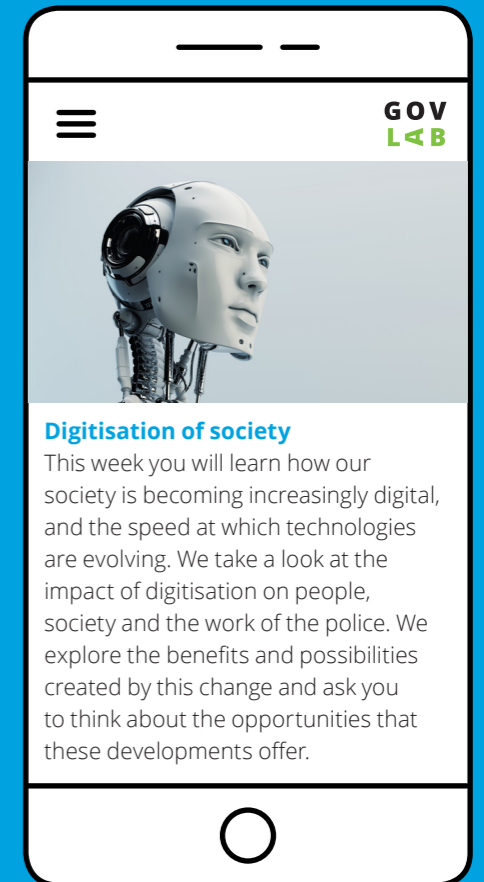
Creating awareness and understanding with top leadership

Dutch National Police

The public scrutiny placed on police services globally requires leaders to become more focussed than ever before. Policing is facing many challenges particularly in the domain of cybercrime, which is a growing and evolving threat. To meet the key challenges facing their force today, the Dutch National Police want to adopt an innovative approach to how they work – but they need to build the capabilities to develop and launch innovations.

In many cases, the Dutch National Police leadership are not fully informed of the opportunities and threats of new exponential, technological and social innovations. In partnership with the Dutch National Police, Deloitte GovLab developed Innovation Booster training for the organisation's senior leadership. A blended learning approach comprised of awareness sessions, digital micro-learnings and traditional classroom training will boost the innovation mind-set, skillset and toolset of police leadership. This will raise awareness with leadership which will enable the adoption of innovative working practices and innovations across the organisation.

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Digitisation of society

This week you will learn how our society is becoming increasingly digital, and the speed at which technologies are evolving. We take a look at the impact of digitisation on people, society and the work of the police. We explore the benefits and possibilities created by this change and ask you to think about the opportunities that these developments offer.

Building block 2: A clear and inspiring innovation strategy

Our colleagues from Doblin carried out research on what makes companies successful innovators. One crucial element is having a clear innovation strategy. In our experience it is also an important building block for successful transformational innovation in the public sector. When setting an innovation strategy for transformational innovation it's important to pay attention to a couple of specific elements: create an adaptive strategy, select sufficiently challenging goals and make it a compelling narrative.

Adaptive strategy
For successful transformational innovation it's important to have an adaptive strategy. Strategies that are truly adaptive require giving up on many long-held assumptions. As the complexity of our physical and social systems make the world more unpredictable, it's important to abandon the focus on predictions and shift into rapid prototyping and experimentation so that what really works is learned through own experience. The innovation strategy for transformational innovation consists of a high level 10-year vision and a concrete one year plan full of experiments in the direction the organisation wants to learn and develop. Along the way, the vision itself will shift and improve based on what is learned from the experiments.

To develop a sound 10-year vision it is crucial not to extrapolate from today, but to reason outside-in. Start with the trends and developments that will shape the world in 10 years and its impact on your policy domains, citizens or customers. From there develop a vision for the role that your organisation can play in this future. What value does your organisation deliver to society in the future and how? Which assets and skills are crucial for your future organisation? Describe the most important hypothesis and make a one year plan with concrete experiments on how to test and learn.

Compelling narrative
As John Hagel III (Chairman, Deloitte Centre for the Edge) explains in his article 'The power of company narratives', narratives are stories that do not end, but persist indefinitely. They invite, even demand, action by participants and they reach out to embrace as many participants as possible. They are continuously unfolding, being shaped and filled in by the participants. At their most fundamental level, narratives answer three questions:

• Why are we here?

• What can we accomplish?

• How should we connect in order to accomplish this?

The "we" in these questions is primarily the employees the narrative is trying to reach, not the individual or organisation crafting the narrative.

By inviting employees to take the initiative, narratives encourage people to lead. Narratives have the potential to profoundly shape the future. Narratives also help participants construct meaning, purpose and identity for themselves. They help to situate participants in a broader context and to build relationships. If your innovation strategy is set up as a compelling narrative, it will be an important driver for transformational innovation.
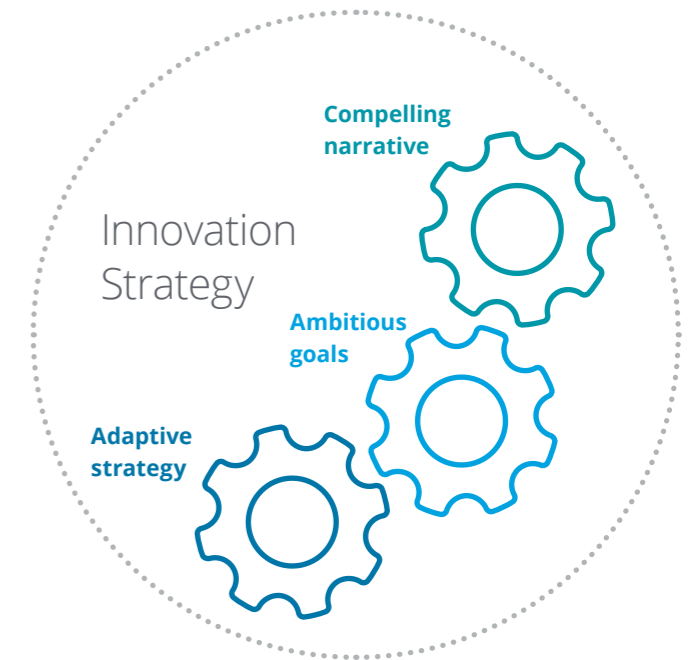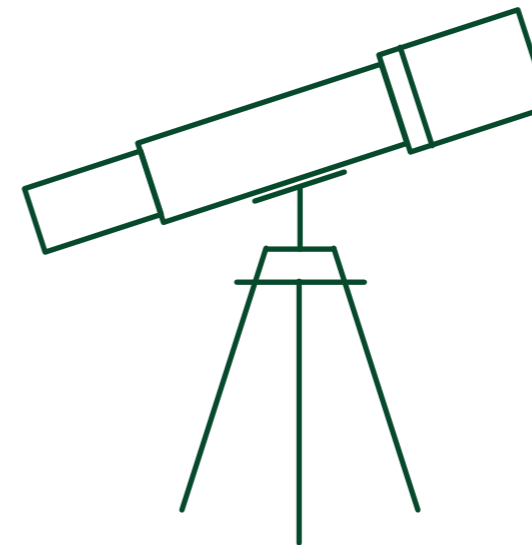
Building block 3: Governance for transformational innovation

Effectively managing innovation involves mastering a number of processes – from idea generation to project management and commercialisation – across functions, disciplines, or even organisations. At the same time, it requires promoting a culture that channels creativity, stimulates entrepreneurship, encourages teamwork and gives permission to fail. The role of top management is to combine "hard" business processes and "soft" people factors through an effective innovation governance system. When setting up a governance for transformational innovation in the public sector there are six crucial elements that need to be taken into account:

Independence on the edge
To achieve transformation an organisation needs to adopt different motivational factors and different support systems. Transformational innovation often represents a departure from the norms inside the organisation. That's why it's often difficult for an organisation to organise itself around a disruptive new idea — particularly if it will potentially cannibalise the legacy activities. In addition, the high risks and uncertain rewards of transformational innovation initiatives often leads to substantial resistance. This resistance may arise in two forms: active or passive-aggressive resistance. With passive-aggressive resistance people often agree during meetings, but fail to take action after, or worse, work against the effort in the background. Both forms of resistance are just as lethal for transformational innovation. For this reason,

transformational innovation should be organised on the 'edge' of the existing organisation, where it has a lot of independence from the core organisation, not only in its governance, but also in areas like staffing, location, budgeting, procurement, use of IT, and other areas.

Ownership by top leadership
The definition and allocation of specific management responsibilities at all levels is vital for effective innovation. This should be defined from the highest level (who is in charge of innovation in the organisation?), to more operational levels (who will be in charge of specific processes or missions?). When organising for transformational innovation, leadership have a number of choices to make when allocating responsibilities for innovation.
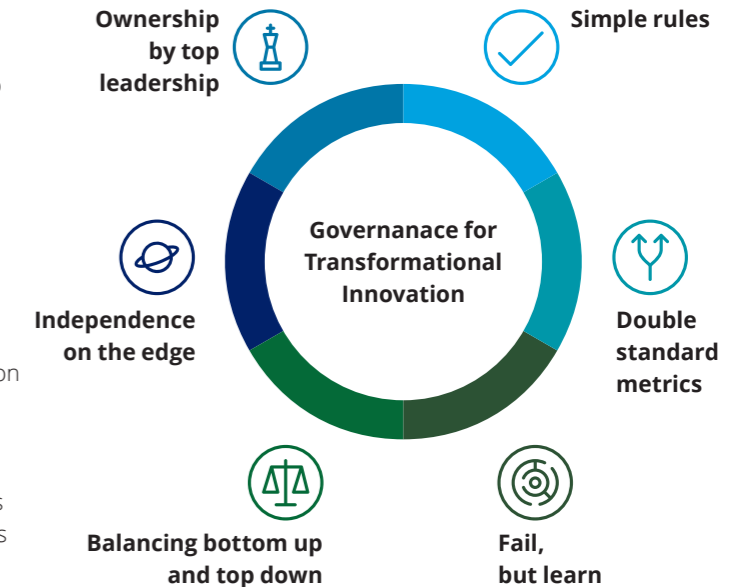
The first choice is related to the type and number of bearers of that responsibility. In our view, it's best that the transformational innovation oversight is entrusted to a single (or a number of) manager(s) fully dedicated to the task. Innovation is a discipline and needs full time attention. The second choice relates to the management level of the appointed innovation heads and their reporting relationships. Due to the anticipated resistance within the core organisation, this job should be filled by a senior manager, reporting directly to the CEO or most senior civil servant. The CEO is ultimately responsible and should be the senior sponsor.

When the CEO is visibly and directly sponsoring the efforts for transformational innovation, the message is loud and clear for the rest of the organisation; transformational innovation is a top priority. As well as sponsoring, it's helpful if the senior leader becomes an innovation evangelist.

Double standard metrics
It's important to measure the performance of transformational initiatives, both to evaluate success and also to justify the innovations organisation's existence to the parent organisation. Establishing correct metrics is another crucial element of innovation governance. In the case of transformational innovation there are three sets of metrics that should be focused on:
(1) Short-term milestones measuring progress in the market, e.g. number of people using the new service, how they rate the performance and how active the participants are. These metrics should be easily measured, aligned with the long term objectives of the initiative and mainly be focused on learning.
(2) Long-term metrics need to be in place to measure aspects such as growth trajectory and correlation with the fundamental shifts.
(3) While the idea is to avoid confrontation with the parent organisation, it is valuable to measure how the innovation may support operations of the parent. By tracking metrics that matter to the core organisation, the transformational initiative can better justify its existence.

Ownership by top leadership

Simple rules

Independence on the edge

Governanace for Transformational Innovation

Double standard metrics

Balancing bottom up and top down

Fail, but learn

Simple rules to guide the innovation process

A disciplined approach to innovation helps innovative practices flourish in an organisation. Putting a structure in place helps to coordinate innovation activities and facilitates effective collaboration. Simply put, innovation will take off when there is a rule book for it. Without guidelines and rules, complex organisations struggle to coordinate innovation activities.

The rules should be kept simple, however they should be tailored to the unique culture and strategy of the organisation. Often two to three well defined rules are enough to guide the process. Too much constraint can stifle innovation, however simple rules add discipline and guidance.

Balancing bottom-up and top-down

Another question governance needs to address is the origin of innovation within the organisation. Some organisations rely on initiatives from employees and encourage them to come up with new ideas and concepts. If this is the case, management has the responsibility to promote and support innovators. There also needs to be simple rules for filtering and funding the best ideas.

However, organisations that wish to innovate at a transformational level can't rely totally on bottom-up innovation. As argued earlier, transformational innovation has such an impact on the organisation that the top level has to be involved. Transformational innovation requires leadership to build and share a vision and innovation strategy, mobilise (at least a part of) the organisation behind that vision and strategy and the determination to persevere in spite of possible initial problems.

So, when setting up the innovation governance it's important to understand conditions under which bottom-up and top-down innovation will prosper, determine the right balance between them and adopt management attitudes that will facilitate the two innovation methods. That said, it's important to be aware of the fact that for transformational innovation there needs to be a strong focus on top-down innovation at all times.

Permission to fail ... as long as you learn!

People tend to be more effective and faster coming up with new ideas if they have the leeway to make mistakes from time to time. Failure can be an essential part of learning. To learn from failure, people have to own it, figure out what went wrong and what they can do better next time. The culture of the innovation organisation must be characterised by trust and eagerness for sufficient reflection and learning. If your organisation can adopt the concept of intelligent failure, it will become more agile, better at risk taking, and more adept at organisational learning.

Permission to fail comes more easily in some settings than others. Although a lot of public sector organisations say that their employees are allowed to fail especially with new innovative ideas, the reality is different. The risk appetite in public sector organisations is often low and failure can lead to public scrutiny. For successful transformational innovation, the organisation will need to embrace failure. This needs to be supported by senior leadership as failures within public sector organisations often end up at the political level or in the public realm. Failure should not be catastrophic either - using smaller scale experiments, and test environments, rather than big-bang approaches can help to manage the impact of the failure. In addition, failure can be reframed as a positive, depending on how the experiment is measured and what its sets out to achieve. Measuring innovation success as the number of initiatives generated, in addition to the outcomes of those initiatives, can help provide some freedom to fail.
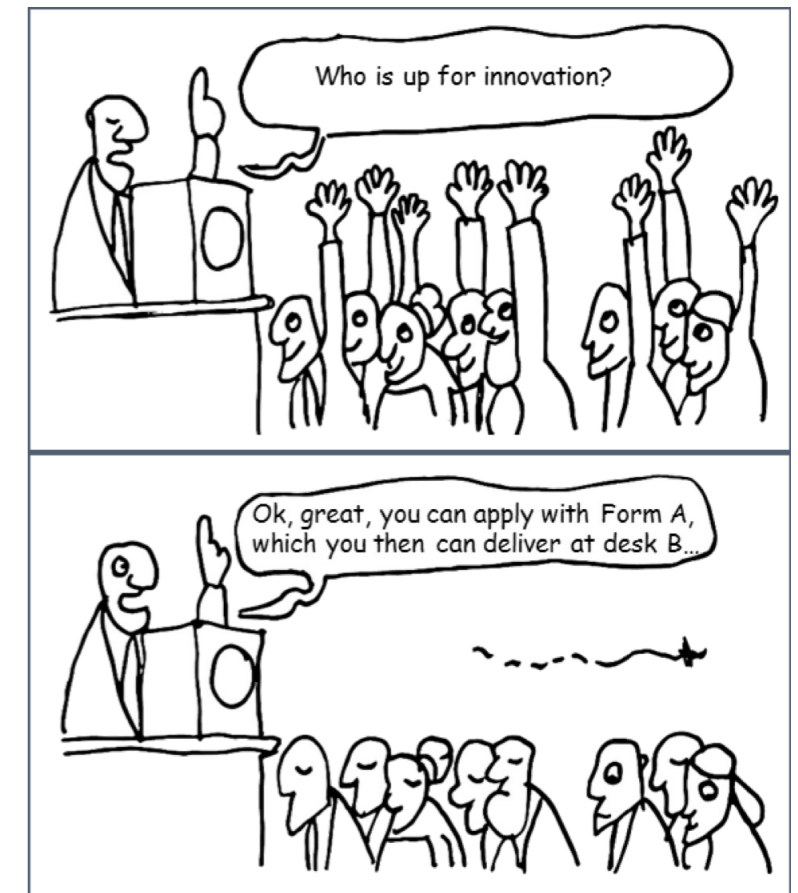
Independence and agility on the edge

> We face problems like poverty, which need a radical solution, a different approach and way of working as a government to keep up with our fast changing environment.
>
> FutureGov changes the way we think and act in government, using disruptive technology, co-creation, behavioural insights and data to solve societal problems and use it as a lever for organisational change: real time insights and fact-based, design thinking including feedback loops, working in co-creation, flexible and based on the needs of our citizens.
>
> **Ger Baron, CTO Municipality of Amsterdam**

Municipality of Amsterdam

Deloitte GovLab assisted the Municipality of Amsterdam in adopting an innovative approach to poverty reduction. After a phase of observing the customer, public and private stakeholders together came up with eight radical solutions. A jury selected three of the eight ideas which were then placed into an accelerator - an innovation organisation on the edge. The radical solutions are brought to life through the Deloitte GovLab Innovation by Design methodology. To date, all three experiments have been successful.

Building block 4: Innovation by design

At GovLab we use the Innovation by Design methodology to help public sector organisations create a better future through innovation. Adopting a user-centric mindset is central to the methodology as it places the focus on addressing the needs of end user.

Key elements of Innovation by Design are as follows:

Balanced breakthrough model
Using the balanced breakthrough model ensures that innovations solve customer needs with a product or service which is viable and sustainable for the organisation to implement. In every innovation, three factors need to be balanced:

Technical (Feasible): Do you have the capabilities to deliver the innovation?
A new technology can be extremely valuable, and can provide the basis for a successful new service or solution.

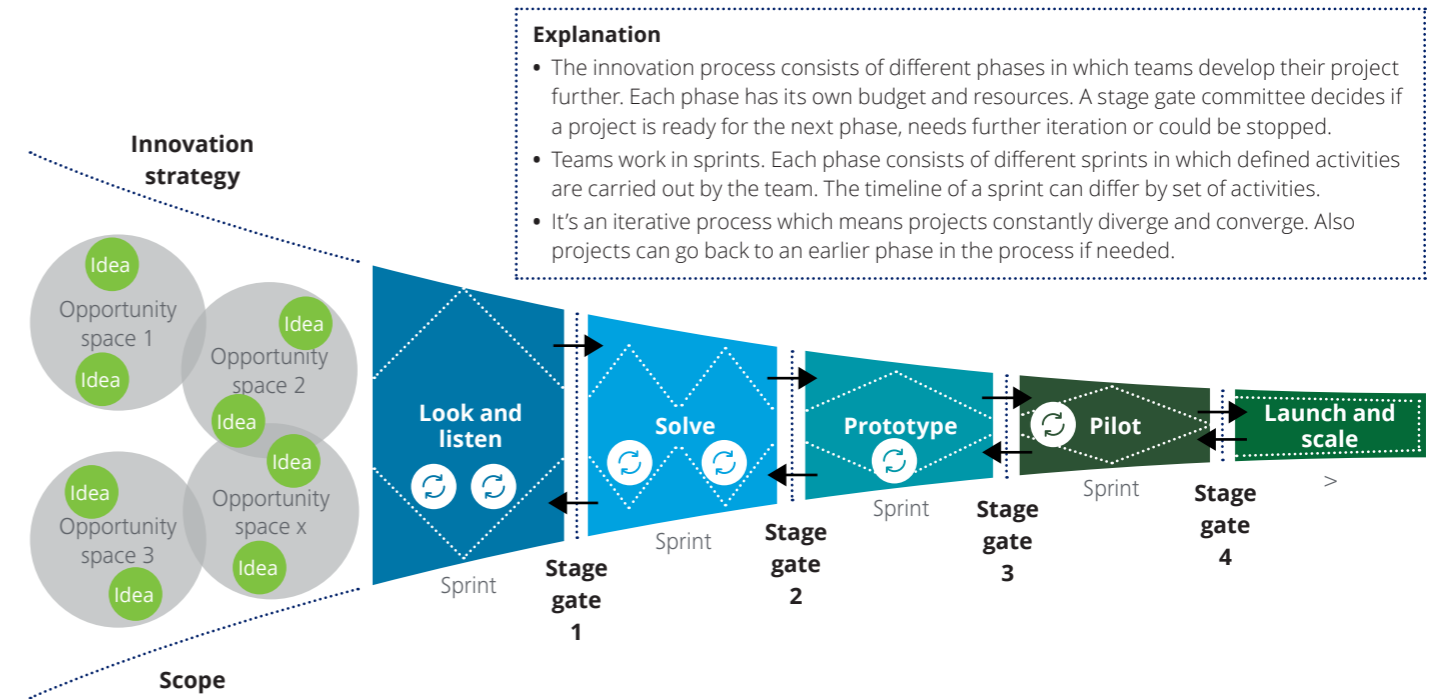**Business (Viable): Is the innovation capable of achieving your goals?**
The solution needs to fit into a business model that will allow the organisation to thrive and the solution needs to be sustainable in the long term.

People (Desirable): Does the end user really need or want the innovation?
Human centric design is at the core of our innovation process. We believe successful transformational innovations rely on some element of human centered design while balancing the other two factors.

Sprint based working
Typical methods for planning and tracking projects are generally not well suited for transformational initiatives. The concept of sprint based working has its origins in the Agile framework. A sprint is a short set period of time during which specific work has to be completed and made ready for review. During a sprint, critical questions are answered through rapid prototyping and user testing. The short sprint cycles allow you to change and adapt if the approach you adopted is not working. At the end of each sprint, deliverables are discussed in a pass / fail test. After the pass / fail test the team moves to the next sprint.

Explanation
- The innovation process consists of different phases in which teams develop their project further. Each phase has its own budget and resources. A stage gate committee decides if a project is ready for the next phase, needs further iteration or could be stopped.
- Teams work in sprints. Each phase consists of different sprints in which defined activities are carried out by the team. The timeline of a sprint can differ by set of activities.
- It's an iterative process which means projects constantly diverge and converge. Also projects can go back to an earlier phase in the process if needed.

Objective	Scope	Look and listen	Solve	Build phase I	Build phase II	Launch and scale
	Primary and secondary research to scan the horizon and select opportunity areas for deeper exploration through experimentation.	Learn how to better understand people. Observe their lives, hear their hopes and desires and get smart on the challenge.	Explore and create new concepts that best meet existing emerging needs.	Experiment with mock-up, iterate and demonstrate initial evidence of desirability, feasibility and viability.	Pilot a minimum viable offering (MVO), testing and refining desirability, feasibility and viability.	Formalise as a new way of working, optimise and scale.
Questions						
	What are our goals and aspirations? What opportunity spaces should we invest in or monitor? Which experiments should we start?	What does the target group of the experiment look like? What are their needs and desires?	Is the concept highly desirable? Does the concept serve an unmet customer need?	Have we tested the key hypotheses and critical uncertainties? How big is the opportunity?	Can we organise execution?	How do we govern the scale?

Sprint based working

Department of Agriculture and Food, Ireland
Managing Ireland's fishing quotas is a critical service provided by the Department of Agriculture and Food, and the Sea Fisheries Protection Authority (SFPA) to those individuals and companies who rely on fishing for their livelihoods.

The SFPA working in conjunction with the Department required a simple, user-friendly system to allow the SFPA to record Ireland's fishing quotas, quota exchanges with other EU member states and manage our national fishing quotas. The Quota Management System (QMS) is a web application that does just that.

QMS was one of the first projects undertaken by the Fisheries team to use a hybrid agile approach that best fitted with the department's requirements. This included best practices such as sprint planning, daily stand-ups, product demonstrations and retrospectives. This approach ensured a more collaborative, user-centric approach which was subject to continuous improvement throughout the solution lifecycle.

Using this methodology and style of working enhanced collaboration across teams, resulted in clearer requirements, timely feedback of deliverables and the delivery approach. Combining this with rigorous quality standards and detailed reporting on project metrics, led to a successful user-centric web application for the end users.

The delivery approach adopted was suited to this project due to its innovative nature. The sprint cycles allowed rapid prototyping, timely feedback and is alignment with the Departments innovation objectives.

In addition to this the application pioneered the use of leading edge technologies such as Angular JS and backend REST services. These will provide the Department with future potential to apply this technology stack across other projects.

Human centered design

The concept of using design thinking for solving business and societal problems was developed at IDEO and the d.school at Stanford. At GovLab we strongly believe in the strength of human centered problem solving. Embracing human centered design means believing that all societal problems, even the seemingly intractable ones like poverty and clean water for everyone are solvable. Moreover, it means believing that the people who face those problems every day are the ones who hold the key to their answer. Human centered design offers problem solvers a chance to design with communities, to deeply understand the people they are looking to serve, to dream up scores of ideas, and to create innovative new solutions rooted in people's actual needs. A human-centred design process isn't a perfectly linear process, and each project has its own contours and character. GovLab projects always go through four main phases:

Look & Listen: It all begins with inspiration. Connecting with the needs, desires, and motivations of real people helps to inspire and provoke fresh ideas. Observing people's behaviour helps to better understand the current situation and trigger new ideas. The next step in the design phase is to grasp real insights by moving to more abstract truths that span across groups of people. Besides observing people, it's also important to research technological and social innovations to learn about their opportunities and pitfalls.

Solve: The observation is then used to explore new possibilities. The goal is to generate countless ideas at first and at the end the most promising ones are selected for the prototype phase.

Build I Prototype: The most promising ideas are advanced in iterative rounds of rapid prototypes. These are early, rough representations of ideas that are concrete enough for people to react to. The key is to rapidly explore a range of ideas without becoming too invested in any one. Based on feedback from end users and other stakeholders, you adapt and polish the solution until it's compelling and workable.

Build II Pilot: Before the new solution is rolled out, the design is further refined through a real scale pilot. The experience of the pilot is input for a road map to implement the new solution within the whole organisation. Again, the implementation can have many rounds. More and more organisations are beginning to launch new products and services in order to learn. They start with a 'beta' version and continue to refine their product.

Design thinking methodology is proven to work if organisations want to achieve a breakthrough innovation or want to make a creative leap.
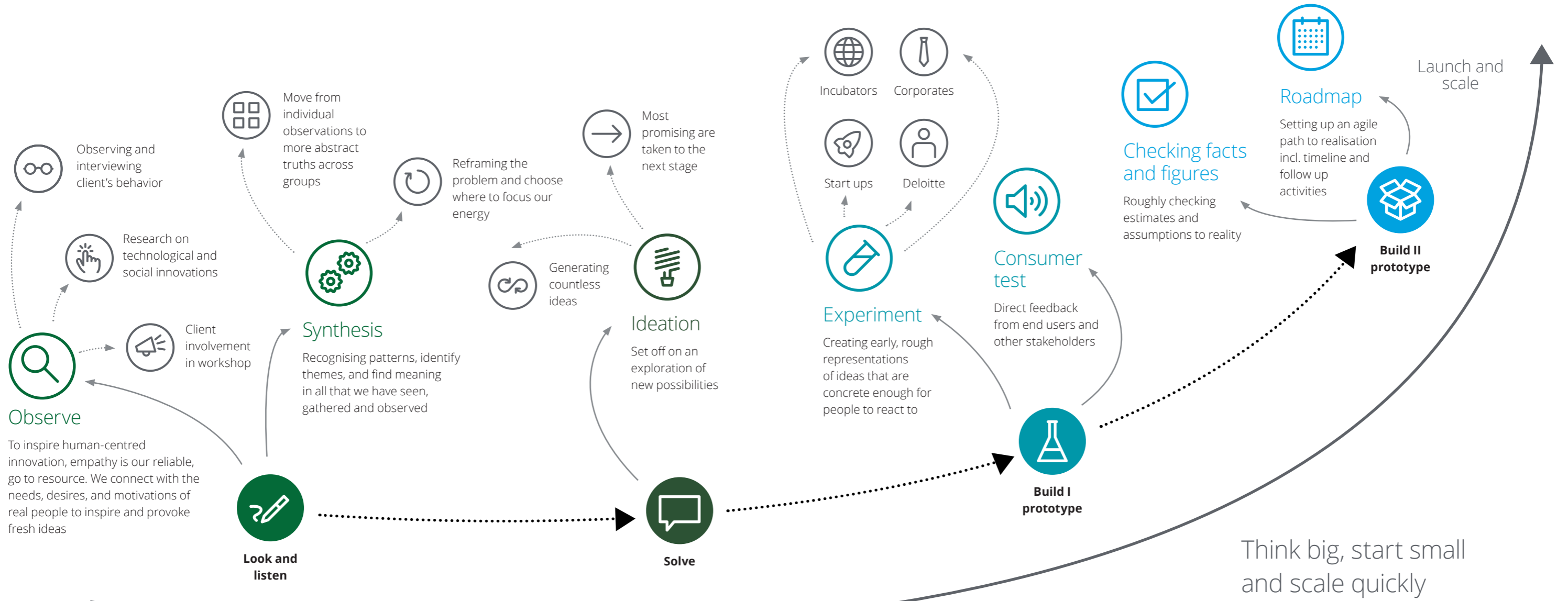
Validated learning

The Build – Measure – Learn feedback loop is at the core of the Lean Startup methodology. During a transformational innovation project an idea is turned into a product or a service. As customers interact with these products, they generate feedback and data.

The feedback is both qualitative (such as what they like and don't like) and quantitative (such as how many people use it and how often). For transformational innovation projects, that information is the most important, because it can influence and reshape the next set of ideas. In the end it's all about validated learning. Validated learning is the process of demonstrating empirically that a team has discovered valuable truths about an innovation organisation's present and future prospects.

At its beginning, each idea is full of assumptions about the customer's needs, the way a technology could be used or the business model to be applied. Validated learning is about testing and validating these hypotheses in the real world. During a project it's therefore important to work with a hypothesis log to capture what is learned in order to keep track of progress and be able to communicate results. The hypothesis log is also used to track validation efforts and enables fact-based decision making.

Observing and interviewing client's behavior

Research on technological and social innovations

Move from individual observations to more abstract truths across groups

Reframing the problem and choose where to focus our energy

Most promising are taken to the next stage

Incubators   Corporates

Start ups   Deloitte

Launch and scale

Client involvement in workshop

Generating countless ideas

Synthesis

Recognising patterns, identify themes, and find meaning in all that we have seen, gathered and observed

Ideation

Set off on an exploration of new possibilities

Experiment

Creating early, rough representations of ideas that are concrete enough for people to react to

Consumer test

Direct feedback from end users and other stakeholders

Checking facts and figures

Roughly checking estimates and assumptions to reality

Roadmap

Setting up an agile path to realisation incl. timeline and follow up activities

Build II prototype

Observe

To inspire human-centred innovation, empathy is our reliable, go to resource. We connect with the needs, desires, and motivations of real people to inspire and provoke fresh ideas

Look and listen

Solve

Build I prototype

Think big, start small and scale quickly

Human centred design

Department of Employment Affairs and Social Protection, Ireland

Users of government digital services expect frictionless access to online services across all devices and channels. In recent years, the Department of Employment Affairs and Social Protection (DEASP) has embarked on a journey to redesign service delivery. Projects range from a secure and scalable identify platform for clients, to an information architecture redesign.

Across these projects, user centric design has underpinned the development of innovative solutions. Persona driven design supported the development of various user journeys with a key focus on user self-service at its core. In other cases, focus groups were held with service users to understand their particular needs which enabled the department to look, listen and step in the shoes of their users.

Deloitte's ability to evolve the user experience by leveraging both real time analytics and persona driven design in partnership with the DEASP has allowed us to continue to innovate in how we support our clients to deliver services to citizens.

Building block 5:
Mechanisms to fuel and fund innovation

The final building block relates to mechanisms to fuel and fund innovation. To successfully innovate the correct resources need to be in place. Innovation leaders need to consider how to identify the best employees to be involved in innovation initiatives, how to fund the venture and how to collaborate across organisations.

Passionate and skilled explorers
Identifying employees who can be classified as 'passionate explorers' is crucial to the success of transformational innovation. According to the Deloitte publication, 'Unlocking the Passion of the Explorer', there are three attributes that characterise the passionate explorer.
01. Commitment to domain – is defined as a desire to have a long lasting and increasing impact on a particular social problem.
02. Questing disposition - employees with the questing disposition actively seek out challenges to rapidly improve their performance.
03. Connecting disposition – those with a connecting disposition seek deep interactions with others and build trust-based relationships to gain new insights.

Besides being passionate, explorers also need to have the right skillset. The skillset needed for core and adjacent innovations differ from those required for transformational innovations. For core and adjacent, analytical skills are vital. These skills can regularly be found within public sector organisations.

Transformational innovation efforts, by contrast, typically employ a discovery and concept-development process to uncover and analyse social needs driving changes, the underlying market trends, and ongoing technological developments. These activities require skills found often among designers, cultural anthropologists, scenario planners, and analysts who are comfortable with ambiguous data. It may be necessary to train employees in these skills or work with people from outside your organisation.

Venture funding
Bold transformational efforts typically require sustained investment. Funding should ideally come from an entity that can rise above the fray of annual budget allocation. Sometimes organisations use the 'innovation tax' to assign budget to the transformational innovation (all units of the organisation contribute a percentage of their budget to transformational initiatives).

To allocate budget to projects within the innovation organisation, choose completely new funding models that spur results and speed. An example of that is a funding structure based on the model of venture capitalists. In this model the projects need to prove success and earn their money for each new phase with a board of public or private investors. Funding itself needs to be minimal at all times and just like real start-ups, the

transformational start-up needs to 'starve on the edge'. It needs to be allocated just enough funding to carry out core activities, so that it's forced to look for partners outside the organisation. By looking outside it can leverage the assets of others and grow stronger.

Co-creation in dynamic ecosystems
Ecosystems can prove beneficial in the quest for innovation. Every organisation is involved in many different ecosystems however, tapping into unexplored connections and alliances can boost transformational innovation. While traditional forms of aggregating and coordinating ecosystems should not be ignored, dynamic ecosystems that drive accelerated performance improvement are central to successful transformational innovation. More information about dynamic ecosystems and how to create them can be found in the Deloitte Center for the Edge report 'Performance ecosystems; a decision framework to take performance to the next level'.

Dynamic ecosystem

Venture funding

Passionate and skilled explorers
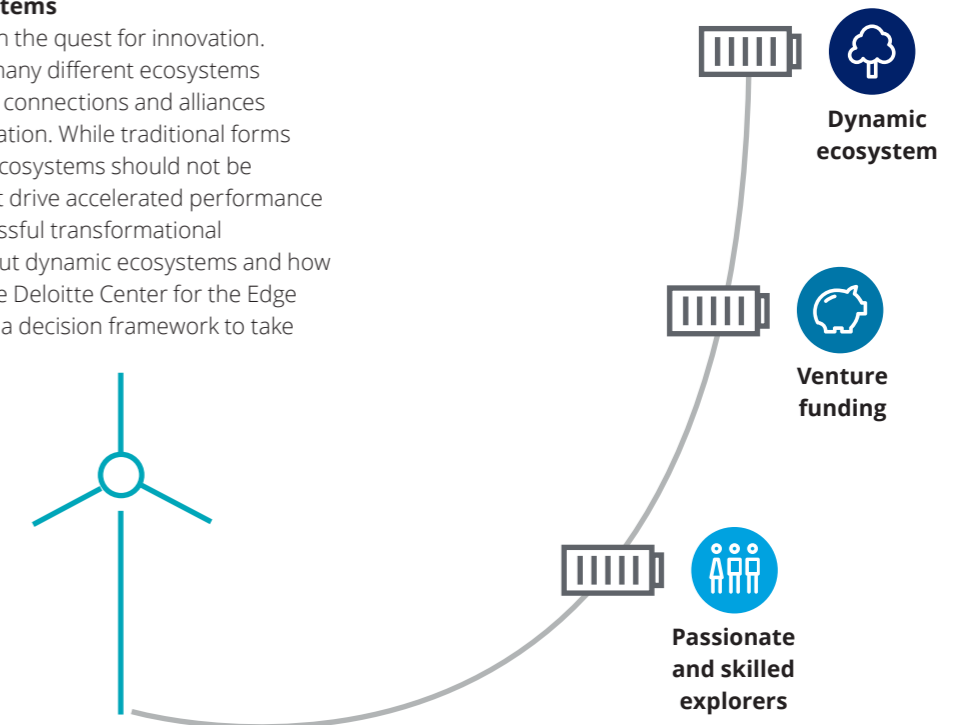
About GovLab

GovLab is Deloitte's public
sector innovation offering

How can GovLab help you with innovation?

Whether discovering the next big thing or expanding on what's come before, organisations thrive and grow from innovation. GovLab brings together a wide range of capabilities, tools, and people to help public sector organisations create new sources of growth and prosperity. Since 1981, Deloitte has pioneered in the discipline of innovation and helped leading organisations navigate through turbulent environments, helping organisations solve complex problems that matter through a rigorous, interdisciplinary approach.

Through a combination of design, strategy, social science, and technology, Deloitte GovLab works to unearth opportunities and spur ongoing growth that helps public sector organisations:

Set and implement innovation strategy
Working alongside senior leaders, we explore how forces of change potentially impact the organisation and policy domain, and identify where opportunities lie within the seemingly chaotic landscape. We then set an "innovation ambition" and help diagnose and address internal breakdowns. Finally, we advise senior leaders on their responsibilities for championing innovation.

Design, build, and launch innovations
We work with organisations to convert opportunities and ideas into new business models for creating public value. Using generative research methods, we unearth new insights about consumers and translate those insights into business concepts that encompass multiple types of innovation. We facilitate prototyping and testing to refine new offers and accelerate launch and scaling. Working with the client implementation team, we use strategy, marketing, and enterprise analytics to refine, pilot, and launch the new business.

Become better innovators, through empowering organisations with the right processes, tradecraft, and partnerships to deliver innovation results. We help clients develop their own signature innovation capabilities, systems, and structures that are specific for the enterprise. This includes governance structures, establishment of incentives and metrics, and implementation of learning programs to teach innovation practices.

What do we do?

Provoking and insightful thought leadership

GovLab produces engaging, insightful, robust and impact oriented thought leadership on new ideas and trends that have the potential to transform the way the government realises public goals.

Search 'GovLab' on deloitte.ie

Connecting to inspiring ecosystems

GovLab connects clients to creative environments and ecosystems in the field of exponential technological- and social innovations.

Businesses

**G O V
L ◀ B**

Universities

Citizens

Scale-ups

Redefining government through leading innovation

Creativity is thinking up new things. Innovation is doing new things. Together with clients GovLab creates complete new innovative products and services.

Innovation
GovLab brings together a wide range of methods, capabilities, tools, and people to help public sector organisations to innovate.

Data Analytics
GovLab brings data driven policy to the next level with products and services on data insights, predictive analytics and customer profiling.

Impact investing
GovLab connects government, social entrepreneurs and social investors to create whole new public private partnerships to solve wicked societal problems.
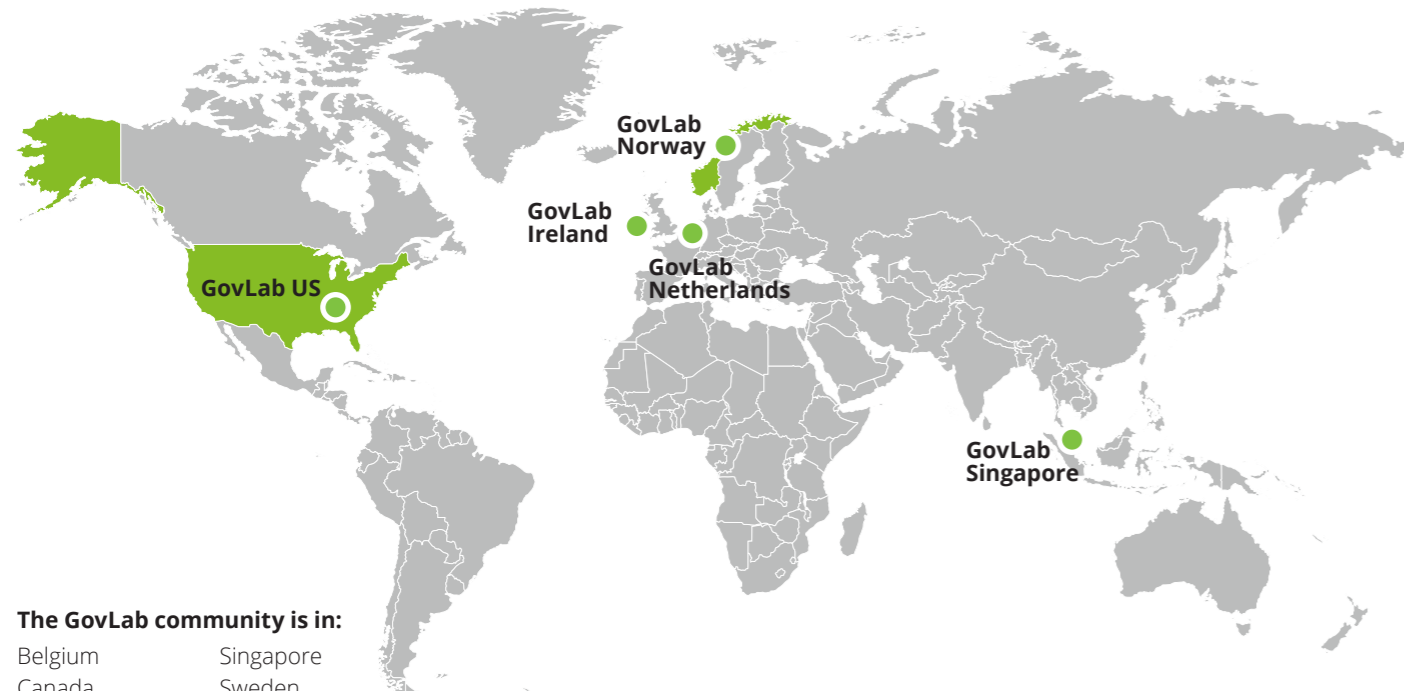
Digital
GovLab helps the public sector transform and adapt to the digital age with offerings on digital strategy, robotics, apps, mobile and platforms.

Five GovLab hubs harness the power of a growing global community

GovLab Norway

GovLab Ireland

GovLab Netherlands

GovLab US

GovLab Singapore

The GovLab community is in:

Belgium	Singapore
Canada	Sweden
Czech Republic	Switzerland
Denmark	Tanzania
Ireland	The Netherlands
Italy	United Kingdom
Norway	United States
Portugal	*and beyond*

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The world is changing.
Society is changing.
Citizens are changing.
Are you ready?

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