Digital Government Innovations
How Might We?

Lance Bialas, SAP SE

FMI 2018

Agenda

Point of View
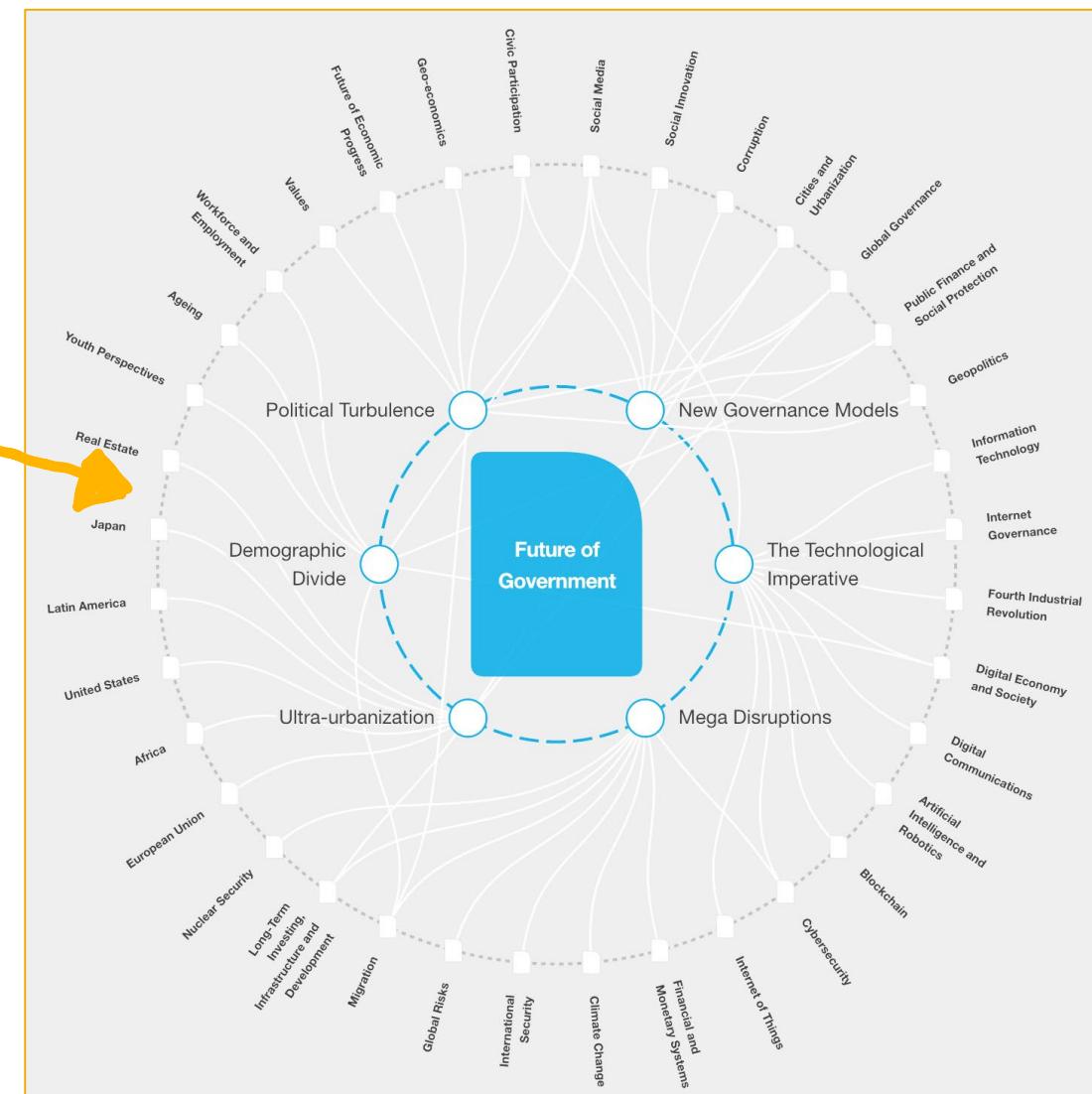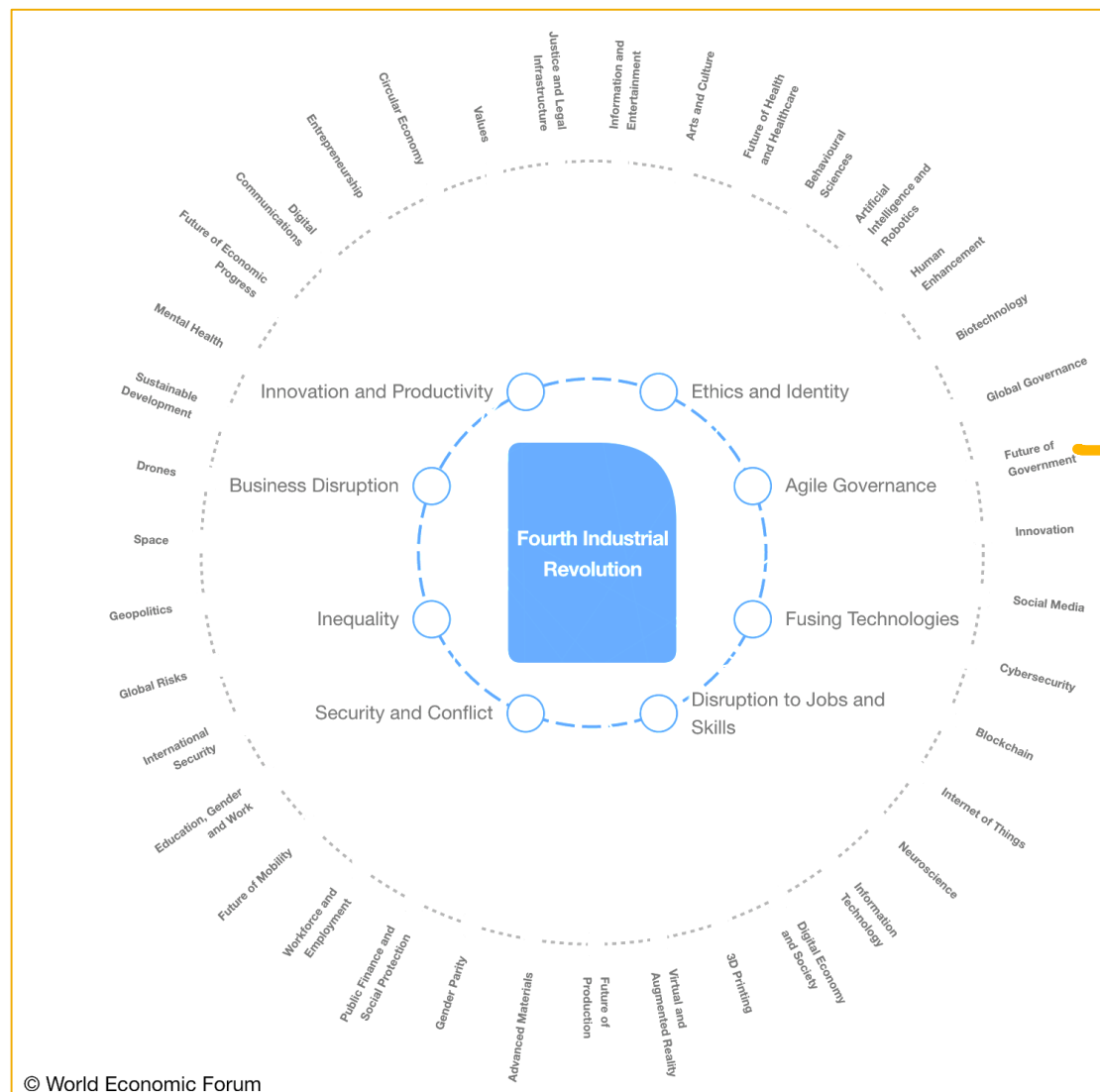
Case Studies

Closing Thoughts

Transformation Leader Panel – Government of Canada Transformation Leaders

SAP Point of View

The Fourth Industrial Revolution is shaping the Future of Government

© World Economic Forum

What is Digital Government?

Digital government is the production and access to data, services and content, sourced and distributed across the digital and networked world, to create public value. (OECD)

Optimize

Extend
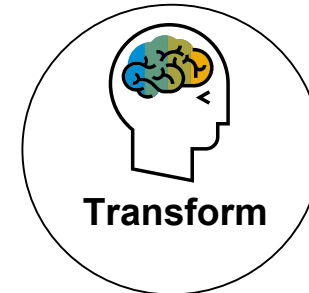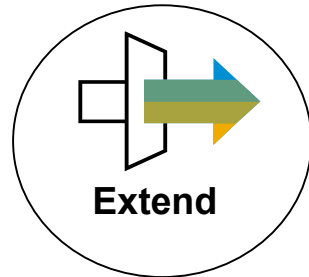
Transform

How might we become a Digital Government?

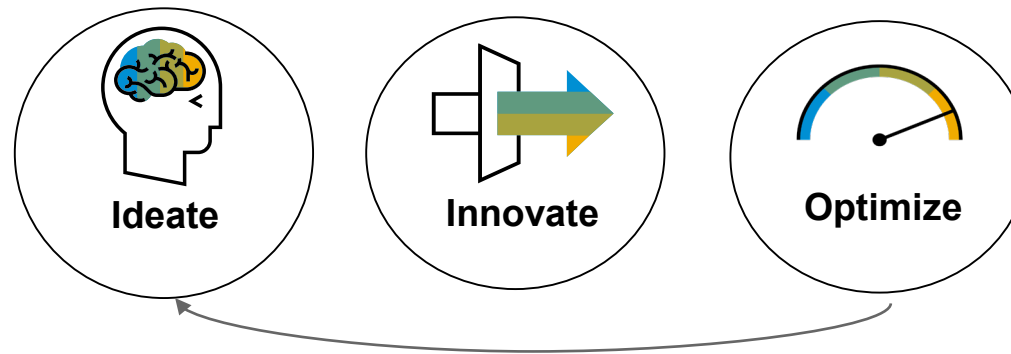A digital government refocuses on what "creates public value" for Canada while transforming the production and access to data, services and content, sourced and distributed across the digital and networked world.
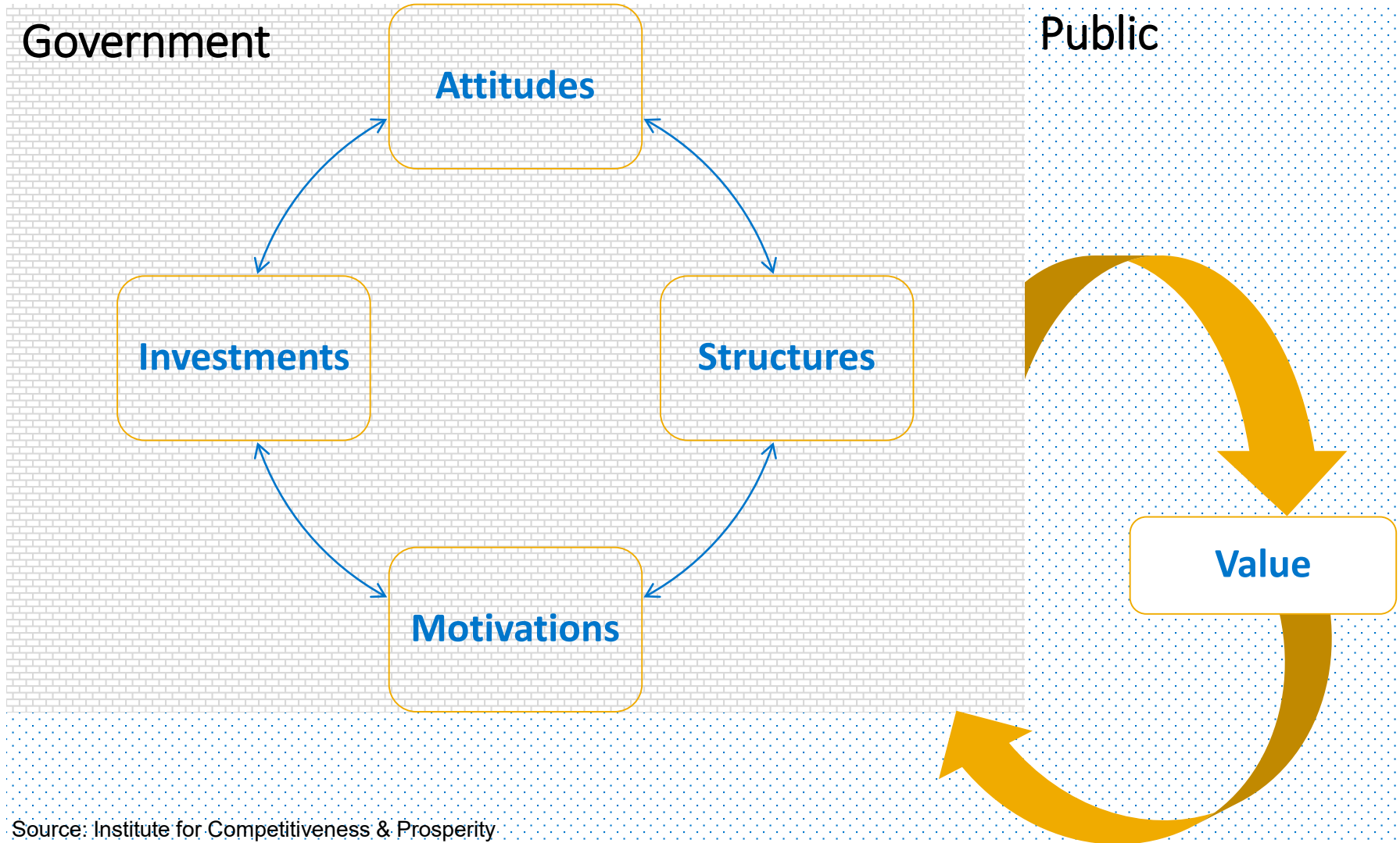(Ideation Centre at SAP Canada)

Ideate   **Innovate**   **Optimize**

We must understand the Attitudes, Investments, Motivations and underlying Structures to enable Public Value

Source: Institute for Competitiveness & Prosperity

Big data created from different sources enables Public Services to rethink processes, which enables insights and then allows for innovative service delivery to citizens

Events & interactions from all channels

X Data

- Social factors & events
- Case & service data
- Financial data
- Sentiment data
- Network data

Explore & gain insights

O Data

Intelligence through Predictive Analytics

merge
score
behaviour
nurture
discover

Personalized targeting & orchestration

Intervention execution and monitoring

- 'Nudge' based
- Provider Support
- Justice and Policing
- Community Engagement
- Health and Welfare

Capturing response

Ideate, innovate & optimize

The Current Pillars of Government of Canada Innovation
A Digital Government Must 'Connect the Dots' Across 5 Key Service Domains
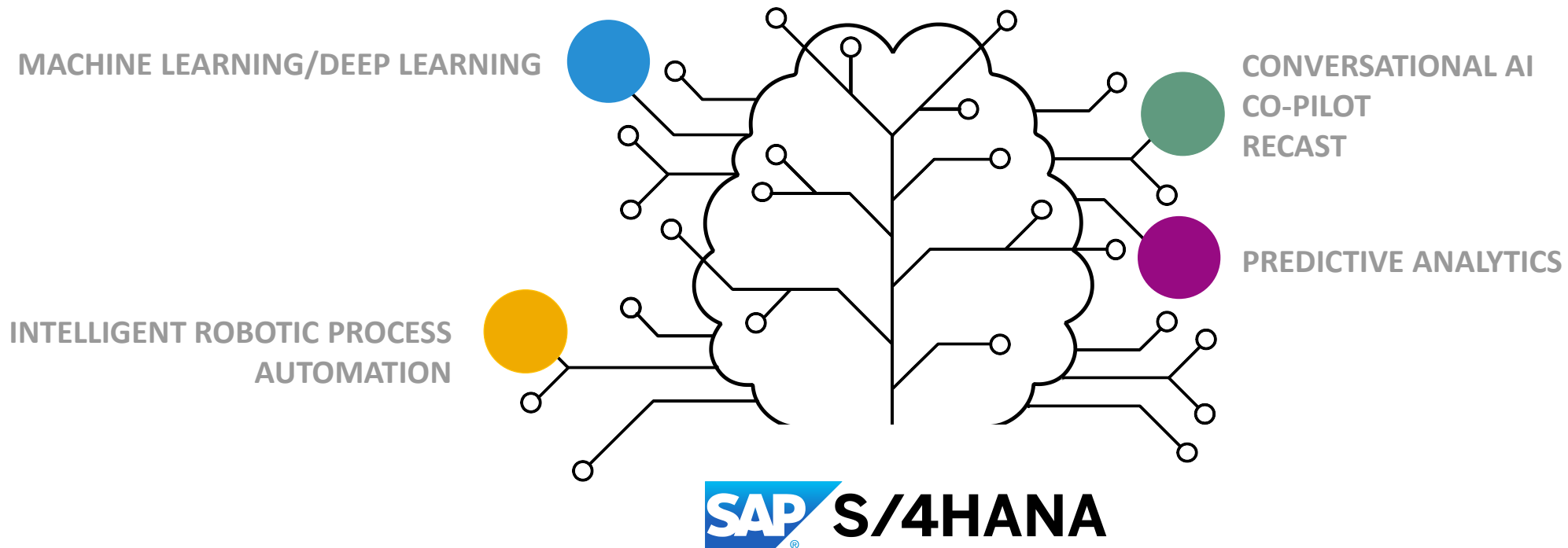
Governance

- Government
- Participation
- Development
- Monetization

Office of the Prime Minister | Cabinet du Premier ministre | Treasury Board of Canada Secretariat

Trade

- Transportation
- Infrastructure
- Logistics

CANADA POST · POSTES CANADA | Canada Border Services Agency · Agence des services frontaliers du Canada | Canada Revenue Agency · Agence du revenu du Canada

People

- Security & Safety
- Healthcare
- Living
- Services
- Education

FORCES

Connected and manageable through One end-to-end platform

BANK OF CANADA · BANQUE DU CANADA | Public Services and Procurement Canada · Services publics et Approvisionnement Canada | Agriculture and Agri-Food Canada | NRC · CNRC

- Planning & Development
- Commerce
- Marketing

Economy

- Sustainability & Preservation
- Natural Resources
- Infrastructure Resources

Environment and Resources

Artificial Intelligence Will Help Deliver Personalized Constituent Services

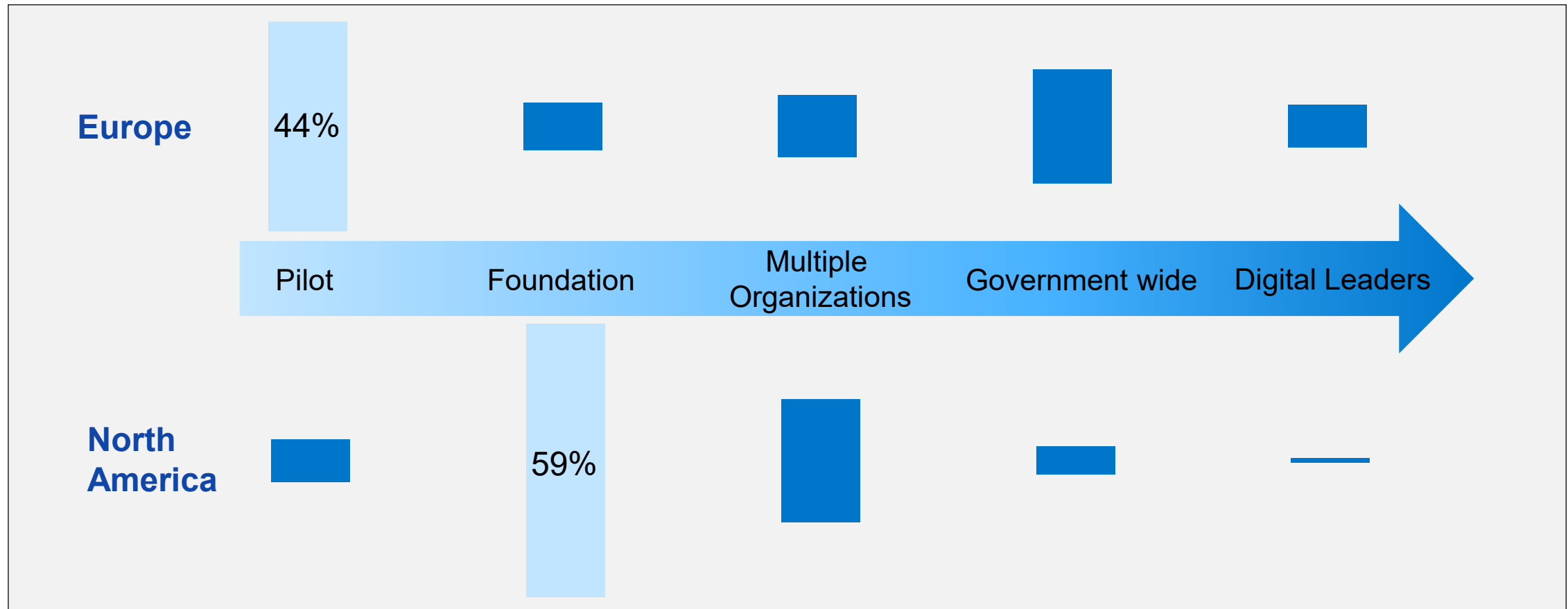Fuel future **process innovation** with artificial intelligence and boost the **FMT/eProc/... transformation value**

MACHINE LEARNING/DEEP LEARNING

CONVERSATIONAL AI
CO-PILOT
RECAST

PREDICTIVE ANALYTICS

INTELLIGENT ROBOTIC PROCESS
AUTOMATION

SAP **S/4HANA**

Machine Learning Use Cases
Existing and planned machine learning use cases for SAP S/4HANA*

Already Delivered → **Planned** — Lab Preview →

Finance:
- Cash Application
- Payment Advice Extraction
- Cash Application: Lockbox Line-item Matching
- Payables Line Item Matching
- Goods Receipt / Invoice Receipt Monitor Status proposal
- Tax Compliance Smart Automation / GRC
- Business Integrity Screening / GRC
- Smart Alerts for Profit & Loss Analysis
- Real Spend Cost Center ML Analysis

Streamlined Procure to Pay
- Quantity Contract Consumption
- Payment Block - Cash Discount at Risk
- Proposal of Options for materials w/o purchase contract
- Propose creation of new catalog item (based on free-text items)
- Propose Material Group

Accelerated Plan to Product:
- Stock in Transit
- Demand-Driven Replenishment: Dynamic Buffer Level Adjustment

Optimized Order to Cash:
- Quotation Conversion Probability Rate
- Sales Forecast Prediction
- SAP Delivery Performance / Delivery in Time

Initial Idea to Design:
- Project Cost Forecasting
- Integrated Digital Content Processing

Finance:
- Detect Abnormal Liquidity Items
- Posting Rule Determination
- Watch List Screening / GRC
- Emission Forecast

Streamlined Procure to Pay:
- Supplier Delivery Prediction
- Automation in Source of Supply Assignment
- Account assignment for purchasing items on PR item and Supplier invoice item
- Auto Approval Workflow
- Demand Forecasting
- Picture-based requisitioning

SAP Cloud Platform:
- Object recognition in building photographs

Our Challenge: Scale Digital Transformation from Siloed Projects to Being a Socially Resilient Digital Government

Europe — 44% (Pilot)

Pilot | Foundation | Multiple Organizations | Government wide | Digital Leaders

North America — 59% (Foundation)

Source: IDC - Western Europe, Digital Government Benchmarking, 2016
Maturity Scape Benchmark Survey, June 2016

"In the age of smart phones, social media and apps that do everything, Canadians expect their government to serve them as seamlessly and as well as they've come to expect from the best digital service providers. Government exists to improve the lives of people, and a digitally enabled public service gives us an unprecedented opportunity to improve government services."

The Honourable Scott Brison, President of the Treasury Board and Minister of Digital Government

Case Studies

The Path to Digital Government: Public Services Transformations in Canada

Enabling a Digital Supply Chain	**Enabling Integrated Processes**	**The Path to Digital Government**
Reimagine the role of a digital supply chain in a world of cyberwarfare	Expanding digital capital project management and introducing a modern data platform while preparing to move to the cloud	Full electronic procurement modernization of Government while transforming end-to-end finance operations
Transforming Driving & Auto Insurance in Quebec	**Enabling 'The eCity'**	**Providing Digital Constituent Services**
Enable digital driver license, insurance offerings and other digital citizen services while introducing a full Digital Core	Enabling Social Procurement and Talent Management modernization with an enterprise approach	To Provide all Province services to citizens through a digital channel in the next 10 years.

How might we improve International Trade? – Parcel Journey

Retailer orders 20,000 laptops

OEM planner processes the order and generates necessary PO's and WO's to component suppliers and EMS vendors

Component supplier dropships ordered components to EMS vendor

EMS planner orchestrates the final assembly of laptops (BC Recording)

EMS planner prepares shipping and customs documents (BC Recording)

0 — **Sales Order**
1 — **Purchase Order**
2 — **Drop Ship**
3 — **Assembly**
4 — **Shipping Prep**

Delivery
Clear Customs
Customs Entry
Carrier Prep

8 — 7 — 6 — 5

Carrier delivers to Retailer and gets signature on the Proof of Delivery (BC Recording)

Customs agent validates the documents against BC records and issues the Entry Summary (BC Verification)

Carrier crosses the border and files the required document Customs (BC Recording)

Carrier (Land/Ocean/Air) files the shipment documents to customs and receives export certificates (BC Recording)

Blockchain

3	4	4	4	5	6	7	8
ASN	Bill of Lading	Certificate of Origin	Commercial Invoice	Customs Declaration	Export Certificate	Entry Summary	Proof of Delivery

National Disability Insurance Scheme
How might we better support Australians with disability, their families and carers?

Organization
National Disability Insurance Agency

Location
Canberra, Australia

Industry
Public Sector

Services
Supports and services for people with disability

Trial User #
35,695

Employees
854

Budget
$2.4B (€1.6B)

Website
www.ndis.gov.au

Partner
SAP Services

Objectives

- Give people with disability better access to personalised, high quality and innovative supports and services.

- Enhance the independence, social and economic participation of people with disability and their carers.

- By 2019, the NDIS will support 460,000 Australians with disability.

Benefits

- End-to-end process support from Gateway to Planning and Assessment to Delivery of Supports.

- "myplace" portal for participants and providers to view plans, request payments and manage services.

- Public-facing website with dynamic content management.

- Integration with Esri for location-based services (e.g. find a provider near me).

- Authentication via myGov whole-of-government services access portal.

- Delivered within 12 months from prototype to production.

Personalized
User experience with standard software at the backend.

Innovative
Participant self-service with natural connection to providers.

Agile
Delivered within 12 months for a new agency implementing new legislation.

NDIS trial – on time and on budget
Posted on 18 September 2016

The NDIS Quarterly Report for April-June 2016 - the last of the three-year trial period - showed $2.4 billion had been committed to help people with disability across the country, with 35,695 participants successfully joining the Scheme since July 2013.

Highlights of the quarterly report include:

- $2.4 billion committed for participant support costs
- 35,695 participants in the Scheme
- 53,423 plans approved (including successive plans)
- Survey of participants - 95 per cent of people's experience either good or very good.
- 3519 registered service providers
- 50 per cent of active participants received disability services for the first time
- The largest amounts overall - $577 million - has been paid for assistance with daily life at home, in the community, education and at work.

Department of Human Services
How might we improve Integrity Screening and enable Fraud Management?

Organization
Department of Human Services

Location
Adelaide, Australia

Industry
Public Sector

Services
Social welfare payments and services, public health insurance and child support

Customers
7.3 million

Employees
34,890

Budget
$165B (€111B)

Website
www.humanservices.gov.au

Partner
In-house

Objectives
- Detect potential fraudulent claims and prevent them going through to payment.
- Identify cases where fraud has already occurred and launch an investigation.
- Encourage self-correction and improve compliance.

Benefits
- Data matching based on various risk parameters (e.g. multiple accounts linked to a single identity).
- Service profiling triggered by change of circumstances (e.g. update of payment destination).
- 360 degree visualization (e.g. analysis of customer relationships to identify high-risk cohorts).
- Interventions to encourage compliance (e.g. SMS confirmations and reminders).
- New scenarios able to be deployed within days/weeks, rather than weeks/months.

Roadmap
- Similarity analytics to identify outliers within a cohort (e.g. unexplained wealth).
- Geospatial analytics to identify people claiming emergency benefits who are outside the affected area.
- Simulation to determine the potential impact of an event (e.g. shutdown of a major employer).

$1.7 billion
Estimated welfare fraud discovered through data matching.

110 million
Records analyzed for potential fraud/compliance issues.

3 seconds
To build a complete timeline for a person of interest.
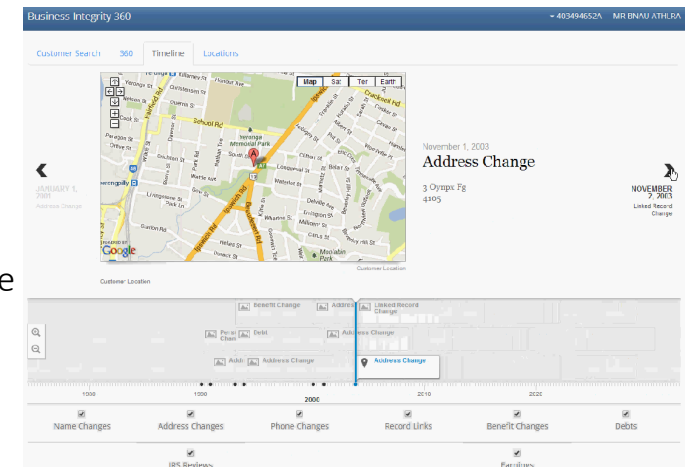
Department of Human Services
How might we better investigate cases across departments?

Organization
Department of Human Services

Location
Adelaide, Australia

Industry
Public Sector

Services
Social welfare payments and services, public health insurance and child support

Customers
7.3 million

Employees
34,890

Budget
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Website
www.humanservices.gov.au

Partner
SAP Services

Objectives

- Manage investigation of potential fraud and non-compliance.
- Replace aging legacy system.
- Build on the foundation of SAP CRM to develop an end-to-end view of customer interactions.

Benefits

- Reduced the processing time from case creation to referral for prosecution.
- Improved data integrity and better protection for the chain of evidence.
- Ability to focus limited resources on the most serious cases.
- Increased collaboration between investigators and caseworkers.
- Full compliance with Australian Government Investigations Standards.

$130 million
Recovered annually through investigations.

2,346
Investigations into fraudulent activity in FY15.

4 months
Project duration from kick-off to production.

Office of State Revenue
How might we enable Personalized Taxpayer Services?

Organization
Office of State Revenue,
Queensland

Location
Brisbane, Australia

Industry
Public Sector

Services
Collection of taxes and
royalties, administration
of first home owners grant

Customers
2 million

Budget
$17B (€10.7B)

Website
www.treasury.qld.gov.au/
taxes-and-royalties

Partner
SAP Services

Objectives

- Leverage Machine Learning capabilities and vast array of data owned by OSR to provide early indicators of land taxpayers not having the capacity to pay.

- Enable root cause analysis to reduce debt propensity through earlier notice and targeted interventions.

Benefits

- Insights into the taxpayer journey; Real-time segmentation/risk profiling.

- Support evidence-based decision making on the next best action

- Ability to apply targeted interventions.

- Visibility of how effective interventions have been.

- Measure effectiveness of processes and their success rates.

Roadmap

- Production project currently underway.

- Improve debtor prediction rate.

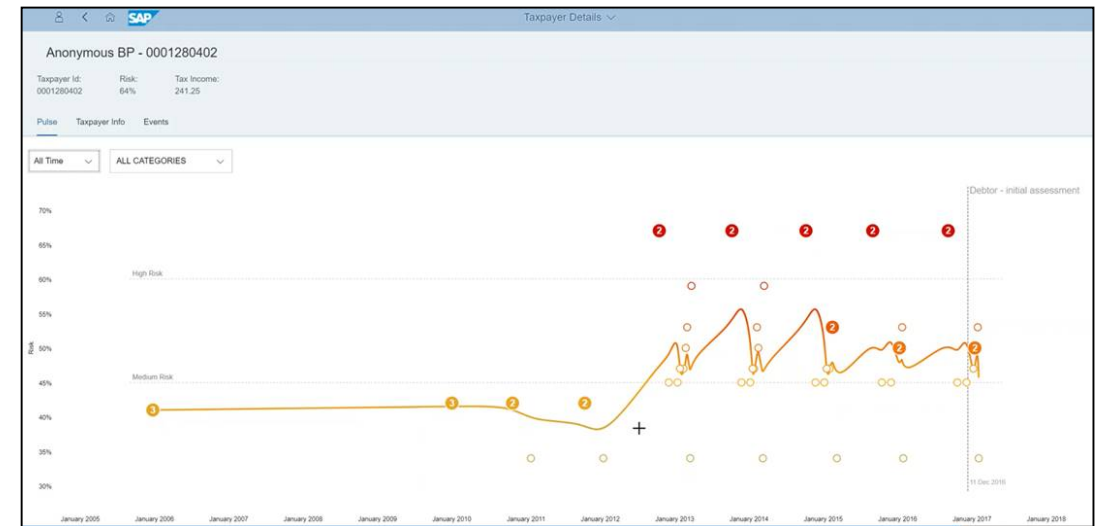- Apply across all tax types to reduce total liabilities.

10 weeks
From idea generation to delivery
of prototype.

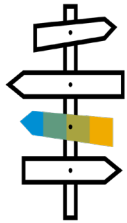**187 million**
Records analysed across 97,000
taxpayers.

71%
Debtor prediction rate from trial.

Closing thoughts

How to get started with SAP? – How might we reimagine public value?

Whether you're still exploring new ideas or have defined one in detail already...

Explore Workshop

Identify and prioritize your business challenges.

Accelerate

Draw on our library of industry innovation kits to address common value propositions.

Design for the Future

Use a guided process to reimagine the future lives of Canadians

Bring Your Own Idea

Bring a defined idea, and we'll support

Transformation Leaders Panel

Thank You.

Email: lance.bialas@sap.com

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