Digital Transformation

Emerging trends in CX
Welcome

Therese Ma
Agenda

1. Government Agenda for Digital Transformation – Dan Roelink
2. Rules as Code – Zack Thomas
3. Life Journeys – Annalisa Yeo

Morning Tea Break

4. Customer Research – Georgos Papanastasiou
5. Digital Drivers Licence – Ozlem Eskicioglu
6. NSW Police Portal – Sergeant Rod Murphy

Thanks and wrap up
The Government Agenda for Digital Transformation

Dan Roelink
digital.nsw

BUILDING OUR DIGITAL FUTURE

July 16, 2019
Digital transformation in government is about improving lives
digital.nsw blueprint

Contemporary governance & assurance

State digital strategy (beta – investment plan)

Reusable state digital assets

A new fund for digital
Customer Journeys

Reusable digital assets

Legacy modernisation
NSW $93.0bn infrastructure investment
We need a product to understand

- Benefits
- Value
- Strategic direction
- Investment needs & roadmap
- Strategic alignment & reuse

Focus for beta release of the State Digital Strategy
Digital transformation is about improving lives

For our most vulnerable
Tell your story once

For Children in Out of Home Care
Choose services that support you

For parents starting and growing a family
Are supported at key events in your life

For anyone that is entitled to assistance
Are proactively assisted

For anyone that has to prove their identity
Can easily find and access what you need

This can only be done if **customer experience** is the centre of everything we do
digital.nsw
BUILDING OUR DIGITAL FUTURE
Rules as Code
Zack Thomas
Rules as **Code**

A policy, design and tech collaboration.

Digital Government Policy Lab, Department of Customer Service

July 2019
Rules as **Code** – Sprint 1

**Ask and learn**

- Jan ‘19
  - Rules engine research

- Nov ‘18
  - Discovery

**Ideate**

- Feb ‘19
  - Learn from NZ counterparts.
  - Project planning

**Prototype**

- Mar ‘19
  - Experiment with Open Fisca
  - CFA join the team
  - Engage with users
  - Build pipeline of projects
  - Build a Proof of Concept

**Test and validate**

- Workshop 25 Mar ‘19

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**Proof of Concept**

**NSW Government**

Bringing policy, legislation and services into the digital age
The problems we are trying to solve

- Rules are complex and difficult to draft, understand, and use.
- Rule changes introduce conflicts with unintended consequences that are increasingly impossible to model.
- Rules that are repeatedly interpreted, hardcoded and updated are slow, inefficient, and inconsistent.
- There is a disconnect between policy development, legislative drafting, and service delivery implementation.
- Digital service delivery of the rules is complicated, but could make them more traceable, transparent, and appealable.

Our current scope

- Focused initially on service delivery rules and regulations.
- Using deterministic rules, not interpretive rules, until precedent is established in order to test, scale, and reform.
- Multi-disciplinary drafting teams to uphold policy intent.
- Collaboration with policy and legal teams, and Parliamentary Counsel to shape future drafting guidelines and methods.

We are experimenting to create

Rules Engine
- Holds the codified rules providing a single source of truth and an open API that enables multiple user interfaces.

RaC Framework
Providing guidance, tools and a user interface for:
- Turning new and current rules into logic in a standardised, consistent and collaborative way for developers to code.
- Codifying the rules into the engine by developers.
- Testing the integrity and modelling the impact of rules.
- Delivering trusted, automated services using an API.
- An integrated environment to collaboratively develop rules in human and machine consumable form simultaneously.

RaC Accelerator
- A service supporting users through the Framework.
- Refining user journeys to develop and test the Framework.
- Uplifting capability and creating partnerships and uptake.
**Rules as Code – A Framework, Engine and Accelerator**

**Rules as Code Accelerator Service**

<table>
<thead>
<tr>
<th>Rules as Code Framework</th>
<th>Rules Engine and API</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take rules in legislation/policy</td>
<td>The Rules Engine holds the codified rules</td>
</tr>
<tr>
<td>Turn rules into logic and then code them and put them into the Rules Engine</td>
<td>The API can support multiple user interfaces</td>
</tr>
</tbody>
</table>

**Input:**
- Service NSW
- Eligible rebates
- Other agencies
- Regulated entities
- NGOs

**bringing policy, legislation and services into the digital age**
Rules as Code – Framework Draft Components

**Project Planning**
- Type of rules
- Rule Criteria
- Legal Considerations
- Project Management
- Roles and Responsibilities
- Stakeholder Engagement

**Process for existing rules**
- Steps in the process
- Understanding Policy intent
- Logic maps
- Definitions in legislation
- Key players

**Drafting ‘code ready’**
- Principles
- Policy development and implementation
- The Policy Design System
- The Better Regulation Guide
- Human and machine readability
- Working with PCO and BRD

**Creating pseudocode**
- What is pseudocode?
- Input variables and parameters
- Output variable(s)
- Logical operators & combinations

**Coding into the engine**
- What is the code engine?
- What is open source?
- How to use the code engine
- Guidance for developers

**Implementing services**
- Application Programming Interface (API)
- Digital end user services
- Data storage
- Data use and analysis

**Drafting platform**
- Integrated collaborative development environment
- Security and maintenance
- Build tools and user-interface
- Test rules before implementation
- Rules consultation
- Publishing
- Updating changes

Bringing policy, legislation and services into the digital age
# Rules as Code – The Vision

## Make government better able to deliver enhanced customer experiences through digital transformation

1. Government functions collaborate to draft and code rules that establish policy intent clearly and accurately.
2. A dictionary of lawful definitions and modular clauses supports rapid and consistent building of rules.
3. Versions and revisions of the rules are tracked along with reasons for decisions made.
4. Rules are pre-tested and mapped for functionality and to examine any consequences for linked and dependent rules.
5. Scenarios are modelled to assess regulatory impact, make comparisons and identify inconsistencies and unfairness.
6. Consultation is simple and feedback is received, responded to, and integrated transparently.

## Make it easier for citizens to complete government transactions and access services

7. New rules and revisions are made and published quickly, seamlessly, and consistently.
8. There is a single open source of truth for rules; readable and usable by both humans and machines.
9. Integrated digital service delivery is updated automatically and instantly across all channels.

## Make it simpler for regulated entities to comply, interact with government, and access information

10. Technology in the Internet of Things has access to the rules that govern their activities.
11. Improved rules drafting helps citizens and businesses understand their rights, entitlements, and obligations.
12. Accessible tools and automated services are built that help people know, apply, and comply with the rules.

## Make compliance and enforcement activities faster, easier and more cost effective for regulators

13. The costs and complexity of regulation are streamlined and reduced through automation and monitoring.
14. Misinterpretation and inconsistent implementation of rules is minimised.
15. Enforcement is targeted proportionate to risk through analysis of data on patterns of use.

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**NSW Government**

Bringing policy, legislation and services into the digital age
Rules as **Code** – What do we need to learn?

- How do rule writers **work and think**?
- What is the **structure and syntax** of rules for pseudocode and code?
- How do we **communicate** ‘Rules as Code’ to different audiences?
- What is the **cultural impact** of changing how rules are prepared?
- What are the opportunities to **improve current policy** through this process?
- What if rules are discovered to be **inaccurate or ethically wrong**; how do we handle these?
- How can **open-source** be enabled and protected?
- What are the **maintenance** requirements of the engine and API?
- Are there any **unintended consequences** of changing how rules are prepared?

**Bringing policy, legislation and services into the digital age**
Rules as Code – What is the future of the project?

- What is the ideal state we could achieve? What are the other options? How can we get there?
- Is the current reliance on OpenFISCA the right architecture to achieve the ideal state? Could it produce too much technical debt for the future?
- What resources does the Accelerator need and have available?
  - DNA – Developers (Full Stack) & Service Designers to code the engine and build the platform.
  - Policy Lab – Human Centred Design to test the PoC Framework with users and iterate.
- How long will we need the Accelerator for? Will it even be possible to not have a support service?
- What is the ask from partners such as Parliamentary Counsel’s Office and Better Regulation Division, as well as key subject matter experts from policy, legal and service delivery?
- What funding and resources (people and technology) are needed to scope and build an integrated collaborative drafting platform?
- Is a Cooperative Research Centres Projects grant (CRC-P) with Austlii and other partners worth consideration?
Life Journeys
Annalisa Yeo
Contents

1. Why life journeys?
2. Our approach
3. Our research
4. Governance
5. Progress to date
6. Questions
Why life journeys?
Why invest in life journeys?

• There is no shared view of citizen’s needs, context and pain points. Therefore, there is no ability to create services that are holistic

• The life journeys team will map services related to specific major life events across:
  • Government
  • non-government organisations; and
  • private sector
What do we hope to achieve?

Better services for citizens
A better understanding of citizen experience will help us better understand their needs. This project will help us to build services that better meet these needs.

Better ways to prioritise projects
We want it to be easier to decide what to build to deliver value early. This project will help government decide what to do next through evidence-based opportunities.

Collaborative government
Improving citizen experience requires a whole of government approach. Through this project we will provide opportunities for government agencies to collaborate on service solutions.
Our Approach
How we’re getting there

Repeatable research model
We’re developing a research model that will help understand citizen experience, and generate actionable insights. This model will make it easier for us to do future research into life events.

Evidence-based opportunity
We’ll be translating our research into evidence-based opportunities to improve government services. We’ll feed these insights into pipelines of work.

Detailed journey map
A visual model to help us communicate the experiences of NSW citizens and their interactions with services.
Putting the customer at the heart of our work
Two Life Journeys currently underway

The Retirement Years Project

End of Life Project
Collaboration with NSW and Federal Agencies

- NSW Police Force
- Australian Government Department of Human Services
- NSW Government
- Multicultural NSW
- NSW Government
- NSW Government
- Justice
- Death & Marriages
- NSW LawAccess
- Australian Taxation Office
- Court of New South Wales
- NSW Government
- Fair Trading
- NSW Government
- Health
- Victims Services NSW Department of Justice
- Australian Government
- Organ and Tissue Authority
- NSW Government
- NSW Trustee & Guardian
- Service NSW
- Australian Government
- Department of Social Services
Our Research
Who we’ve spoken to so far

Citizens = 108
Service Providers = 34
Agencies = 21
NGO’s = 7
SME’s = 7
<table>
<thead>
<tr>
<th><strong>Opportunities classification</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Anecdotal</strong></td>
</tr>
<tr>
<td>• The team heard one person raise this opportunity</td>
</tr>
<tr>
<td>• Further investigation needed</td>
</tr>
<tr>
<td><strong>2. Observed</strong></td>
</tr>
<tr>
<td>• Three interview subjects have reported the opportunity</td>
</tr>
<tr>
<td>• Consultation with the appropriate agency is required</td>
</tr>
<tr>
<td><strong>3. Confirmed</strong></td>
</tr>
<tr>
<td>• An agency has been informed and further context provided</td>
</tr>
<tr>
<td>• Once confirmed, the Journey Advisory Board can request quantification or progress to a ‘How Might We’ statement</td>
</tr>
<tr>
<td><strong>4. Quantified</strong></td>
</tr>
<tr>
<td>• If the Journey Advisory Board want further validation, a quantitative research piece can be conducted to understand the scope of the pain-point further.</td>
</tr>
</tbody>
</table>
Governance
Journey Advisory Board

The Benefits

- Each slice of the journey has a different chair, as nearly every citizen will interact with BDM, they are our chair for the current 'death and ceremony' slice.

- Board members provide clear, direct advice and provides historical context.

- Each idea is assigned an owner to ensure agency support.
Customer Experience (CX) Pipeline
Validated opportunities to improve user experience with NSW Gov are captured in a CX Pipeline for ongoing assessment, prioritisation and investment. The pipeline will be publicly visible to support serendipitous peer collaboration and investment across NSW.

Life Journeys Custodianship
Coordination (inc agency secondees), funding proposals support, mapping, core projects team, (Customer Service Commission)

CDC SteerCo Engagement
Major CX opportunities are explored and validated with Clusters to populate and prioritise the CX Pipeline.

Digital Investment Fund
Management, assurance, assessments, monitoring progress. (Investment Assurance Branch)
Progress to-date
The Retirement Years

Financial Awareness (including Housing Options)

Staying Healthy in Retirement

Working & Volunteering

Mental Health & Social Wellbeing (including keeping active and transport options)

Needs More Support

➢ **Engaged** with State and Federal Agencies, NGOs and Peak Bodies who currently provide Housing related services for NSW Citizens

➢ **Completed two rounds of citizen interviews**

➢ **Forming a Joint - Journey Advisory Board** (JAB)

The Team

A cross jurisdiction collaboration between NSW and the Federal Governments, along with FACS as Subject Matter Experts.
End of Life

Planning

Saying Goodbye

Death & Ceremony

Managing the Estate

Grieving & Support
Throughout the journey

14 IDEAS GENERATED

4 IDEAS SEEKING FUNDING

COMPLETED

CURRENT FOCUS
Death & Ceremony – Ideas Seeking Funding

End of Life Information Service (Navigator)
Centralised information service to help people plan what to do after the loss of someone close to them.
Lead Agency: Births, Deaths and Marriages

National Death Notification Service
People will provide consent to their funeral director to notify service providers which will automatically trigger appropriate actions to close accounts.
Lead Agency: Births, Deaths and Marriages

Capturing People’s Intentions
A platform where people can make intentions known would dramatically reduce the stress and time spent by family or estate executors in ensuring the wishes of the deceased are met.
Lead Agency: Trustee and Guardian
Thank You

For more information and a demo, come and see us at our booth during morning tea
Customer Research

Georgos Papanastasiou
Are we drunk on customer research?

The limits and alternatives to customer research

7 Aug 2019

Georgos Papanastasiou
Product Director - Easy to do Business
Service NSW
georgos.papanastasiou@service.nsw.gov.au
Exploratory & qualitative customer research
Before customer research, there was...
**What is this?**

The existing Tow Truck Industry Regulation 2008 (the current Regulation) will be repealed on 1 September 2020.

NSW Fair Trading is the regulatory framework that supports the Tow Truck Industry.

Key changes to the existing Regulation include:

- **Protecting consumers:** Reducing red tape by exempting vehicles from licensed businesses, updating penalties for modernising the fleet, and assisting consumers with updating their practices.

To seek feedback on impact statement:


**What has happened so far?**

In December 2016, a review of tow truck fees and licensing was undertaken by the Independent Pricing and Regulatory Tribunal (IPART). The draft recommendations were released in the Tow Truck Industry Regulation 2016 (the draft Regulation), which made recommendations for legislative changes.

In 2015, Roads and Maritime Services (RMS) (Department of Transport) released a response to the framework report, which included a full or in part part of the 2016 recommendations.

On 1 July 2017, administrative responsibility for tow trucks legislation was transferred from RMS to Fair Trading (Department of Customer Services).

**What is this about?**

NSW Fair Trading is proposing to replace the Regulation, with changes to improve and enhance the framework. The Tow Truck Industry Regulation 2016 (the proposed Regulation) supports the Tow Truck Industry Act 1998.

Key changes to the proposed Regulation include:

- **Protecting consumers:** By improving compliance in the industry and ensuring relevant information is provided to motorists.

- **Reducing red tape:** For example, by removing unnecessary automatic licence cancellation, exempting recreational vehicles (including campers), licensed mechanics and multi-deck car carriers from licensing requirements where they do not represent a risk to consumers and businesses.

- **Updating penalties:** For example, to address the nature of the offence and allow for an escalated compliance response.

**Next step**

Stakeholders and interested parties are invited to review the Regulatory Impact Statement and provide comments. Consultation can be from 1 April to 30 June 2019.

Complete our consultation survey using the online form below.

Alternatively, please email your response to [Tsunami@service.nsw.gov.au](mailto:Tsunami@service.nsw.gov.au)

**Documents**

- Tow Truck Regulation 2008 (draft Regulation)
- Tow Truck Regulation 2016 (draft Regulation)
- Regulatory Impact Statement:
  - Tow Truck Industry Regulation 2016 (draft Regulation)
  - Tow Truck Industry Regulation 2018 (current Regulation)

**Consultation period:** 01/06/2019 12:00 am to 29/06/2019 5:00 pm

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Complete our consultation survey using the online form below.

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**Documents**

- Tow Truck Regulation 2019 consultation draft (PDF File, 376.0 KB)
- Regulatory Impact Statement: Tow Trucks (PDF File, 1.2 MB)

**Consultation period:** 01/08/2019 12:00 am to 29/08/2019 5:00 pm

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Now we’re stepping into citizens' shoes to understand their experience.
So, why again do we do customer research?
Problem | Solution
--- | ---

Risk
EMPATHY
So, what’s not to love about customer research?
Combine Design Thinking, Lean Startup and Agile
Customer research should not displace the ultimate aim of improving something...for someone...soon
And, customer research cannot match real customer interactions with a product or service.
Some ways we can maintain balance in customer research

- Just-in-time/just enough research
- Go lower-fidelity
- Prototype more quickly
- Time-box research (design sprints)
- Commence build & test
- Use data analytics, A/B testing and customer feedback on a real service
- Take a calculated risk & skip or do less research - **only** if validated knowledge or easy/cheap to pivot

- Long research-build-measure-learn cycles
- Delaying while polishing documents & artefacts
- Not being aware of core research questions and riskiest assumptions to test through research
How do we do it with our digital product development?

Limited, time-boxed discovery & framing
Dual-track discovery & delivery
Key takeaways

1. Many good reasons to do customer research, especially in our context

2. Be careful about how much and when we do it, through understanding its limits and the trade-offs

3. Consider different approaches that still allow you to learn & reduce the risk of not delivering something valuable to our customers
Some feedback please

Thank you!
NSW Police Portal

Sergeant Rod Murphy
NSW POLICE FORCE
COMMUNITY PORTAL

https://portal.police.nsw.gov.au
What is the NSW Police Force Community Portal?

- A new Police website
- Report Police Assistance Line (131 444) suitable incidents online
- Lost Property, Stealing & Intentional Damage (incl. graffiti)
- Account capability (provided by SNSW)
- Two way communication tool
- Platform for future online services

https://portal.police.nsw.gov.au
Since launch in June 2016

255,541 connected Users
54,388 Submitted Reports
27,896 Multimedia Attachments

*As at 30 June 2019
The existing model

- For emergencies and where an immediate response is required
- General point of contact for all non-urgent enquiries
- Report information about criminal activity
WHERE DOES IT SIT?

The new model

- For emergencies and where an immediate response is required
- Online reporting for crimes and lost property
- General point of contact for all non-urgent enquiries
- Report information about criminal activity
NSW Government

- Recommendations from an audit by the NSW Minister for Police and Emergency Services

- Goal 16 (NSW 2021)
  - Prevent and Reduce the Level of Crime
  - Use new technology and provide frontline police with smarter tools....and increase community safety
  - Improve customer service via enhanced community engagement, victim support and service improvement initiatives
Organisational Issues

- Police Officer / PAL time consumed in high volume crime report taking – no opportunity for self serve
- Disparate process for capturing multimedia files
- Opportunities for leveraging technology and the Internet were being under utilised
- Little automation of customer / victim service outcomes
Problem Statement

“How might the NSW Police Force increase services to the community so that frontline Police can perform their role more efficiently?”
Exploring the Issues

- Surveys within NSW Police Force staff
- Customer Interviews
- Affinity mapping
- Focus groups
- Usability testing
- User acceptance testing
COMMUNITY CONSULTATION

21 Questions asked over 40 days for 1801 responses from 3788 visitors with 737 responders willing to provide further comments.
The Outcome

- NSW Community is supportive and highly likely to use the NSWPF Community Portal
- Community members are willing to report a wide range of incidents and information
- Reports to be triaged based on the information content
- Community expects timely and relevant responses
- Portal to be available on multiple device types and platforms
- Users to be supported via electronic and phone communication channels
- Potential to improve the NSWPF customer service / victim care experience
What Do the Community Think?

A recent independent survey of Community Portal users revealed:

- 86% of users were satisfied / extremely satisfied with the overall process of reporting through the Community Portal
- 91% would be likely to re-use the Community Portal
- 90% would be likely to recommend the Community Portal
Where to from here?

Future Development:

1. Four new online reporting forms
   - Break, Enter & Steal
   - Fail to Pay (fuel, fare, meal etc)
   - Minor Traffic Crashes
   - Stolen Vehicles / Vessels

2. Submit property lists online

3. GIPAA (Freedom of Information)

4. Web Chat help

5. Improvements and enhancements