Action focussed innovation

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A story about mud

• Company problem statement
  • Declining revenues; declining demand for dredging services
  • Cost increasing as a percentage of revenue
  • Main cost types are fleet maintenance and staff

• Technical capabilities of note
  • Good at dredging rocky river beds. The challenge of dredging these beds is sorting and handling pebbles and stones on size in order to protect equipment
  • The company developed specialised equipment for this

• What would you do? Cut cost?
A narrative about service

Narrative:

- A tree in front of a retail shop is causing flood damage in heavy rain
- The owner notifies council ("friendly staff") but after initial contact no feedback is received
- Over the next 2 years 6 repeat calls are being made to council, during which
  - The shop floods a further 3 times, leading to damages, loss of revenue and an angry retail tenant
  - One year in an arborist visits the site and determines that one tree limb needs pruning. "Friendly capable fellow". No communication nor follow up from council
- After 2 years the owner fires up a chain saw and cuts off the limb (risking a fine) in less then 5 min. It resolves the issue

Observations:

- The customer tried to do the right thing
- At no stage information was provided to the customer as to the status of the issue
- Council appeared to be unaware of previous interactions relating to this issue
- To the customer each interaction felt as if "it was the first"
- Council appeared to be unaware of the priority to the customer or potentially this information wasn’t used

- The departments involved individually performed ok. It was the lack of a coordinated end to end approach to service that made service fail the customer
Complexity and services

Services are not simple. Standardisation and cost cutting often have unintended and poorly understood flow on effects.

Studying how customers use our services generates insights about opportunities and waste.

Failure to deliver to initial demand is called failure demand. It is a major source of waste.

Experimentation and curiosity are key to address failure demand.

Cynefin framework (Snowden, 1999)
Ballarat: city context

The City of Ballarat (Council) plays a key role facilitating social and economic prosperity for the city and its inhabitants

Solid guiding principles underpin the success of Ballarat

• A successful community that has built its future on its beautiful city and great lifestyle
• A proud community that has retained its unique sense of identity
• A desirable city that we love to live and work in, with excellent facilities and services
• A friendly city where the sense of community is a daily cornerstone of our life
• A healthy and safe community that supports and values its residents
Ballarat’s pressures today

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<th>Pressure</th>
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<td><strong>Rate capping</strong> has put clear restrictions on long term projected revenue growth for council leading to an unanticipated shortfall.</td>
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<td>The success of Ballarat will see a <strong>40% increase in citizens over the next 16 years</strong> placing significant additional demand on council services.</td>
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<td>Locally felt pressure that the <strong>gap is widening</strong> between needs and expectations of citizens and what governments can provide.</td>
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Currently, local government is characterised by sector inefficiency (everything x79), unsustainable services, reputational decline, and financial constraint. Can local government innovate and collaborate its way out of funding cuts?
Doing Nothing is not an option

(1) Impact of Population Growth on Social Care Costs to Councils

(2) Forecast Headcount and cost (000’s) based on Population forecasts

(3) Growing gap between revenue and underlying cost increases as population increases
LGA challenge: *increased* value, *reduced* waste, *lower* budget, *happier* customers

Current spend
- Business waste
- Business value
- Current practice

Future spend
- Business waste
- Business value
- Innovation and business optimisation

Council budget
Good **design** of a business service leads to better outcomes in terms of cost and performance.

So you get this... instead of this...
DTO capabilities

- City futures & Innovation
- Digital services strategy
- Business change leadership
- Business process re engineering
- Data analytics
- First transformations
  - Waste optimisation
  - Roads optimisation
  - Environmental Health optimisation

Business Process Redesign

Digital services strategy

End to end customer service

City futures & Innovation HUB

Demand and project management
Reasons for DTO

• **Save council money** through Business Process Redesign and optimisation in business (enable extraction of cost from business)

• **Increase productivity** of workforce (allow current resourcing envelope to cater for expected increase in demand for council services)

• **Improve service performance and experience** for external customer through council wide approach to service design and improved (automated) transactions and workflow

• **Create measurability** through corporate reporting against council plan, state govt KPIs and business performance indicators

• **Ensure council data** is effectively provided to all parties (including councillors, media, citizens where appropriate)

• **Enable smart city initiatives and innovation** through execution of delivered strategies
Team and skills

• Business optimisation
• Data analytics
• Business analyst and process improvement, GIS
• Learning and change specialist
• Manager
Implementation of the response

### Increase value
- Services reviews
- Service design and transition

### Design centric to customer
- Co design and delivery
- Relevant to city challenges and opportunities

### Decide based on insights
- Open data and analytics
- Service optimisation

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**4 year investment program proposed**

- $6 – $8m total investment
- $20 – $30m return
- 70 optimisation projects

**Executive response**

- Luke warm turning to cold
- Preferred implementation approach is continual improvement
Garbage collection optimisation
Steps in waste optimisation

• Understand what value is (value driver tree)
• Understand current practices and issues
• Review/analyse data sources & create insights
• Visualise opportunities to the business
• Optimise business processes and implement practices
• Quantify benefits realised
Understand value: Value Driver Tree (VDT) value components and metrics for data analytics and optimisation
Customer centric service design

1. What is the purpose (in customers terms)?

2. Demand: Type & Frequency
   What matters?

3. Ability to meet purpose

4. Flow: Value work + Waste

5. System Conditions

6. Thinking

Lean & Systems Thinking in the Public Sector in Wales, 2010
Council internal waste hackathon (1d)
Select high value candidates

- Missed bin practice
- Route optimisation
- Scheduling of compactors
- Group task finish
- Increasing utilisation of compactors (shifts)

- Waste interchange
- Energy to waste
- Entire waste strategy
Optimise business processes

Value demand is the demand for services from customers

Failure demand is the demand that exists because initial demand was not satisfied properly
Drive decisions with insight

Data is stored in a data warehouse and we’re working toward making it easily accessible and usable.

Our default position is to publish data as “open data”; naturally with some precautions (privacy, competitiveness, ownership and security).

Progressively we’re collecting data that informs us about the performance of our services with a view to allow insights and optimisation.
When do trucks dump waste?
What do compactors do during the day?
What is an optimised route for collection?
Live business dashboard to aid decisions
Outcomes of the optimisation to date

• No one lost their job; high team participation
• Route optimisation led to
  • Cut 3% of annual kms driven for landfill waste
  • Cut 9% of annual kms for contracted green waste
  • Freed capacity in the team and plant that allowed for our Saturday run to be brought back into the normal week
  • Freed capacity will allow us to handle increase in demand for next 2 years
  • Reduced contractor spend
• Business process optimisation led to
  • Improved handling of missed bins
  • Alive optimisation practice with drivers and team leader
  • Business dashboard to track performance and improve
• Business desire to continue the effort and expand in other areas
What actions will Ballarat take?

- Continue to optimise business practices with a view to
  - Save money
  - Improve service
  - Create shareable practices
- Modernise ICT infrastructure to support business change
- Progress a CityLab and innovation hub
- Continue to publish open data for benefit of the city
- Run hackathons with customer involvement to design services
- Investigate the application of machine learning
- Work with partner councils to accelerate the above
Thank you

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