

# Spatial Data Supply Chains

## Towards a National Spatial Data Supply Chain

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An Australian Government Initiative

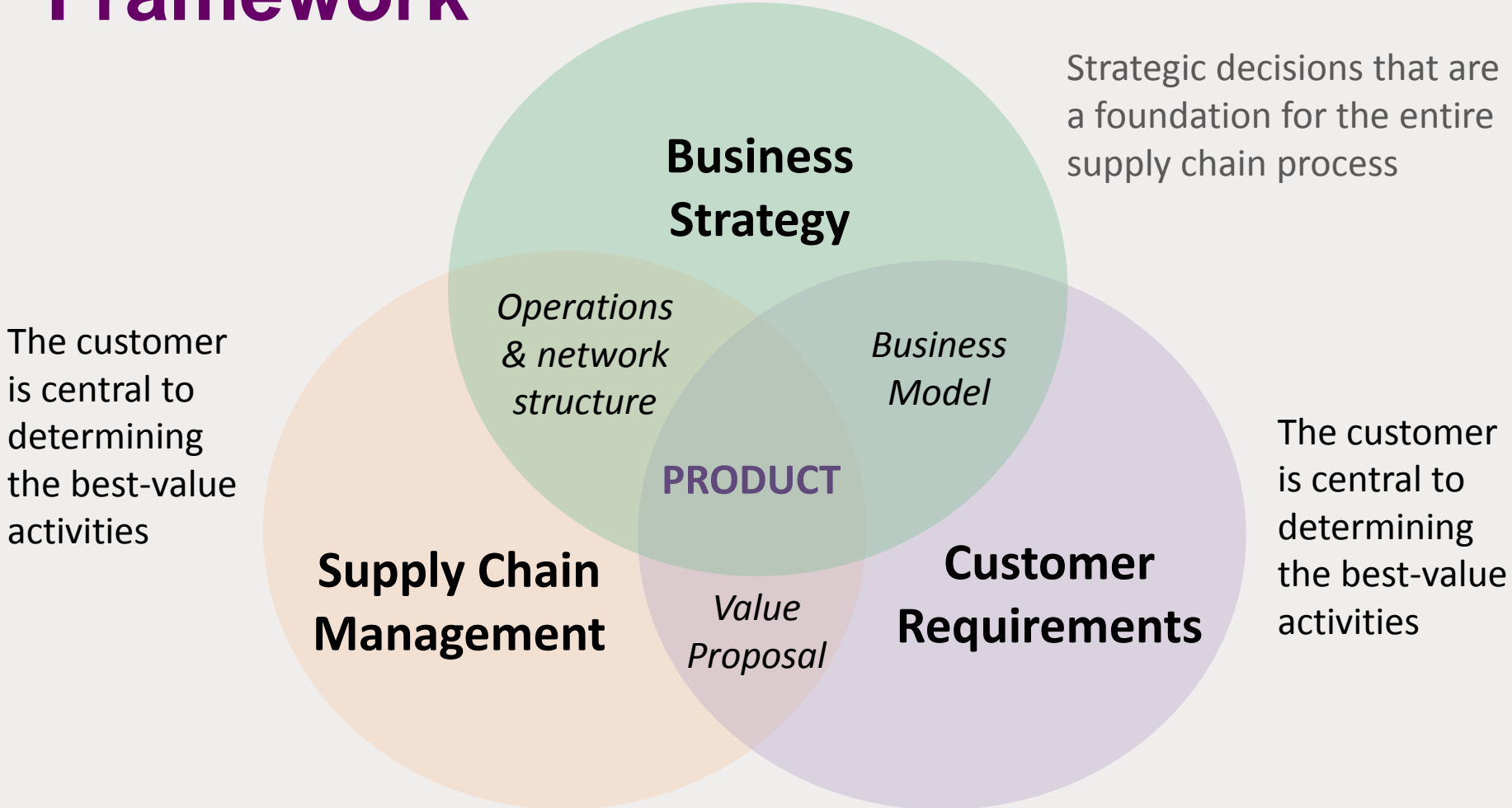


# Presentation Outline

- National Supply Chain Framework – the user perspective
- Spatial data supply chains
- Need for a new approach
- How research is addressing gaps in capability
- Where to next...

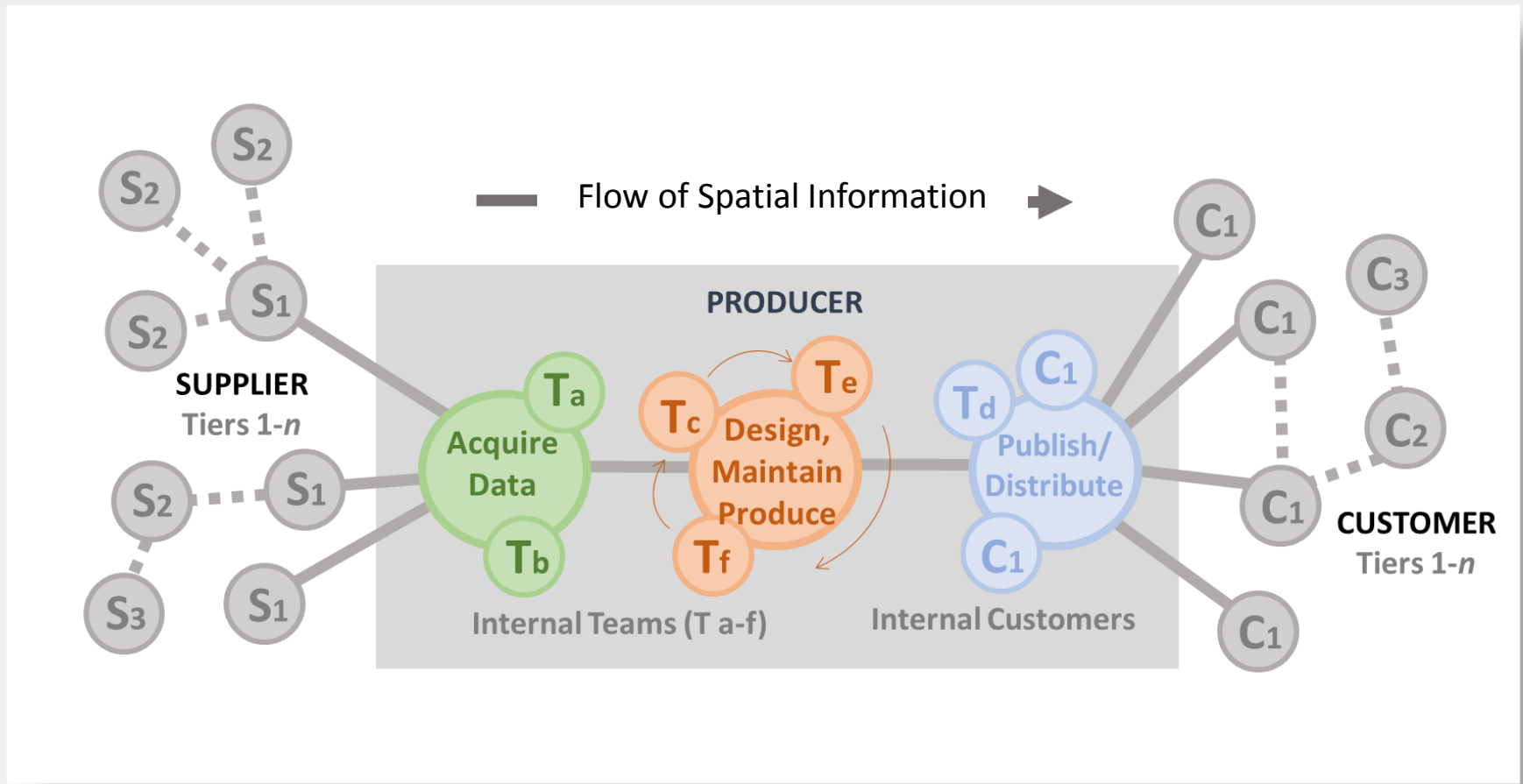
Key Message: The value proposal afforded the consumer will characterise new generation spatial data supply chains

# Spatial Data Supply Chain Framework



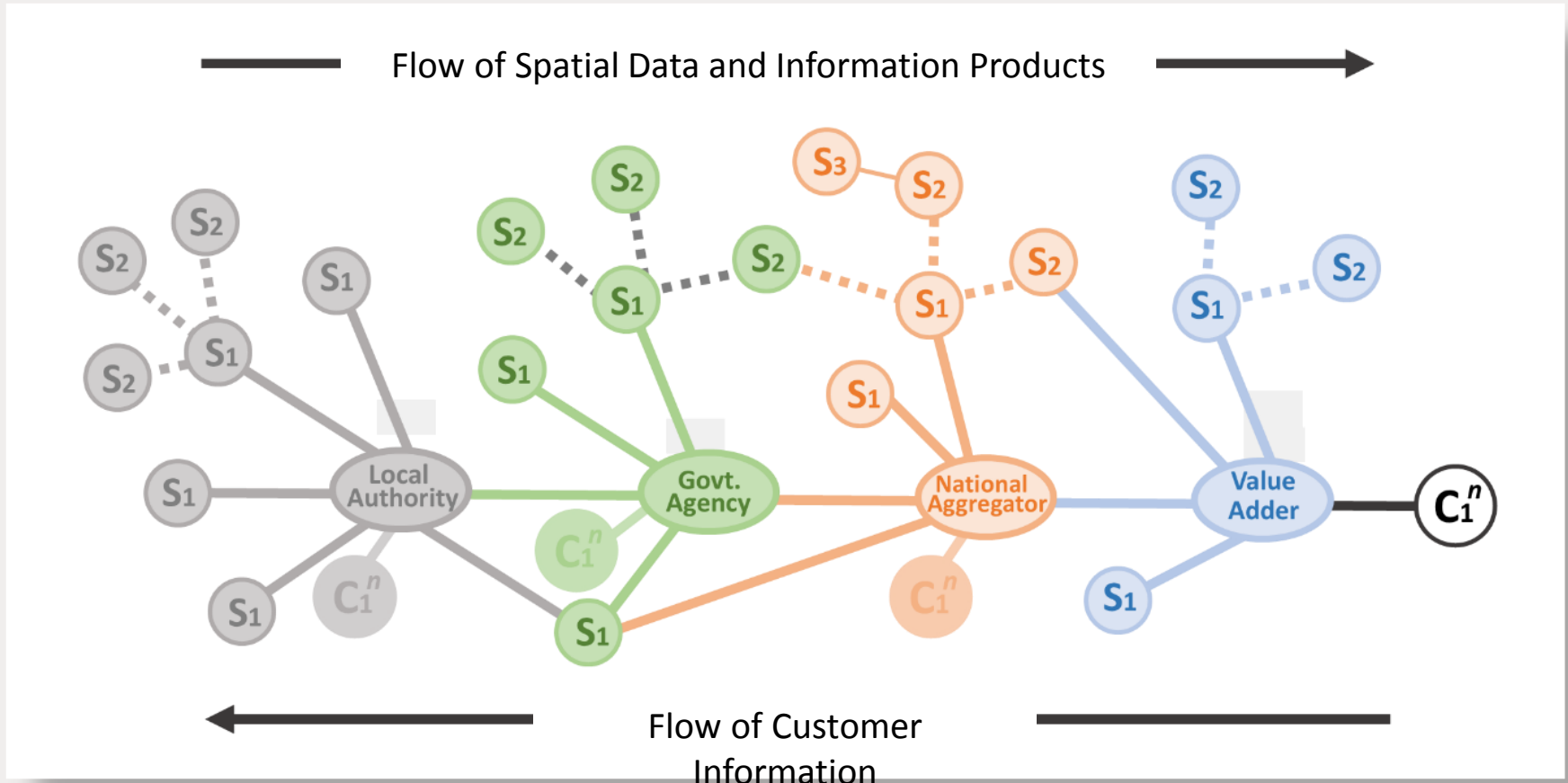
SDSC by Value and differentiation is linked to business strategy

# Spatial Data Supply Chain



An organisation perspective of a spatial data supply chain

# Spatial Data Supply Chain



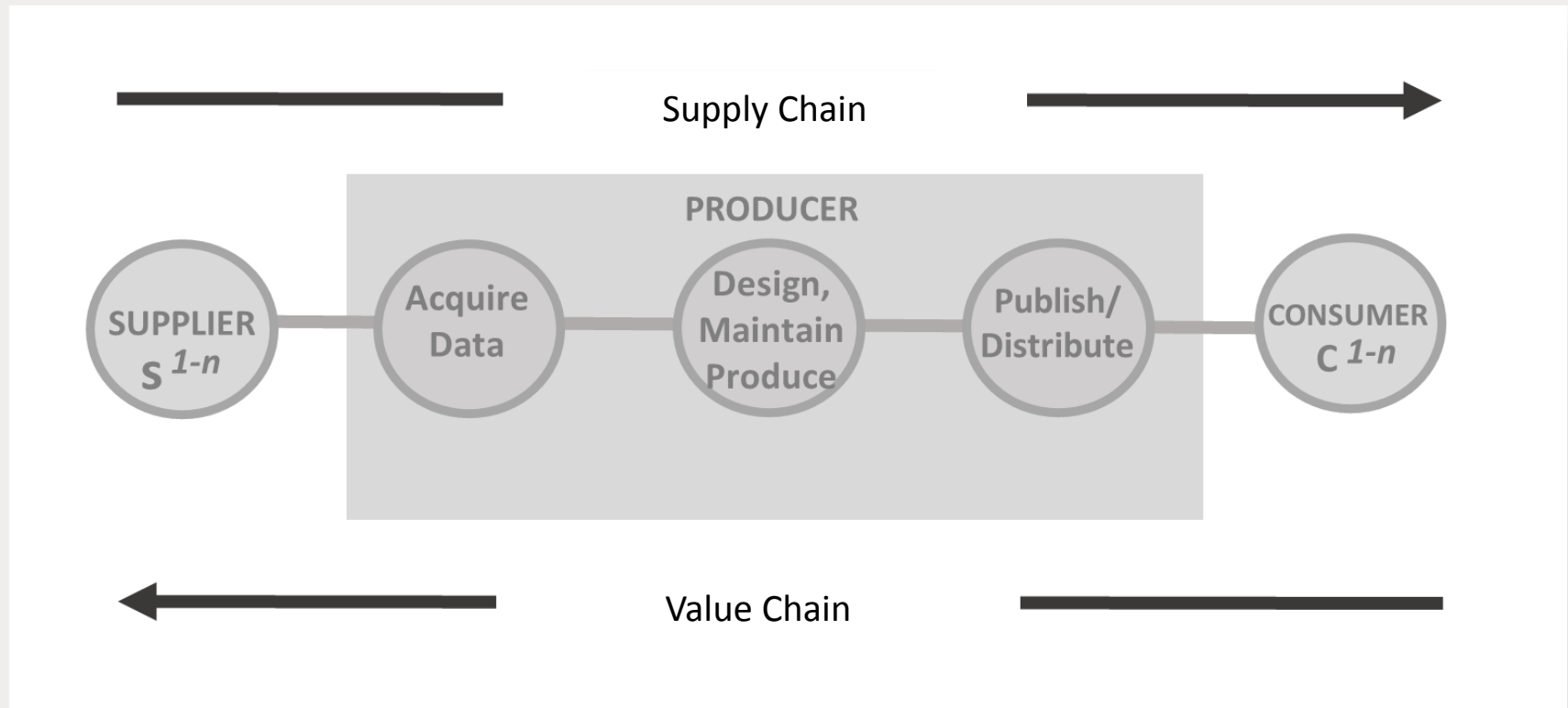
A supply chain is characterised by nodes and links

# Need for a New Approach

- Deliver end-user needs
  - Social
  - Economic
  - Environmental
  - Cultural
- Anticipate future user expectations

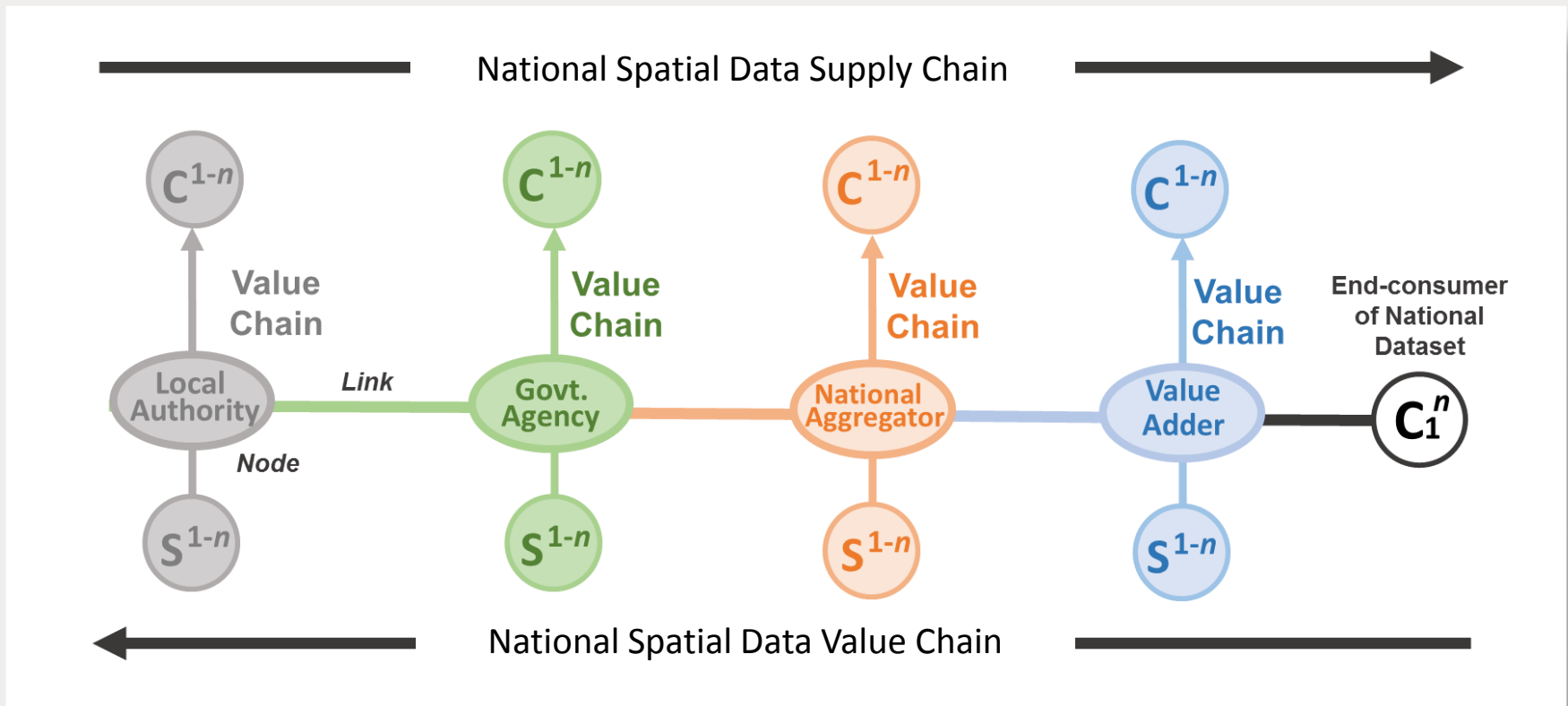


# Supply v's Value Chains



Value chains = activities that deliver value to the consumer

# Supply v's Value Chains



National supply chains made up of isolated value chains



# Next Generation Supply Chains

- Transact business online
- Find best data available
- National view
- Fit for Purpose
- Trust information
- Anywhere, anytime, in real time
- Answer complex queries
- Leveraged innovatively
- Participate



Focus on activities that add best value to the consumer

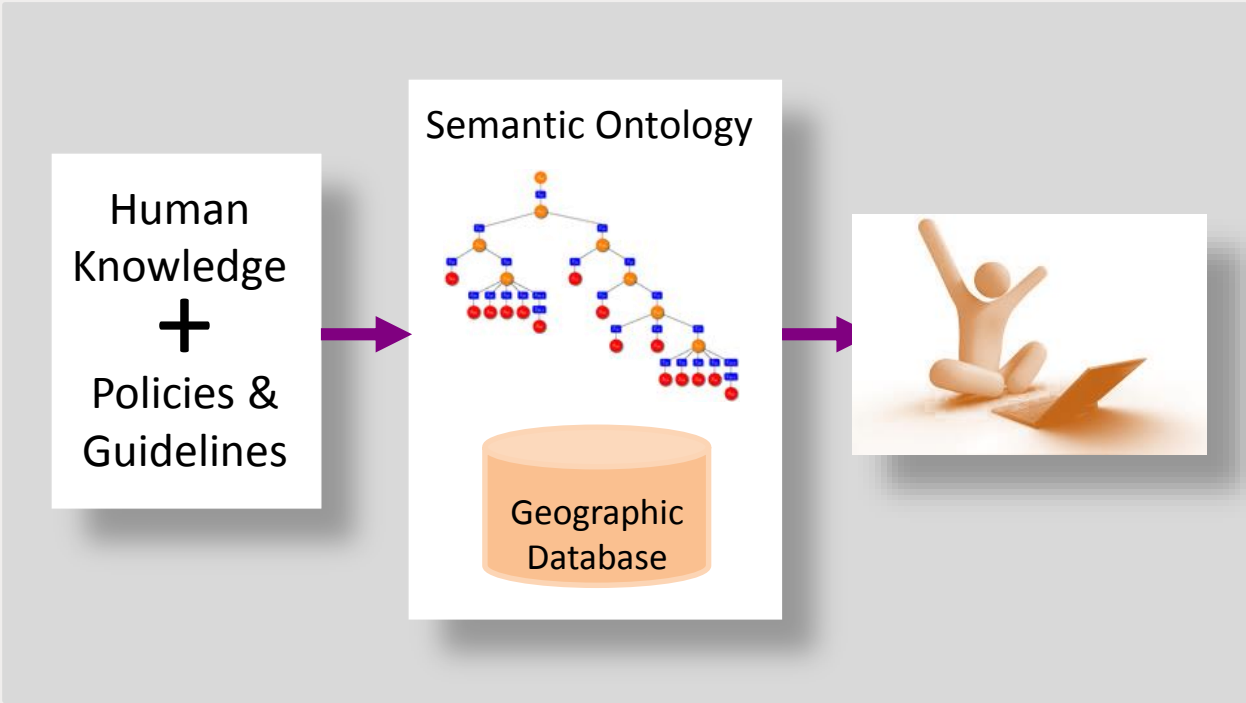
# Addressing Gaps In Capability

- Self-Service
- W
- W
- W
- W
- W



Focus on activities that add best value to the consumer

# I want to transact business online



**Latha Varadharajulu**  
“Developing automatic online spatial transactions”



# Supply Chain Traceability

- Operations Oriented Analysis
- Increasing focus on innovation
- Evolving governance models – extended supply chains
- Trends towards vertical disintegration

Supply Chains are characterised by isolated value chains

# I want to find the data I need

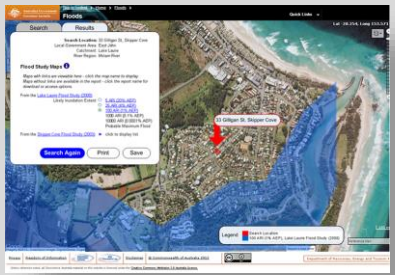


METADATA

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Term set Name: "Term Set Description", "LCID", "Available for Tagging", "Term Description", "Level 1 Term", "Level 2 Term", "Level 3 Term", "Level 4 Term", "Level 5 Term", "Level 6 Term", "Level 7 Term"
Fabianworld Enterprise Taxonomy, "Enterprise taxonomy for Fabian Williams
Enterprises: "True"
--- "True", "Global", "United states"
--- "True", "Global", "Jamaica"
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--- "True", "Department", "Sales", "Employment"
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--- "True", "Department", "Sales", "Government"
--- "True", "Department", "Marketing"
--- "True", "Department", "Consultant", "LC"
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--- "True", "Department", "Design"
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--- "True", "Projects", "SharePoint 2007"
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--- "True", "Projects", "Ad Hoc"

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VIEWER



**Tristan Reed**  
“Improving Search & Delivery”

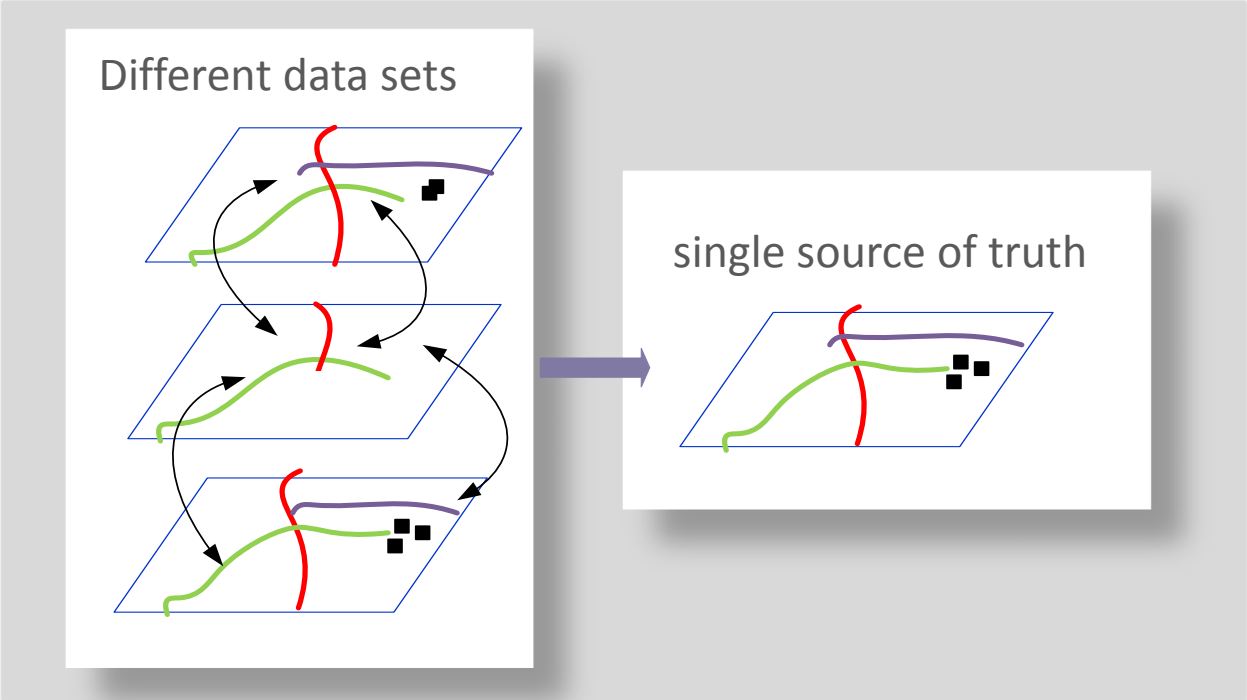


Developer      LGA      Land Agency      National Aggregator      Final Customer



I want

# the best combination of data



**Feiyan Yu**  
“Automated Data conflation”



Developer

LGA

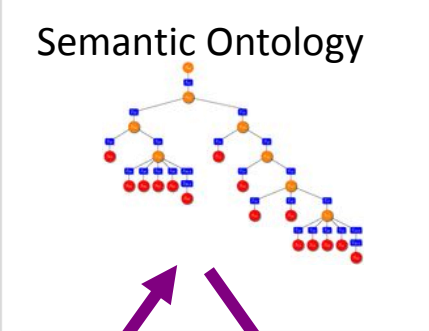
Land Agency

National  
Aggregator

Final  
Customer



# I want a national view of data



**Jeremy Siao Him Fa**  
“On-the-fly Federated Views”



Developer

LGA

Land Agency

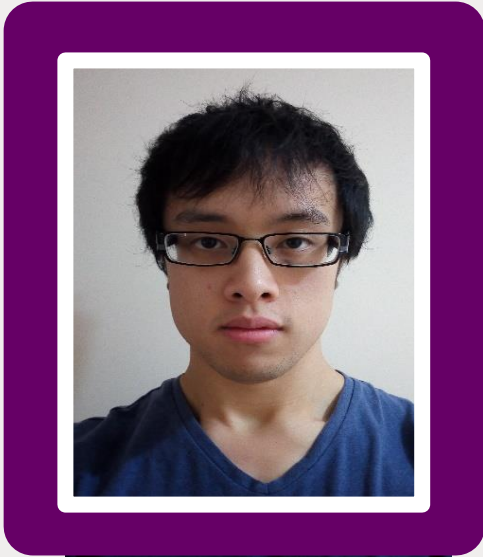
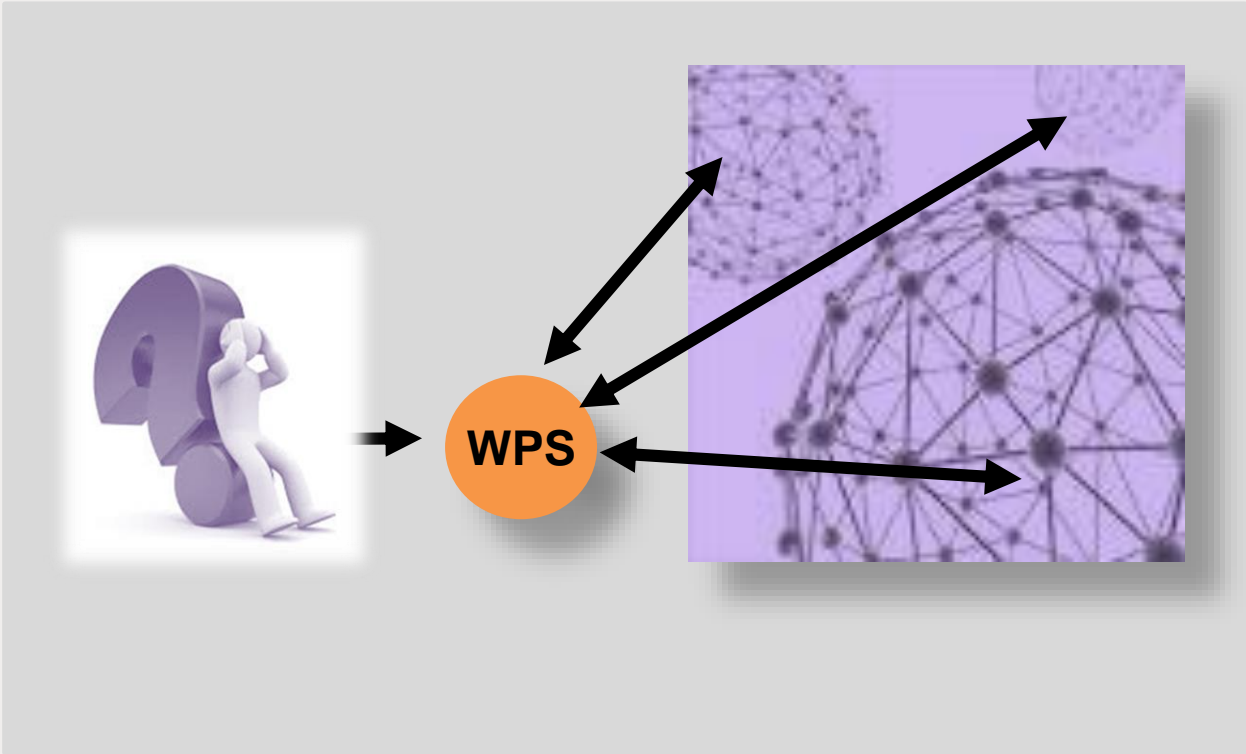
National  
Aggregator

Final  
Customer





# I want to answers to my questions



**Chet Bing Tan**  
“Intelligent Automated  
Orchestration of WPS”





# I want to participate in data collection

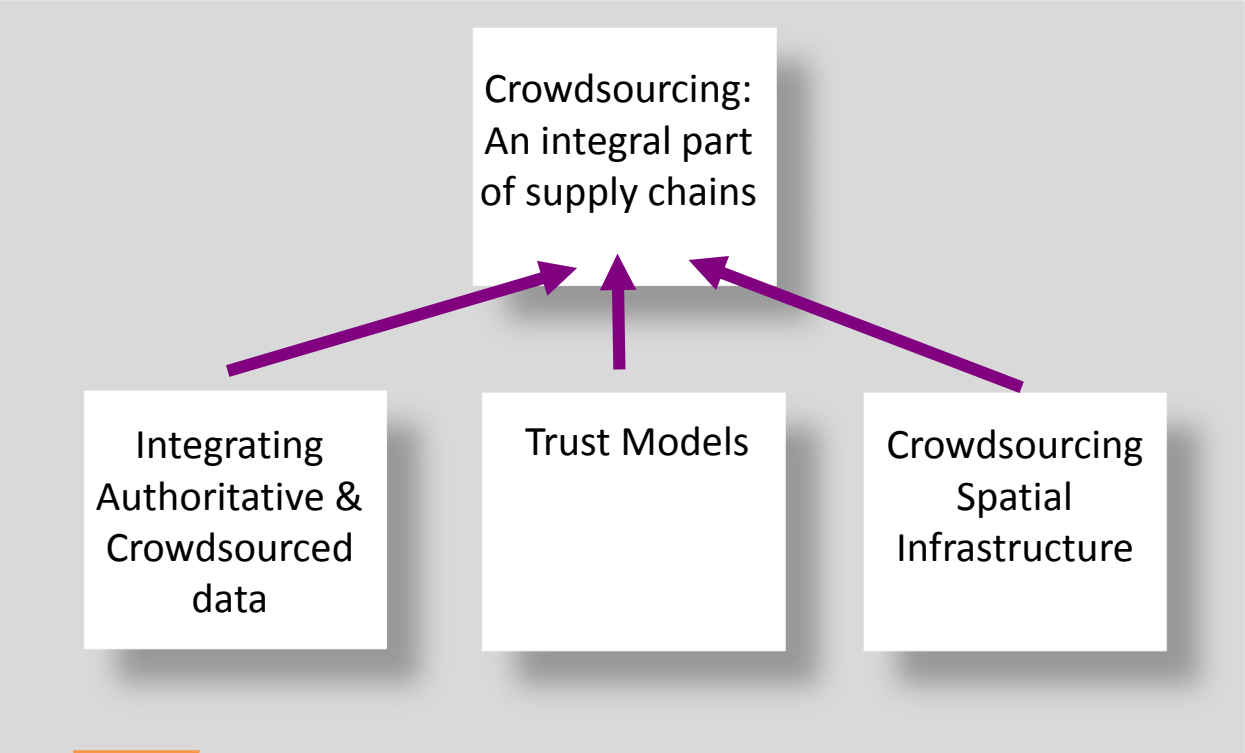
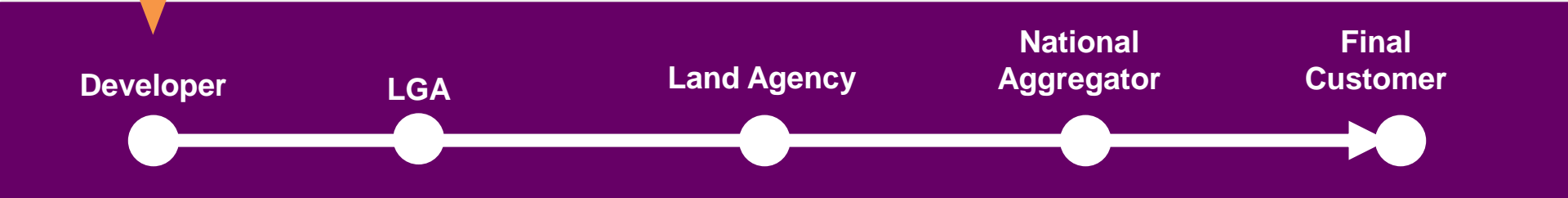
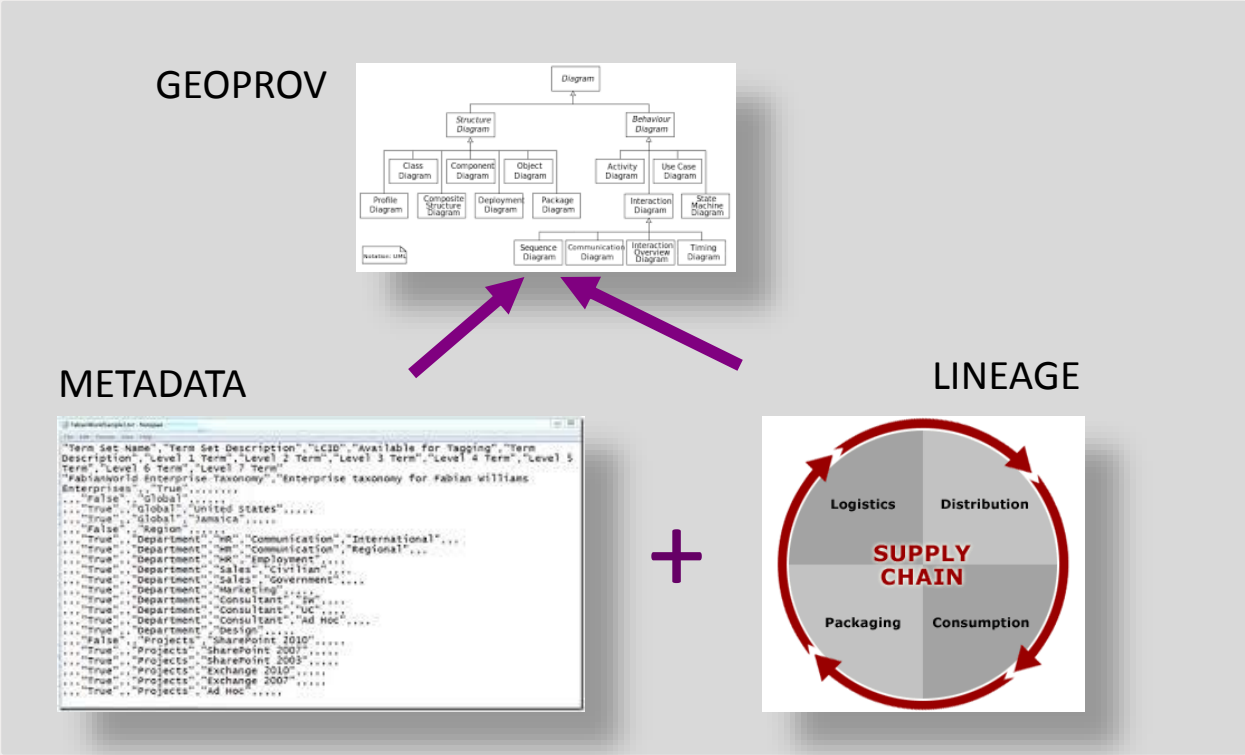


Image: mkiwi.com

**Canterbury University**  
“Embrace the Online  
Community”



# I want to know where my data is sourced



**Muhammad Azeem Sadiq**  
“Spatial Data Provenance Model”



# I want to know if data are for my purpose

**Product:** How do I know if a television program is suitable?

**Television Program** A rating and recommendation of audience based on age and level of maturity; and consider level of violence, coarseness of language, nudity, horror, adult themes, medical practises etc.



**Standards:** Australian Commercial Television Code of Practice



Developer

LGA

Land Agency

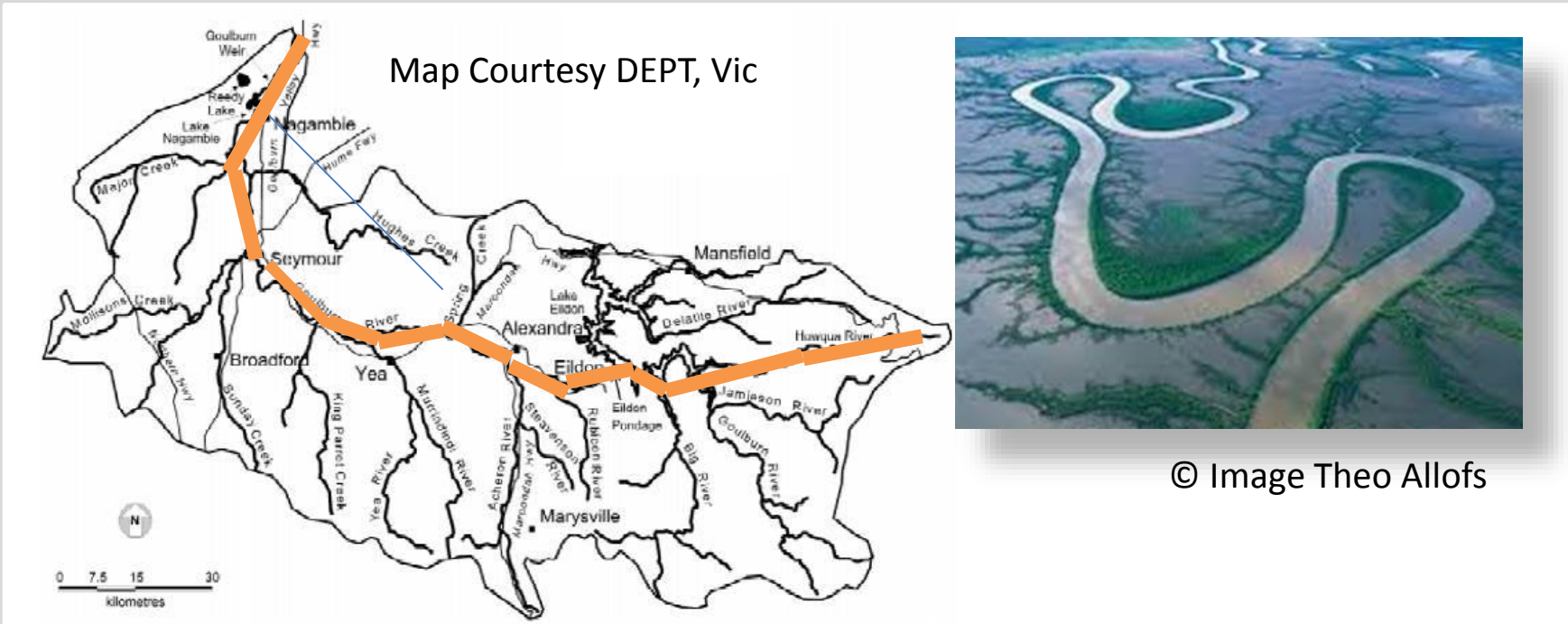
National  
Aggregator

Final  
Customer



Is my data

# part of the primary supply chain



Developer

LGA

Land Agency

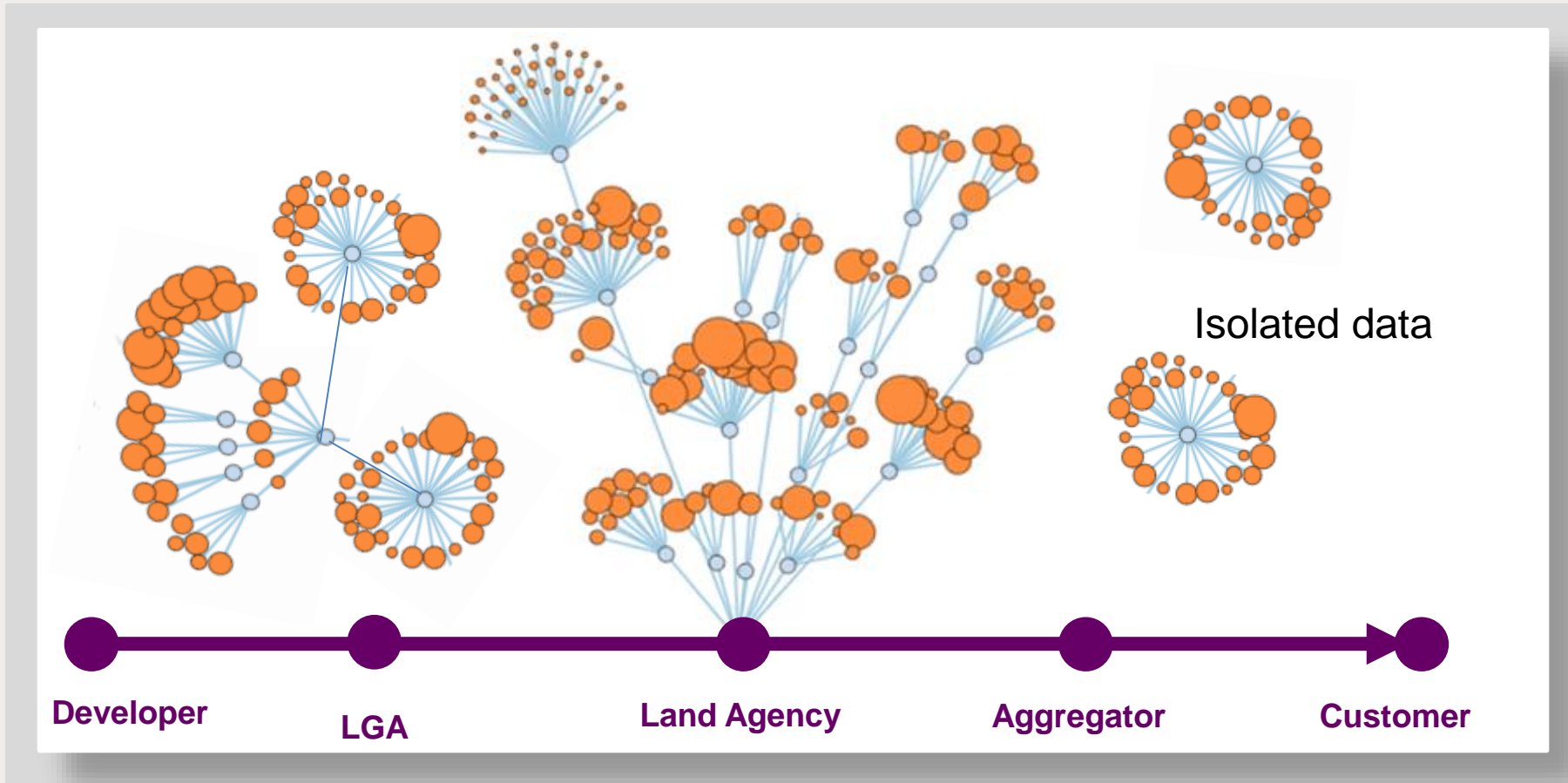
National  
Aggregator

Final  
Customer



Is my data

# part of the primary supply chain



Traditional Approach is to interview and plot data flows

Is my data

# part of the primary supply chain



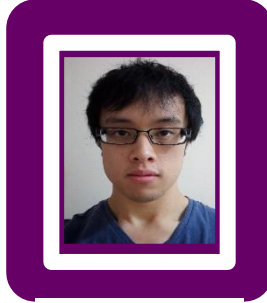
GEOPROV  
(province & lineage)

+



Powerful  
Metadata  
Search

+



Answer  
Complex  
Queries

Mine metadata to better  
understand networks of data flows

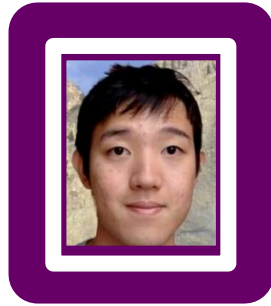
New Approach: Data mining using

Is my data

# part of the primary supply chain



Conflate  
Multiple  
datasets



Federate  
adjacent  
datasets

Produce user views by combining  
data to form a single source

New Approach: Data mining using

# Conclusion

- Operations Oriented Analysis
- Increasing focus on innovation
- Evolving governance models – extended supply chains
- Trends towards vertical disintegration

Supply Chains are characterised by isolated value chains