UN Global Platform

Mark Craddock

#UNGlobalPlatform
@mcraddock
@UNBigData

BigData
UN Global Working Group

A global collaboration to harness the power of data for better lives

#UNGlobalPlatform

Leave no one behind

Endeavour to reach the furthest behind first

UN GWG (Big) Data Membership

Australia; Bangladesh; Brazil; Cameroon; **Canada**; **China**; Colombia; **Denmark**; Egypt; Germany; Indonesia; Ireland; Italy; **Mexico**; Morocco; **Poland**; **Netherlands**; Oman; Pakistan; Philippines; Republic of Korea; Saudi Arabia; Switzerland; **United Arab Emirates**; **United Kingdom**; United Republic of Tanzania; United States of America

United Nations Statistics Division, United Nations Economic Commission for Africa , Nations Economic and Social Commission for Asia and the Pacific, United Nations Economic Commission for Europe, United Nations Statistical Institute for Asia and the Pacific, United Nations Global Pulse, International Telecommunication Union, Universal Postal Union, African Development Bank; CARICOM, GCCSTAT, Eurostat/European Commission, International Monetary Fund, OECD, World Bank

Using the Platform

Become a trusted partner

Access the new platform

Discover new data and methods

Share data

Set-up project based collaboration

Learn from best practice

modernize statistics and analysis

SUSTAINABLE DEVELOPMENT GOALS

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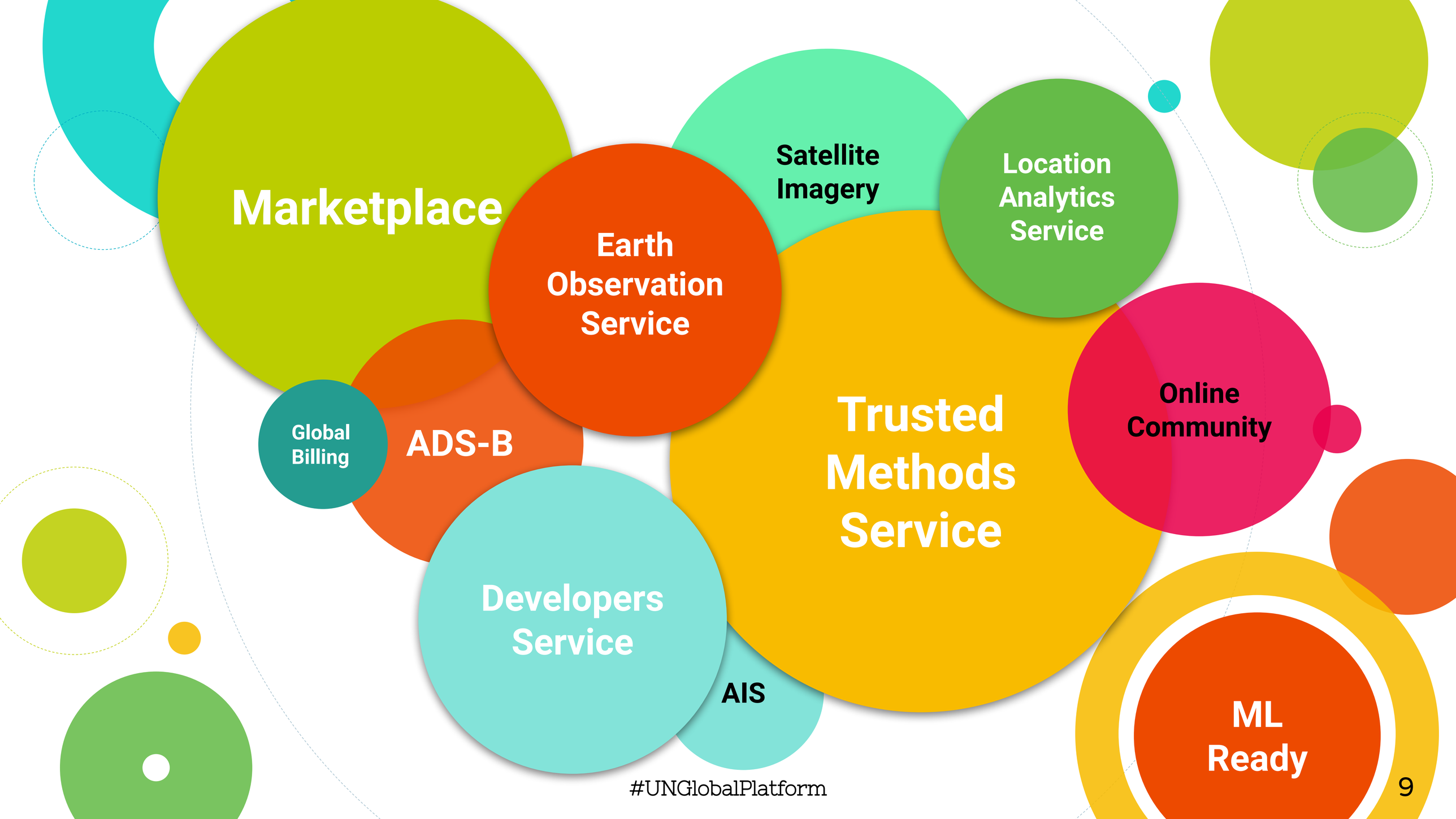
The world is drowning in data and thirsty for insights

@rebeccatmoore

Director, Google Earth, Earth Engine & Earth Outreach at Google

The world is drowning

.....


Marketplace
Earth Observation Service
Satellite Imagery
Location Analytics Service
Global Billing
ADS-B
Trusted Methods Service
Online Community
Developers Service
AIS
ML Ready

Holding Government to Account Using Platform Thinking

(*not technology platform*)

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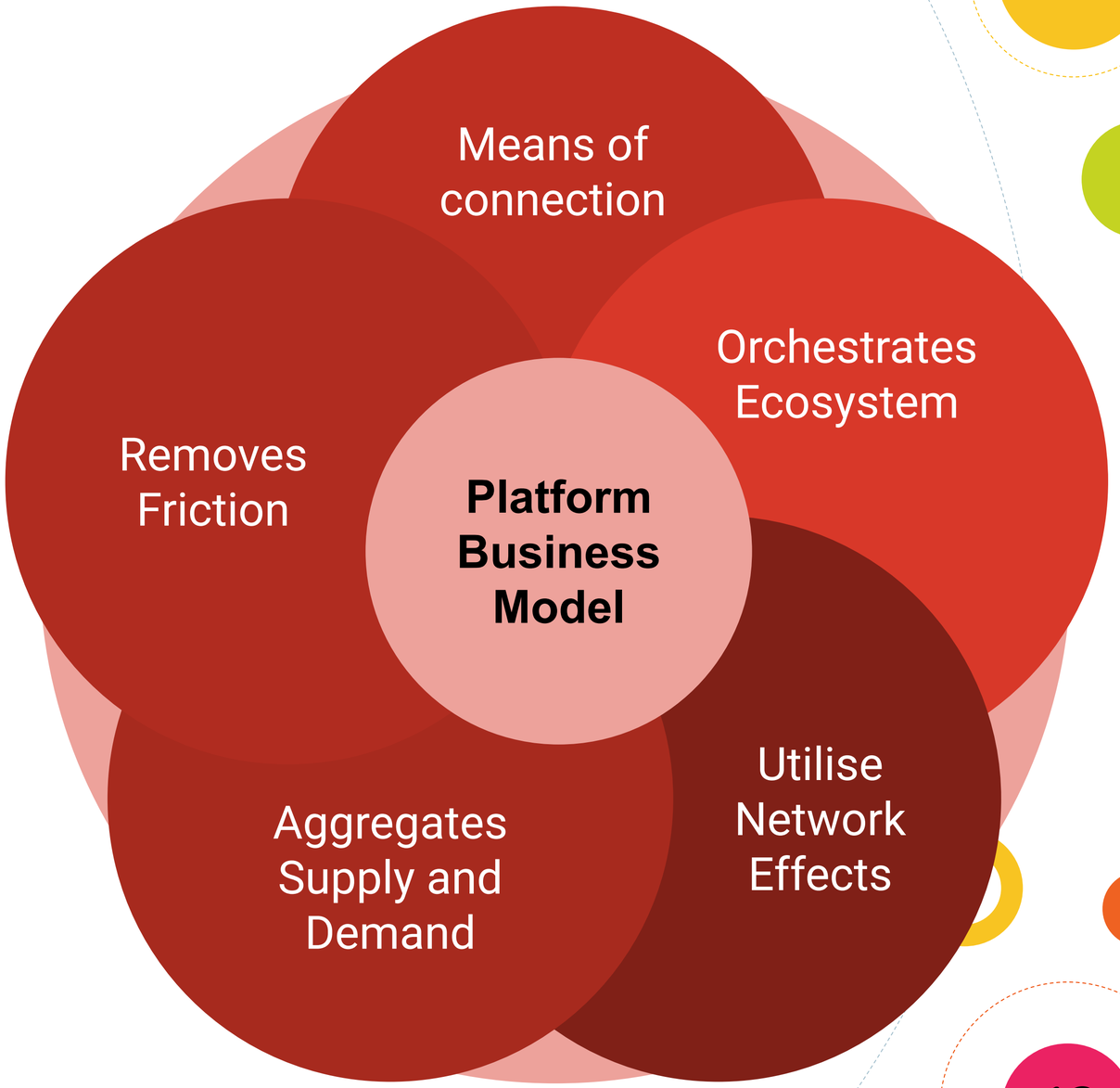
Wardley Maps

Wardley Mapping

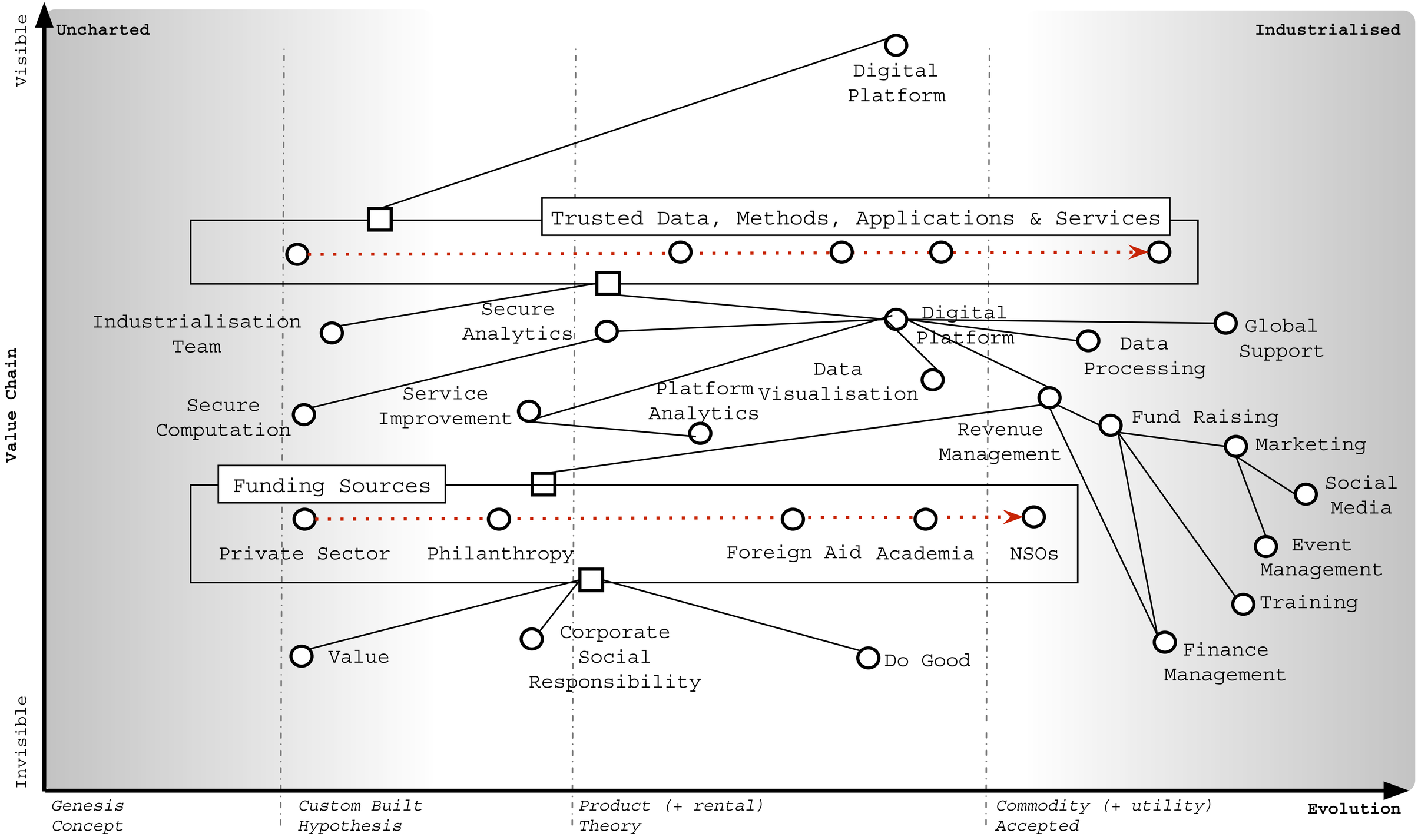
- Platform Strategy
- Platform Business Model (Organisation)
- Platform Services
- Technology Strategy Handbook
- Privacy Preserving Techniques Handbook
- Digital Services Roadmap

Platform Business Model

- Shaping an ecosystem
- Utilise the network effects
- Aggregates supply and demand
- Remove frictions
- Can have more than one type of value exchange going on



Platform Business Models are also one of the best organisational structures for enabling rapid evolution

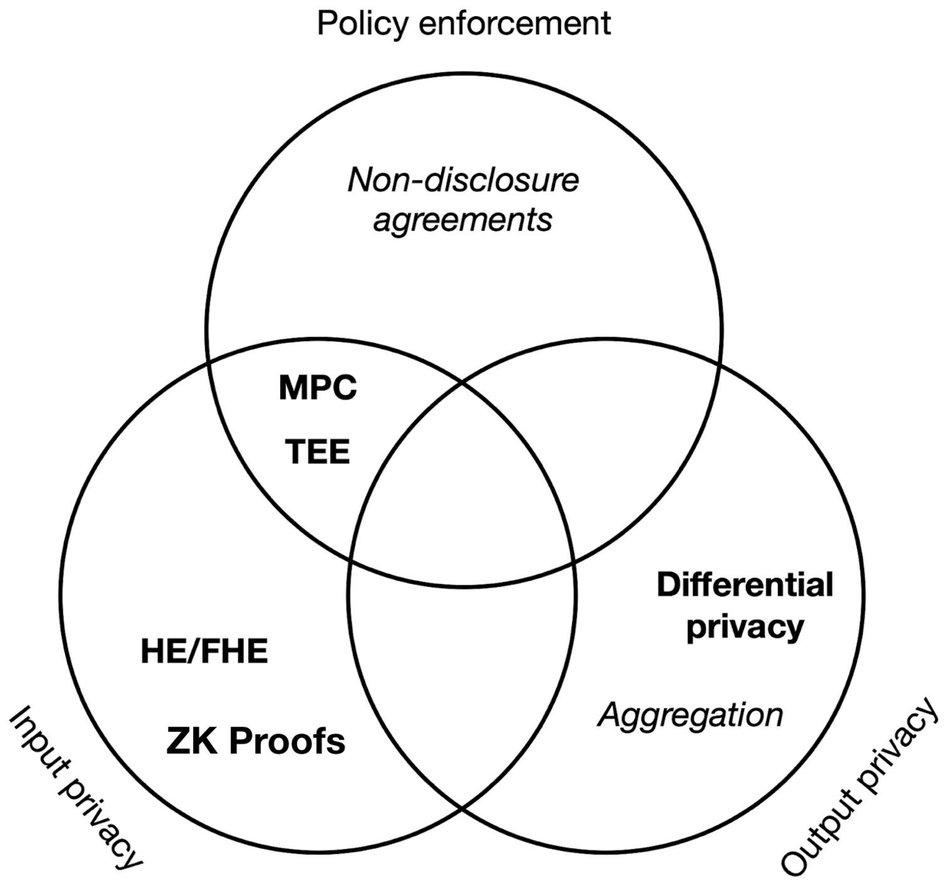

Uncharted
Industrialised
Visible
Invisible
Value Chain
Evolution
Genesis
Concept
Custom Built
Hypothesis
Product (+ rental)
Theory
Commodity (+ utility)
Accepted
Digital Platform
Trusted Data, Methods, Applications & Services
Industrialisation Team
Secure Analytics
Digital Platform
Global Support
Data Processing
Data Visualisation
Platform Analytics
Service Improvement
Secure Computation
Fund Raising
Revenue Management
Marketing
Social Media
Event Management
Training
Finance Management
Funding Sources
Private Sector
Philanthropy
Foreign Aid
Academia
NSOs
Value
Corporate Social Responsibility
Do Good

Technology Strategy Handbook

- Wardley Mapping
- Cloud
- Machine Learning
- Big Data
- Serverless
- IoT
- Privacy Preserving Techniques

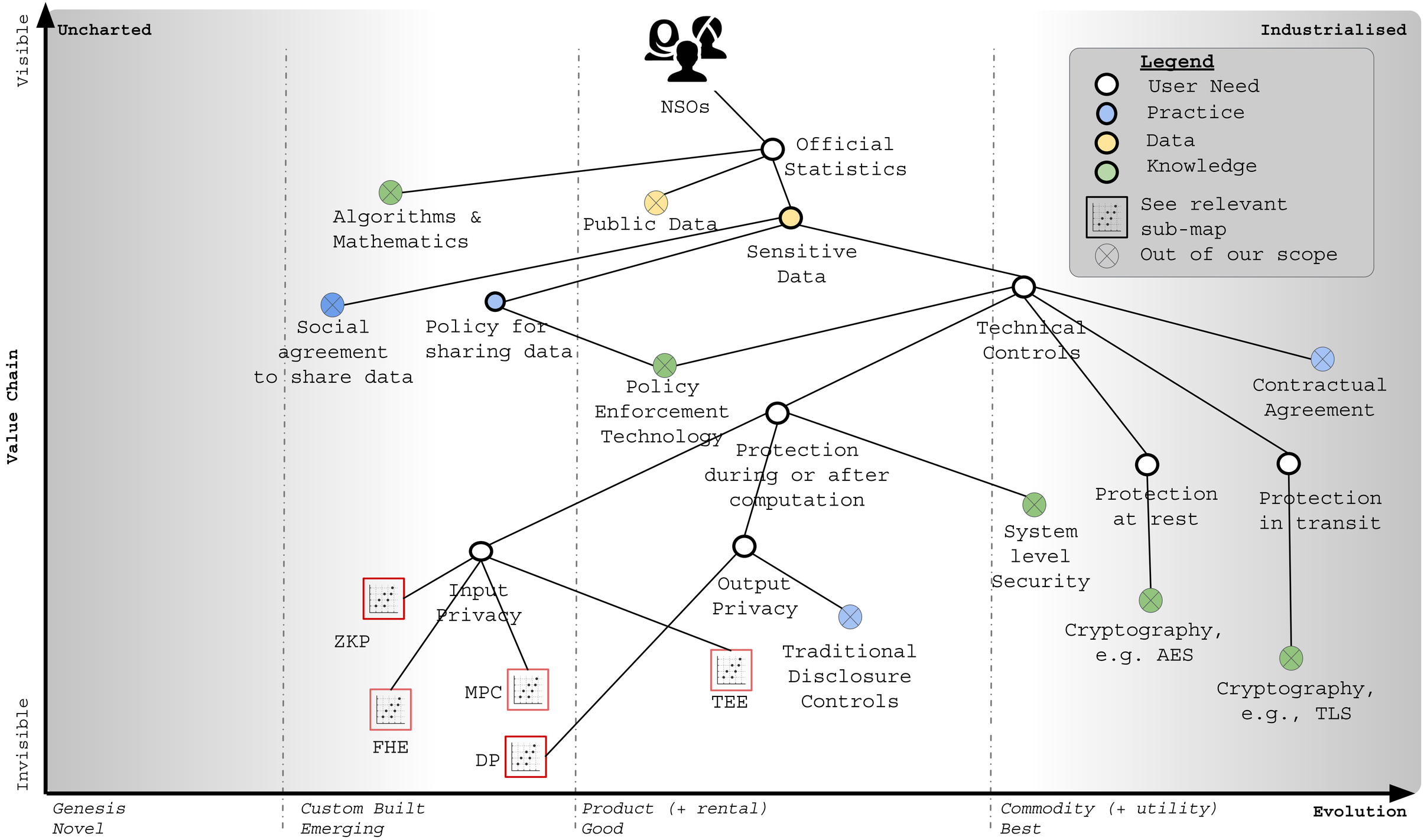
Privacy Preserving Techniques Handbook

- Multi-party Computation
- Fully Homomorphic Encryption
- Zero Knowledge Proofs
- Trusted Execution Environments
- Differential Privacy



Privacy Preserving Techniques

- UN Privacy Preserving Techniques Handbook
- Wardley Maps
- Proof of Concepts
  - Health Statistics
  - Trade Statistics


Uncharted
Industrialised
Visible
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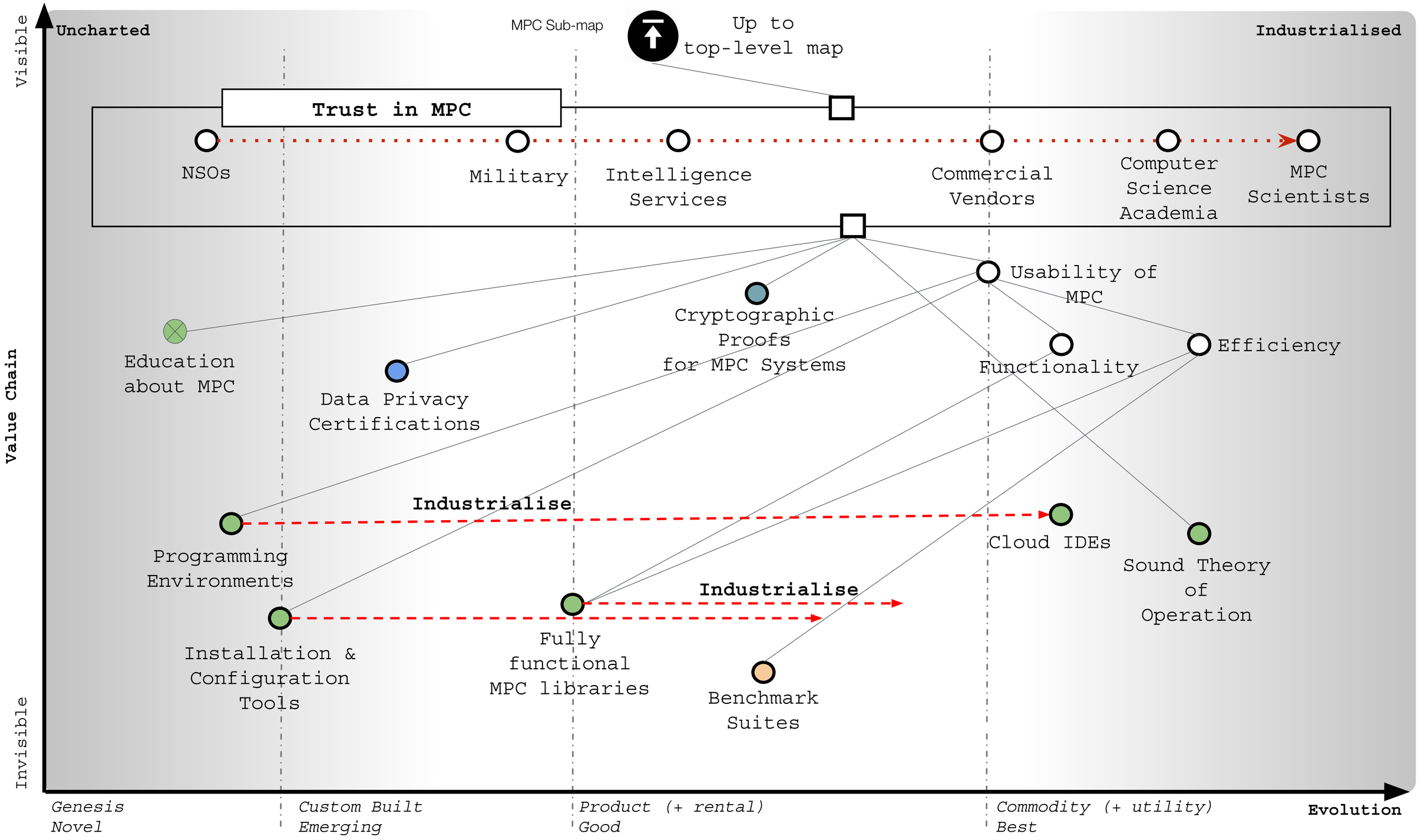
Value Chain
Evolution
Genesis
Novel
Custom Built
Emerging
Product (+ rental)
Good
Commodity (+ utility)
Best
Legend
User Need
Practice
Data
Knowledge
See relevant sub-map
Out of our scope
NSOs
Official Statistics
Algorithms & Mathematics
Public Data
Sensitive Data
Social agreement to share data
Policy for sharing data
Policy Enforcement Technology
Technical Controls
Contractual Agreement
Protection during or after computation
System level Security
Protection at rest
Protection in transit
Cryptography, e.g. AES
Cryptography, e.g., TLS
Input Privacy
ZKP
FHE
MPC
DP
Output Privacy
TEE
Traditional Disclosure Controls


Visible
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Value Chain
Uncharted
Industrialised
MPC Sub-map
Up to top-level map
Trust in MPC
NSOs
Military
Intelligence Services
Commercial Vendors
Computer Science Academia
MPC Scientists
Usability of MPC
Cryptographic Proofs for MPC Systems
Education about MPC
Data Privacy Certifications
Functionality
Efficiency
Industrialise
Programming Environments
Cloud IDEs
Sound Theory of Operation
Industrialise
Installation & Configuration Tools
Fully functional MPC libraries
Benchmark Suites
Genesis
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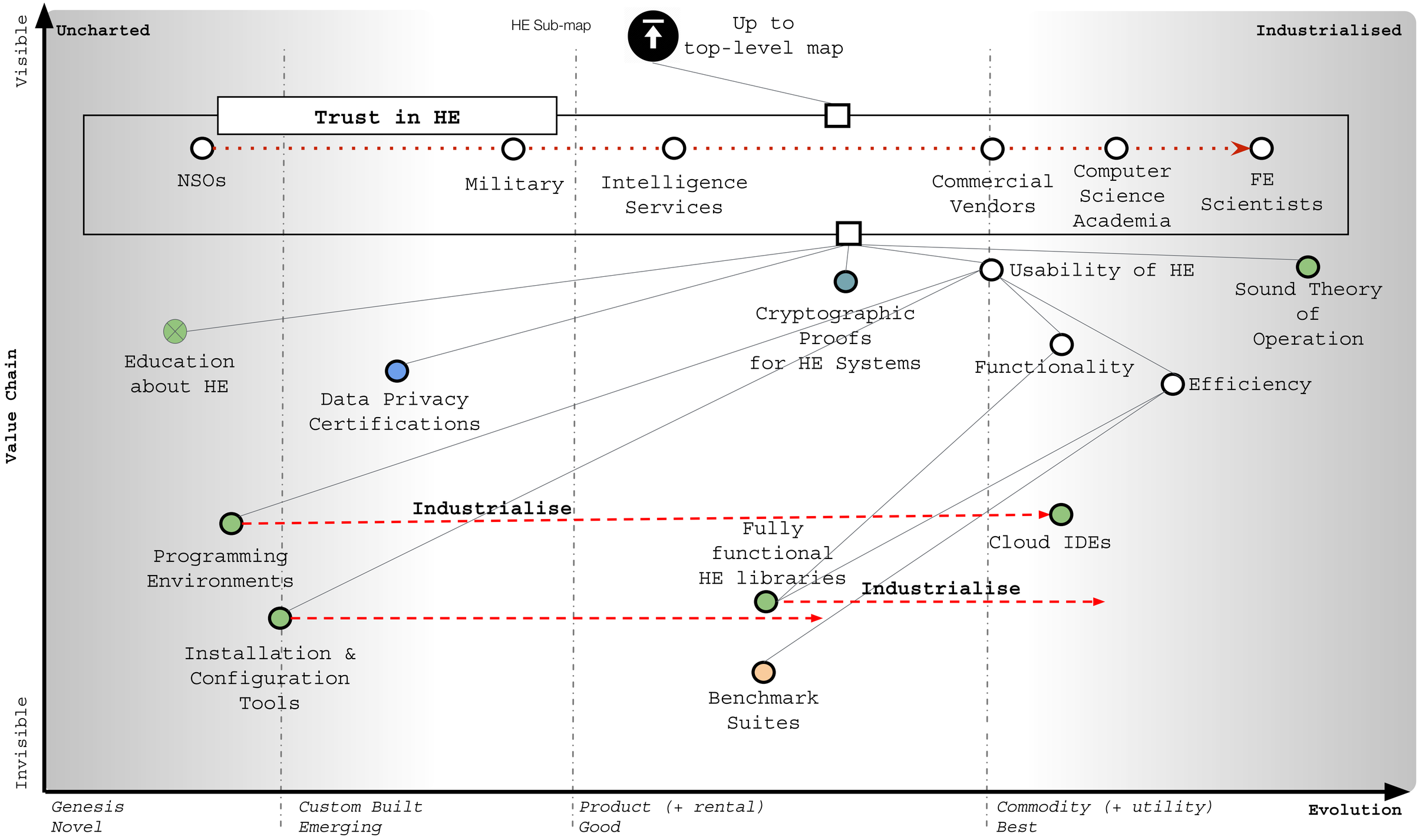
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HE Sub-map
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Science
Academia
FE
Scientists
Usability of HE
Sound Theory
of
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Cryptographic
Proofs
for HE Systems
Education
about HE
Data Privacy
Certifications
Functionality
Efficiency
Industrialise
Programming
Environments
Fully
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HE libraries
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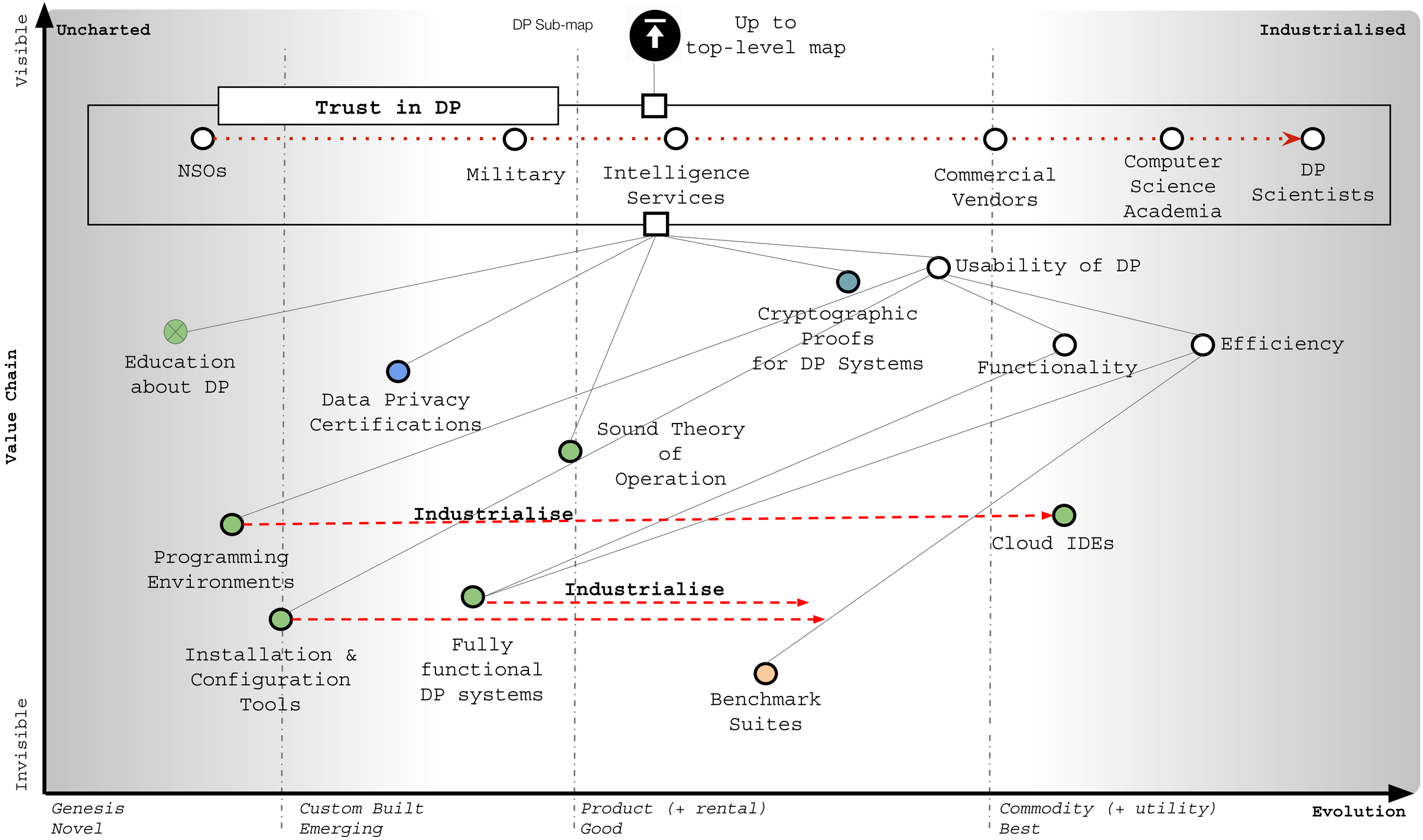
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Commercial
Vendors
Computer
Science
Academia
DP
Scientists
Usability of DP
Cryptographic
Proofs
for DP Systems
Efficiency
Functionality
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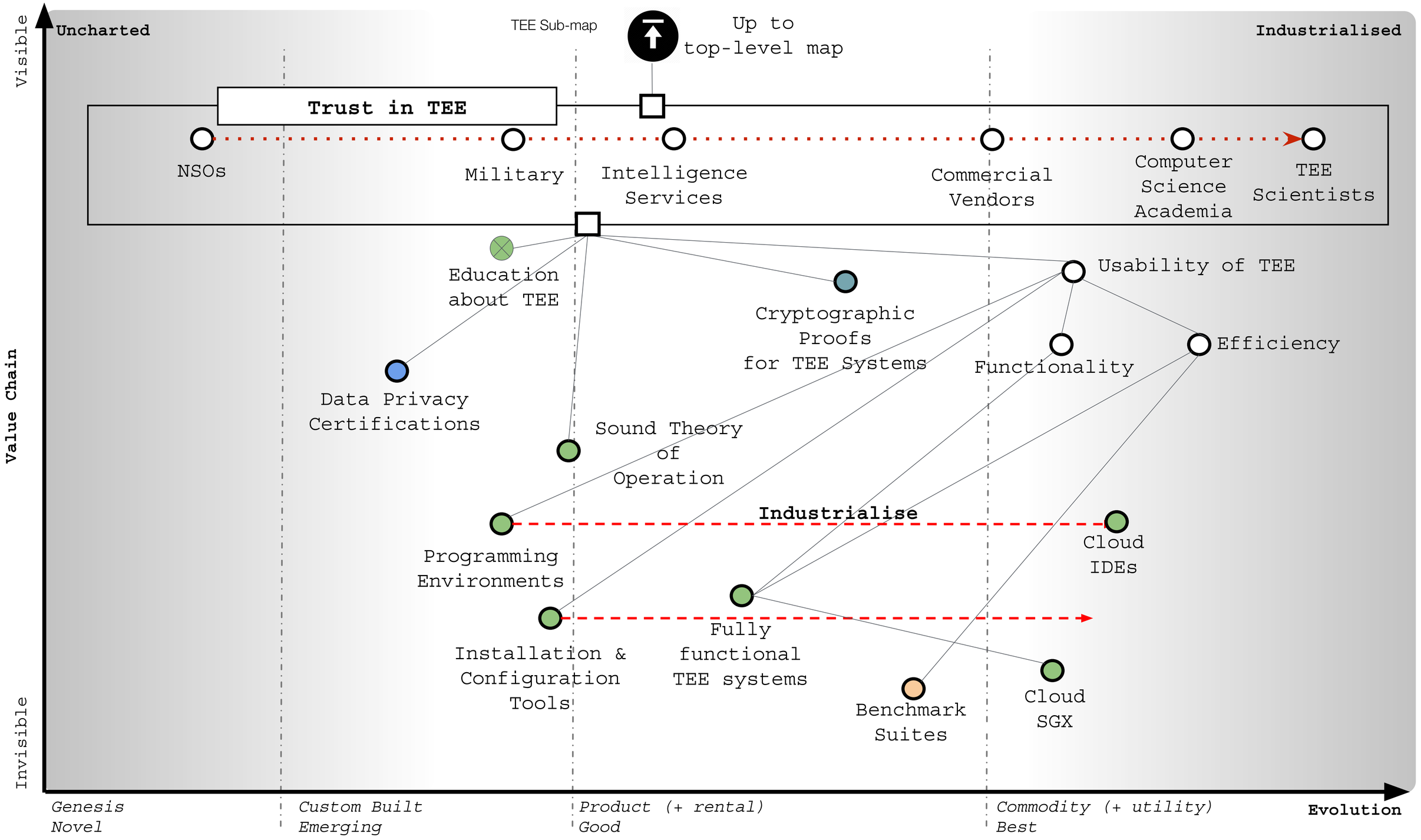
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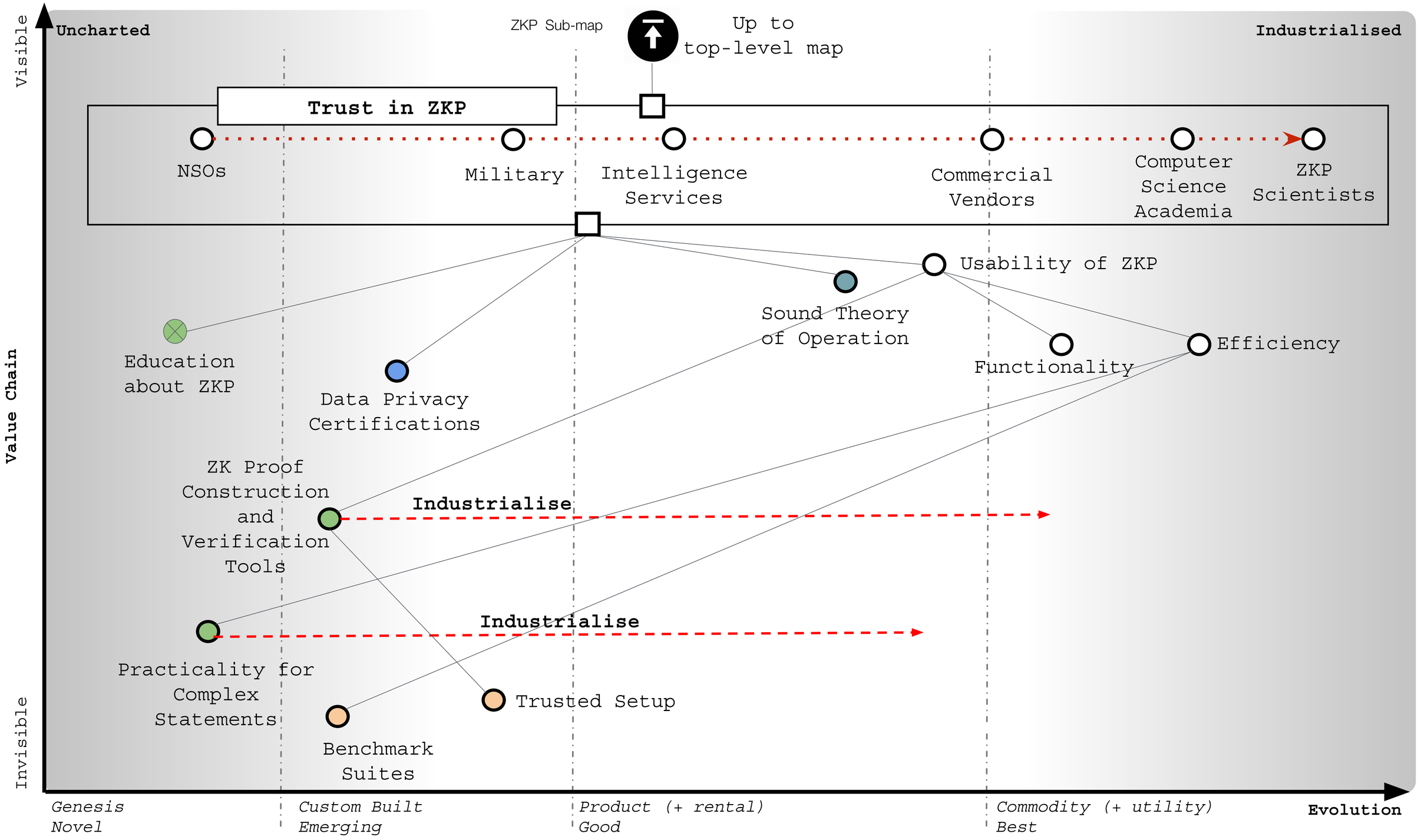
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Education
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Data Privacy
Certifications
ZK Proof
Construction
and
Verification
Tools
Industrialise
Industrialise
Practicality for
Complex
Statements
Trusted Setup
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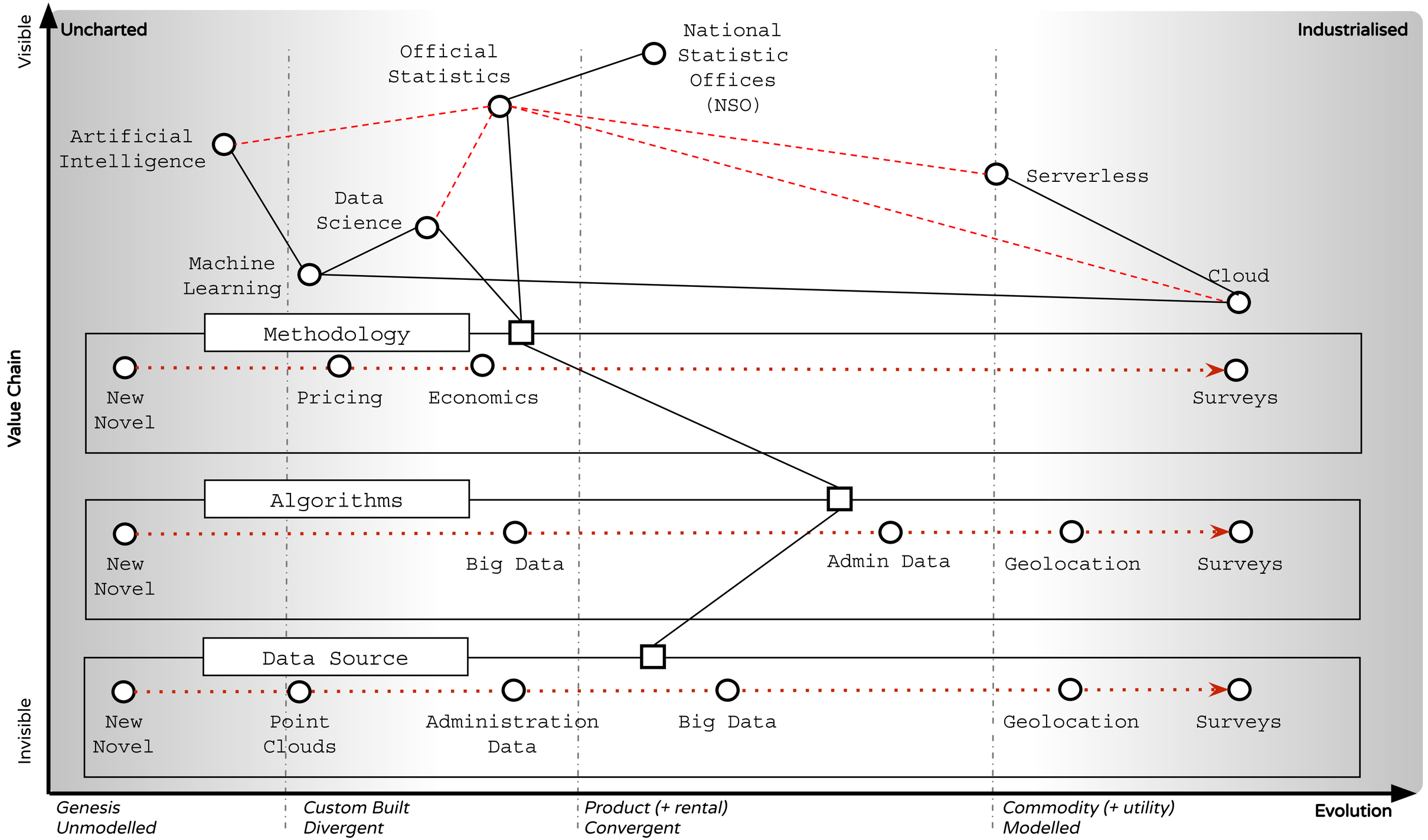
Is Data A Commodity?

.... It Depends

(well ... it is in Denmark 😉)

National Statistics Offices (NSO)

- 100,000+ Staff Globally
- Methodology
- Algorithms
- Data
  - Admin Data (Government)
  - Micro Data (Data)
  - Ying/Yang Data/Algos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National Statistic Offices (NSO)
Official Statistics
Artificial Intelligence
Data Science
Machine Learning
Serverless
Cloud
Methodology
New Novel
Pricing
Economics
Surveys
Algorithms
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Big Data
Admin Data
Geolocation
Surveys
Data Source
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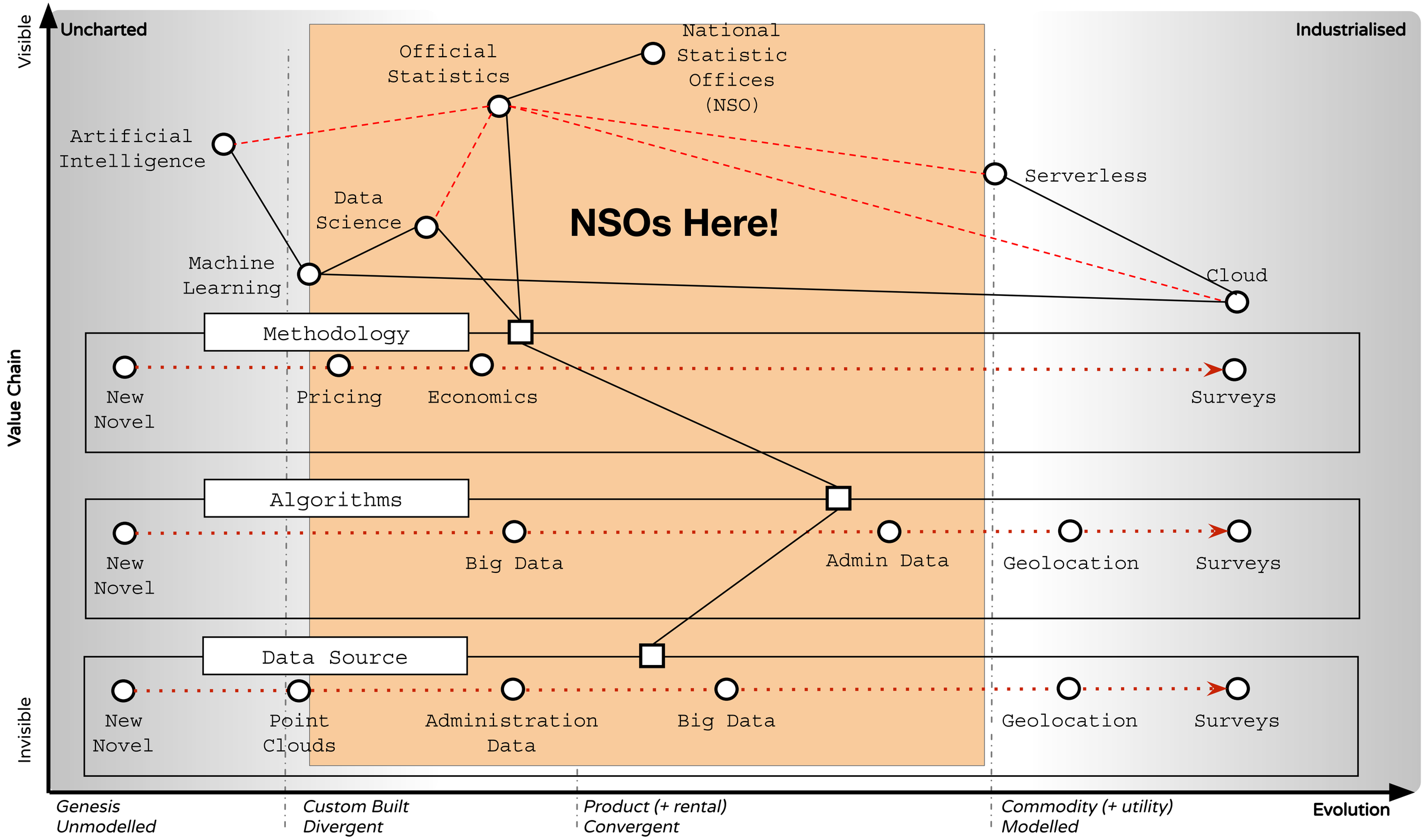
Divergent
Product (+ rental)
Convergent
Commodity (+ utility)
Modelled
Evolution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NSOs Here!
Serverless
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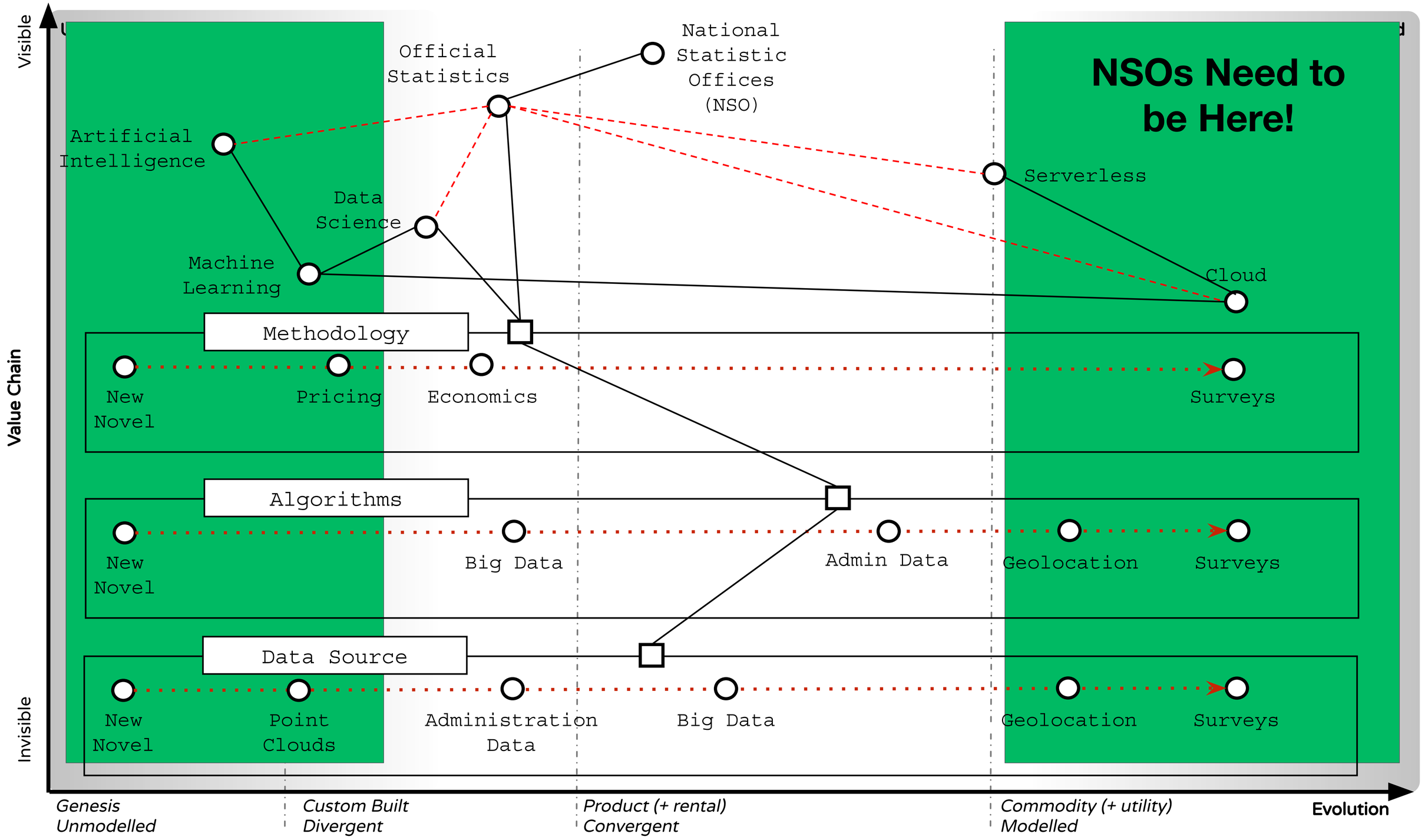
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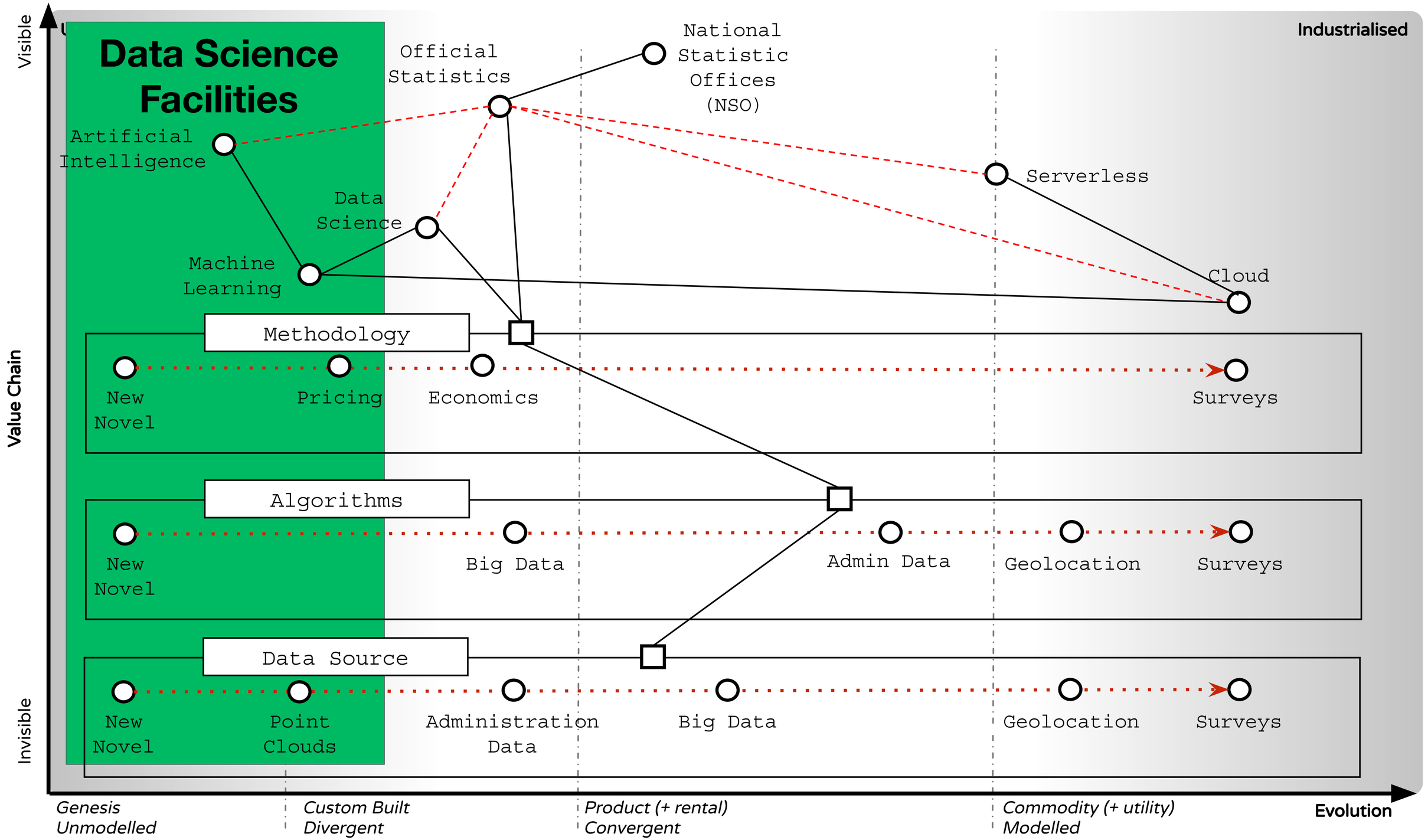
Data Science Facilities
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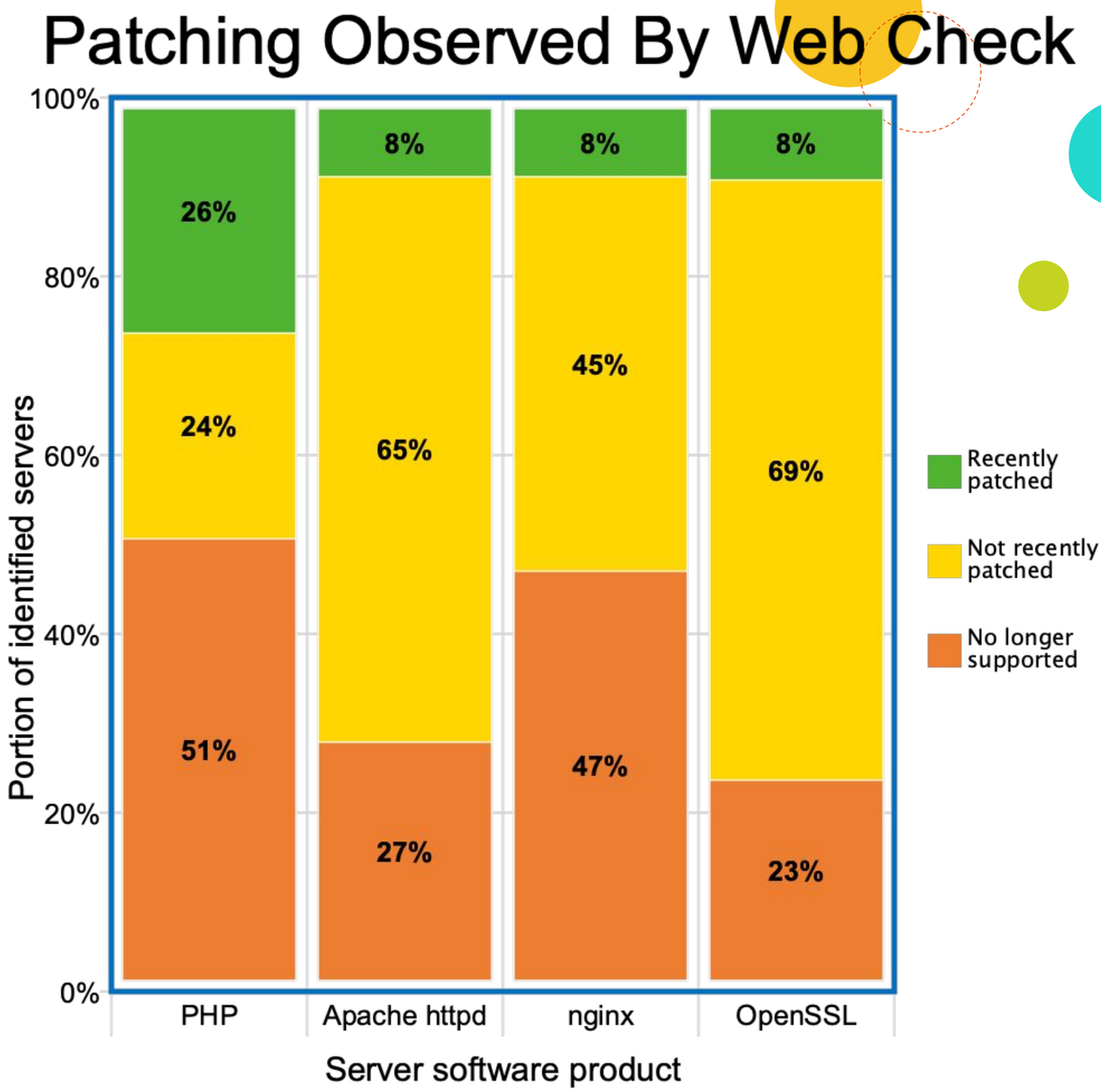
Serverless

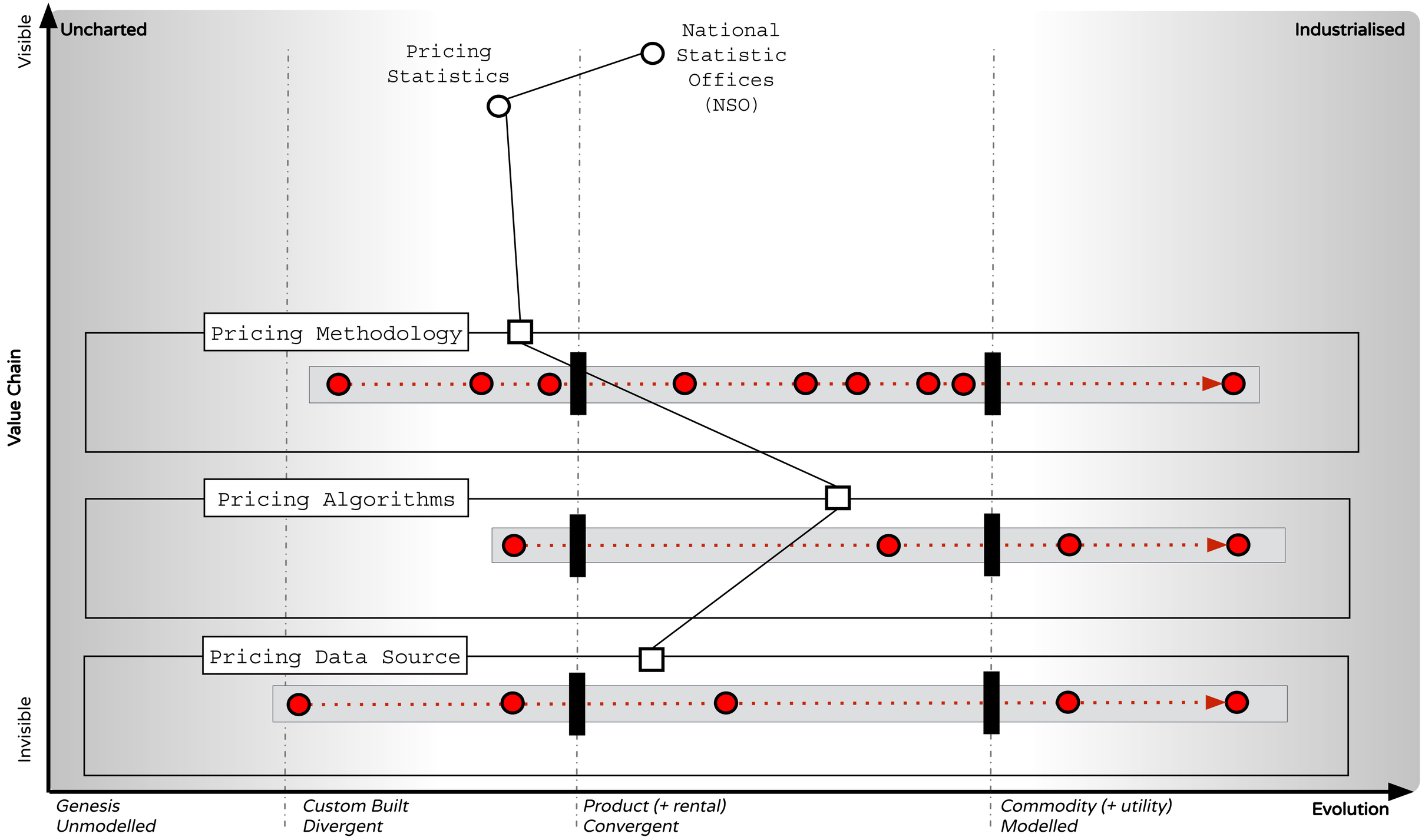
NCSC research shows that using Serverless components makes it easier to get good security in the cloud



Across the sites declaring which software versions they were using, only about 7% had been fully patched in the previous 30 days.

Meanwhile, 39% were reporting a product so old it was no longer supported by the vendor!

Pricing Statistics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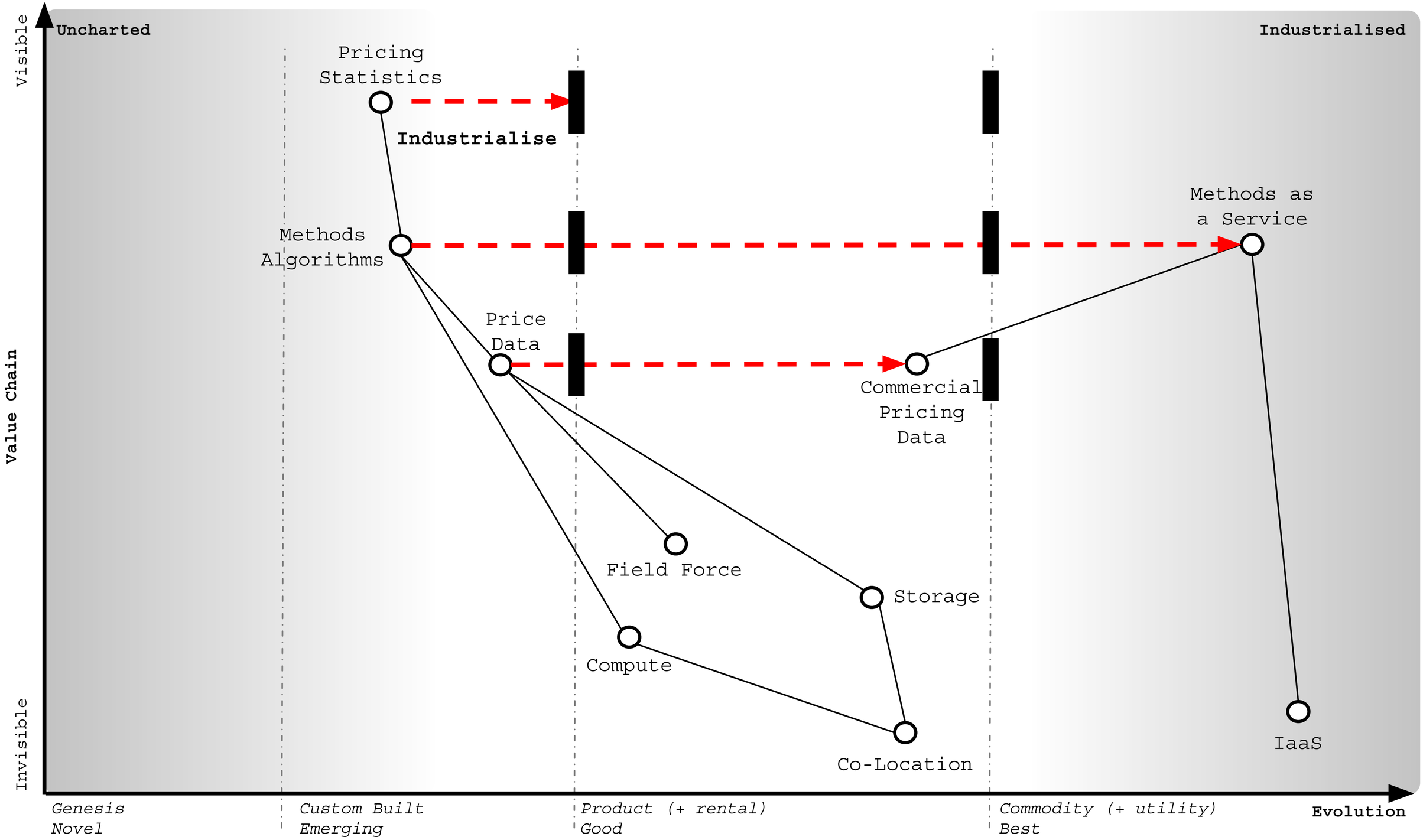
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Methods Algorithms
Price Data
Commercial Pricing Data
Methods as a Service
Field Force
Storage
Compute
Co-Location
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Genesis
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Census

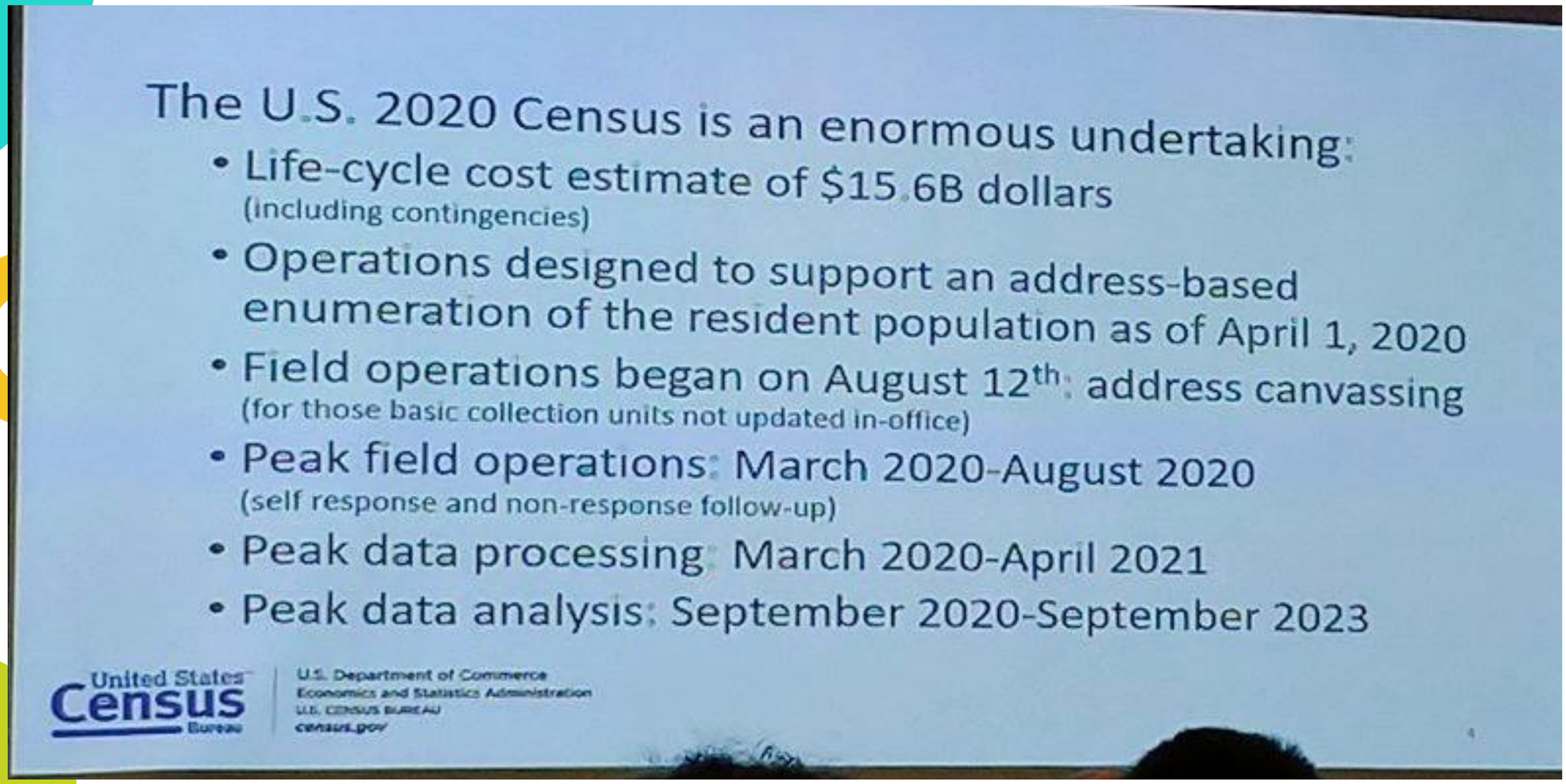
Australian Census 2016

- Australia
  - $500M
  - Reported - 40-Hour outage cost $30m

UK Census 2021

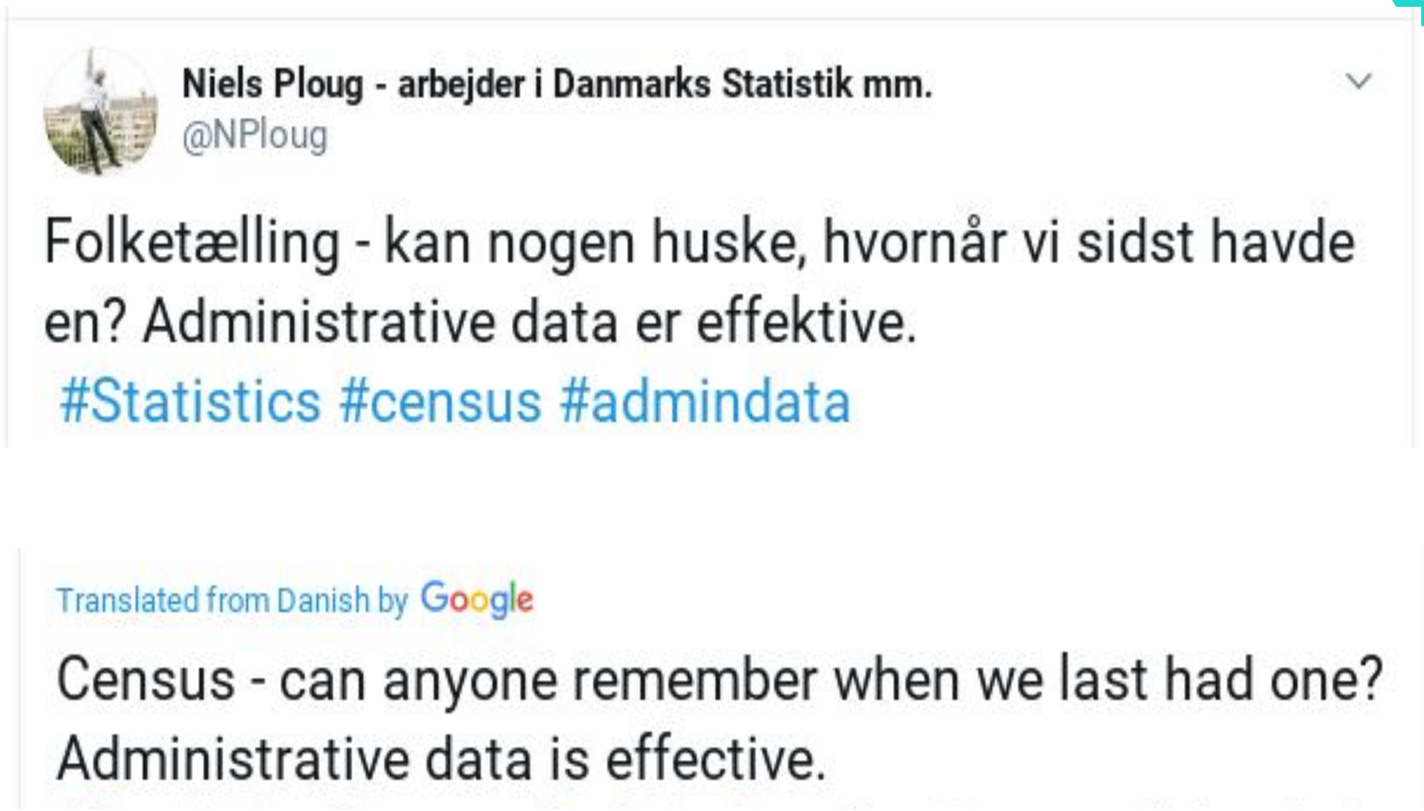
- £900M (Major Projects Authority)
- Delivering a successful 2021 Census, **researching** how to make it the **last of its kind**
- 2011 Census benefits evaluation report
- Digital Economy Act enables ONS to request information to create Official Statistics

U.S. Census 2020



Denmark Census

- Four people overnight
- Last census 1970!



Economic Statistics

Economic

- Independent review of UK economic statistics: final report
- “the longer a decision-maker has to wait for the statistics, the less useful are they likely to be”
- Financial Crash 2008: 12 Weeks = £12Bn Cost to the Economy
- Faster Economic Indicators

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UN Global Working Group

How Can You Get Involved?

How Can You Get Involved?

- Read the Handbook
- Use the Template
- Start Mapping the SDGs
- Publish Maps in GitHub
- #WardleyMaps4SDGs

Harnessing the power of ~~data~~ **Wardley Maps** for **better lives**

BigData
UN Global Working Group

A global collaboration to harness the power of ~~data~~ Wardley Maps for better lives

#WardleyMaps4SDGs

UN Global Platform

Harnessing the power of data for better lives

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Thanks!

Any questions?

You can find me at @mcraddock & contactus@officialstatistics.org