# Why the fuss about serverless?

LEADING EDGE FORUM

WARNING

FOTANGO

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**Gifts Gallery**
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**Promotions**
Share pictures & when friend registers, you both get 3 free 6x4 prints.

Fotango website, 2005, courtesy of CEO.

# Fotango, 2003

Our strategy is **customer focused.** We will lead a **innovative** effort in the market through our use of **agile techniques** and **open source** to become a leading provider of open standard solutions to the digital world. To develop products of the highest standards we make our clients part of the team. Our final measure of success is the satisfaction of the team at the end of the project.

Eigenberg Fotografie, Nov 2013, CC by 2.0
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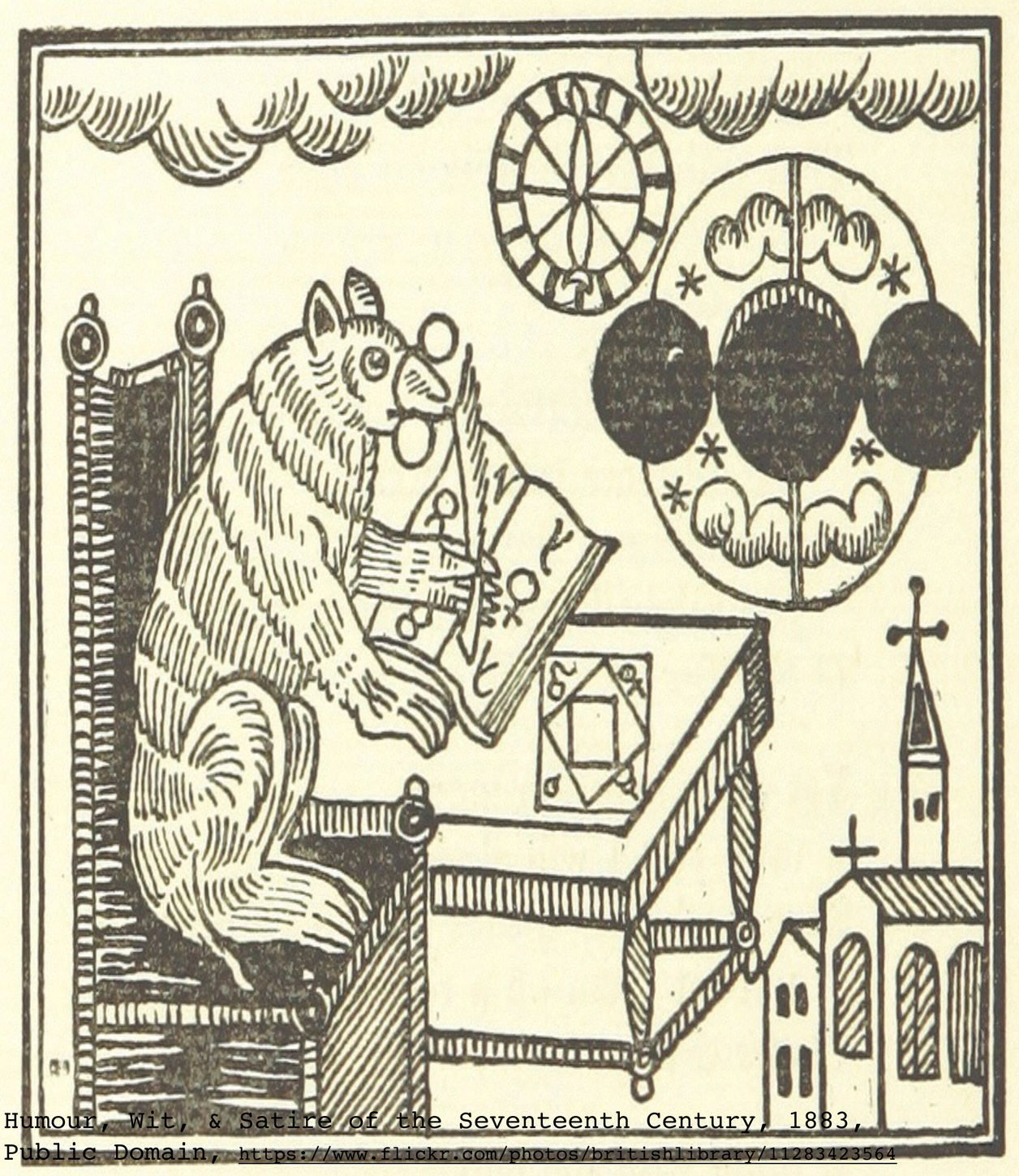


Humour, Wit, & Satire of the Seventeenth Century, 1883, Public Domain, https://www.flickr.com/photos/britishlibrary/11283423564

**B**usiness
**L**evel
**A**bstractions of a
**H**ealthy
**S**trategy

# Common Blahs

digital business, big data, disruptive, innovative, collaborative, competitive advantage, ecosystem, open source, networked, efficiency, learning organisation, social media, revolution, cloud based, agile, secure, internet of things, growth, value, customer focused, open, digital first, data leaders, agile, insight from data, platform, sustainable, revolution, culture.

# Blah Template

Our strategy is **[Blah].** We will lead a **[Blah]** effort of the market through our use of **[Blah]** and **[Blah]** to build a **[Blah].** By being both **[Blah]** and **[Blah]**, our **[Blah]** approach will drive **[Bah]** throughout the organisation. Synergies between our **[Blah]** and **[Blah]** will enable us to capture the upside by becoming **[Blah]** in a **[Blah]** world. These transformations combined with **[Blah]** due to our **[Blah]** will create a **[Blah]** through **[Blah]** and **[Blah].**

**Blahs**

**+**

**Blah** template

**=**

auto generate

64 strategies

# Strategy 1 / 64

Our strategy is **customer focused.** We will lead a **disruptive** effort of the market through our use of **innovative social media** and **big data** to build a **collaborative cloud based ecosystem.** By being both **digital first** and **agile,** our **open** approach will drive **efficiency** throughout the organisation. Synergies between our **culture revolution** and **networked learning organisation** will enable us to capture the upside by becoming **data leaders** in a **digital business** world.

# Strategy 2 / 64

Our strategy is **innovative digital business.** We will lead a **growth** effort of the market through our use of **customer focused competitive advantage** and **disruptive social media** to build a **collaborative revolution.** By being both **data leaders** and **cloud based**, our **ecosystem** approach will drive **insight from data** throughout the organisation. Synergies between our **platform** and **open culture** will enable us to capture the upside by becoming **digital first** in a **networked** world.

1. This is the exact wording from our business plan.

1. This is the exact wording from our business plan.

2. I’ve seen two of these used already.

1. This is the exact wording from our business plan.

2. I’ve seen two of these used already.

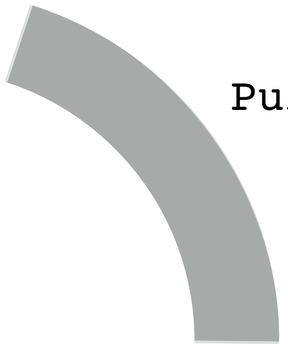
3. Are you for hire?

Fork me on GitHub

*Our strategy is collaborative. We will lead an open effort of the market through our use of big data and social media to build a digital business. By being both disruptive and agile, our networked approach will drive internet of things throughout the organization. Synergies between our growth and insight from data will enable us to capture the upside by becoming sustainable in an innovative world. These transformations combined with learning organization due to our data leaders will create a platform through revolution and leaders.*

http://strategy-madlibs.herokuapp.com/

Julian Mason, APR 2011, CC by 2.0
https://www.flickr.com/photos/meandmyshadow/5687986018/

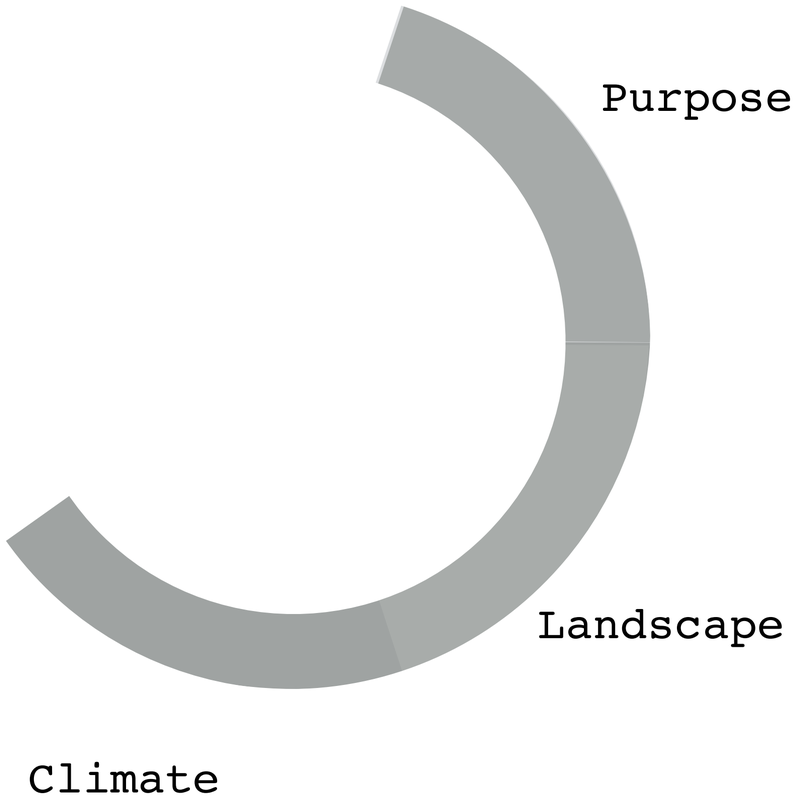



The Strategy Cycle

***Sun Tzu's five factors***

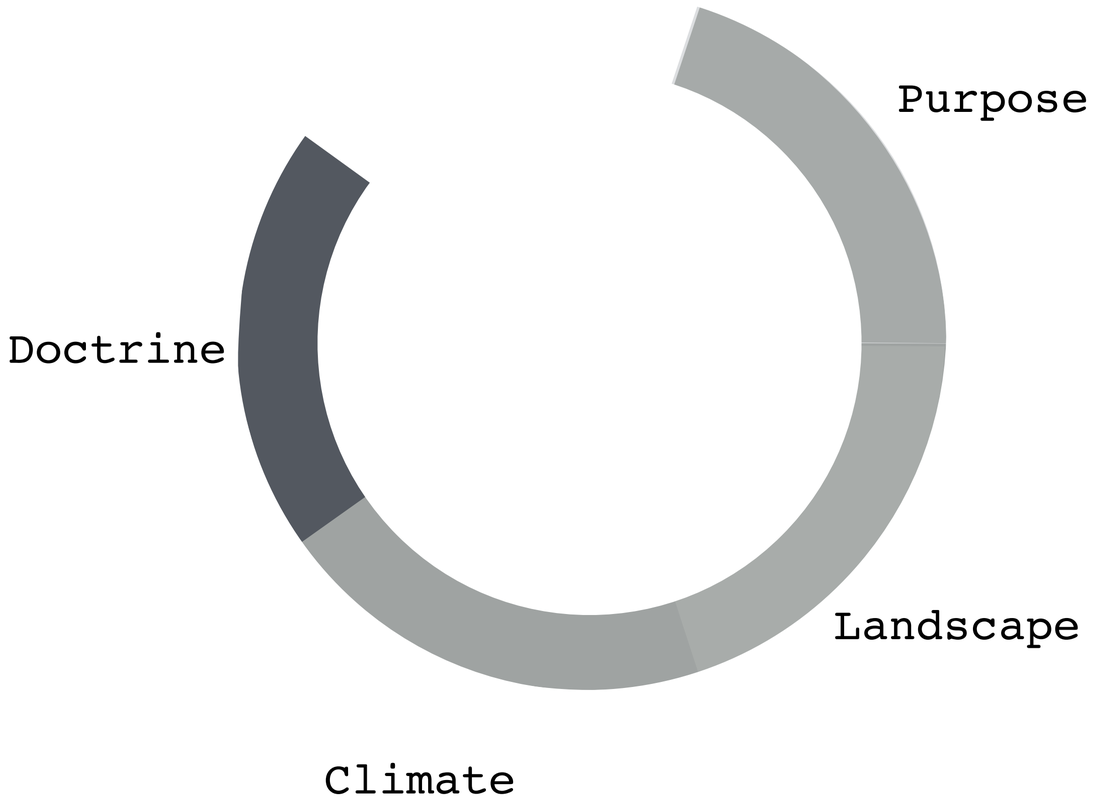
The Strategy Cycle

***Sun Tzu's five factors***



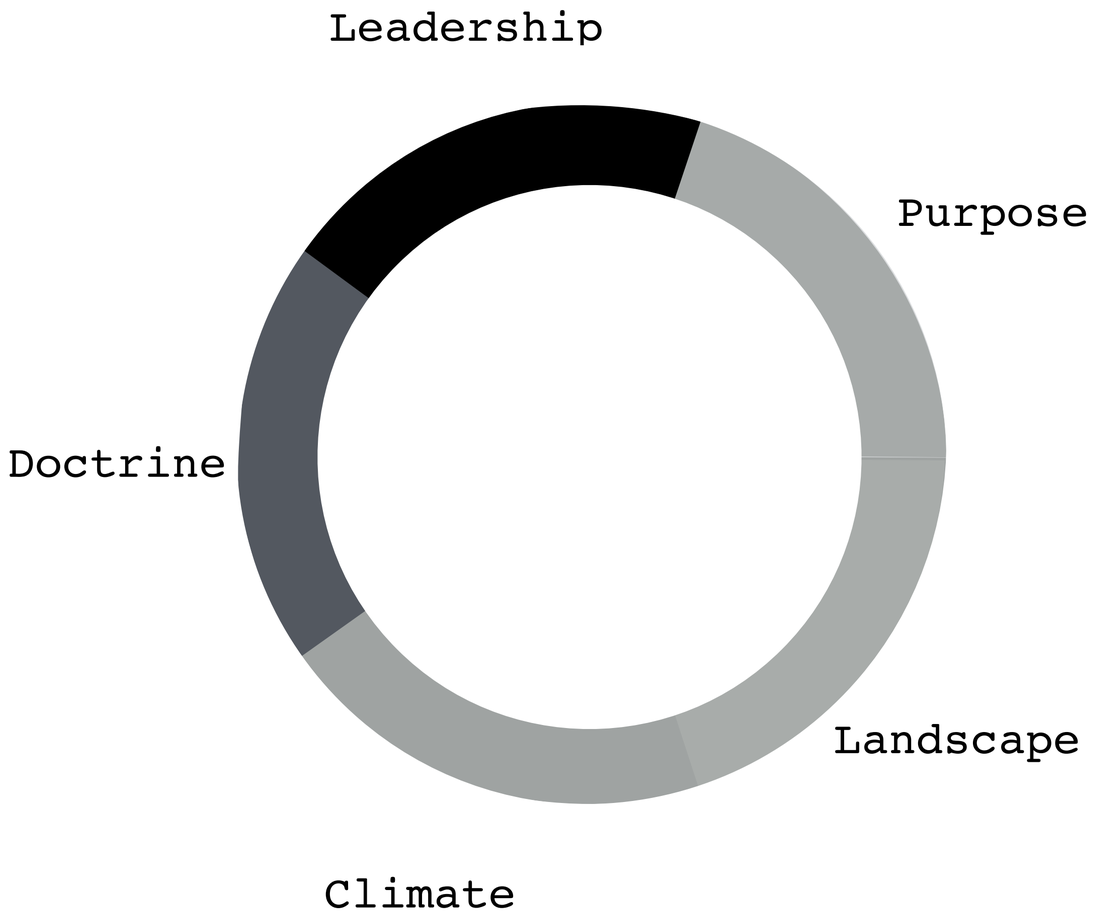

The Strategy Cycle

***Sun Tzu's five factors***




The Strategy Cycle

***Sun Tzu's five factors***

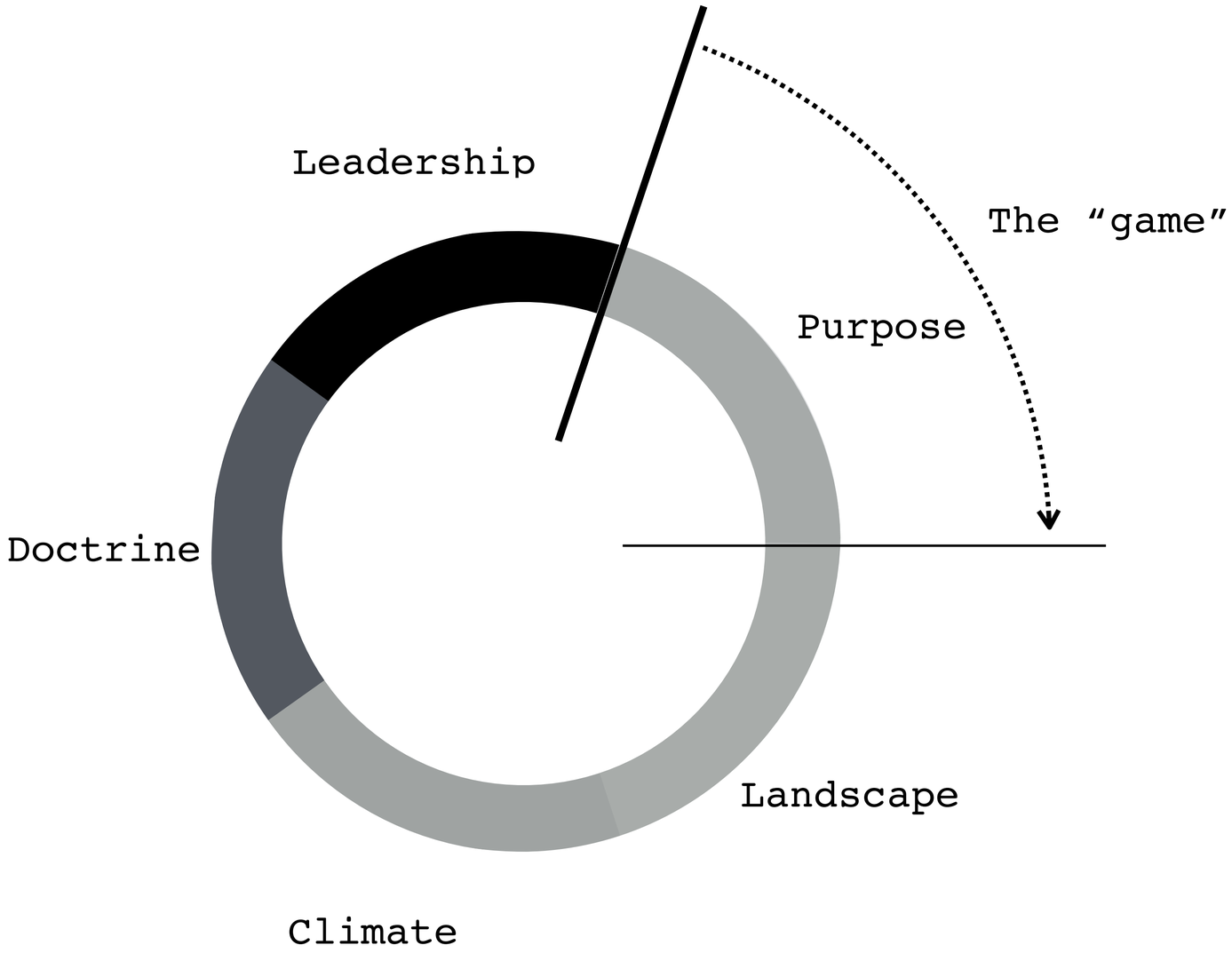



The Strategy Cycle

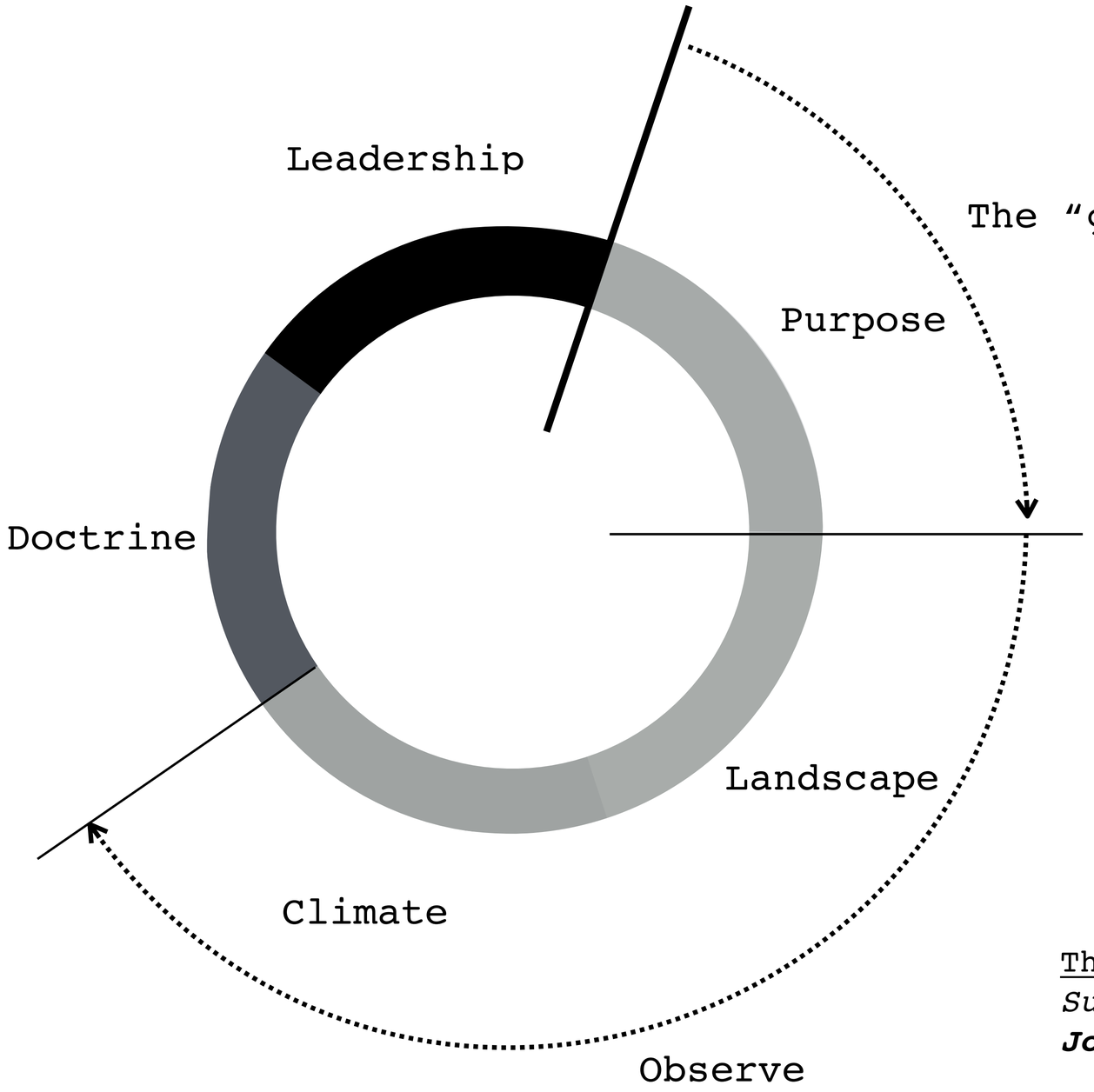
***Sun Tzu's five factors***

# John Boyd, USAF

Public Domain, US Gov, 2012



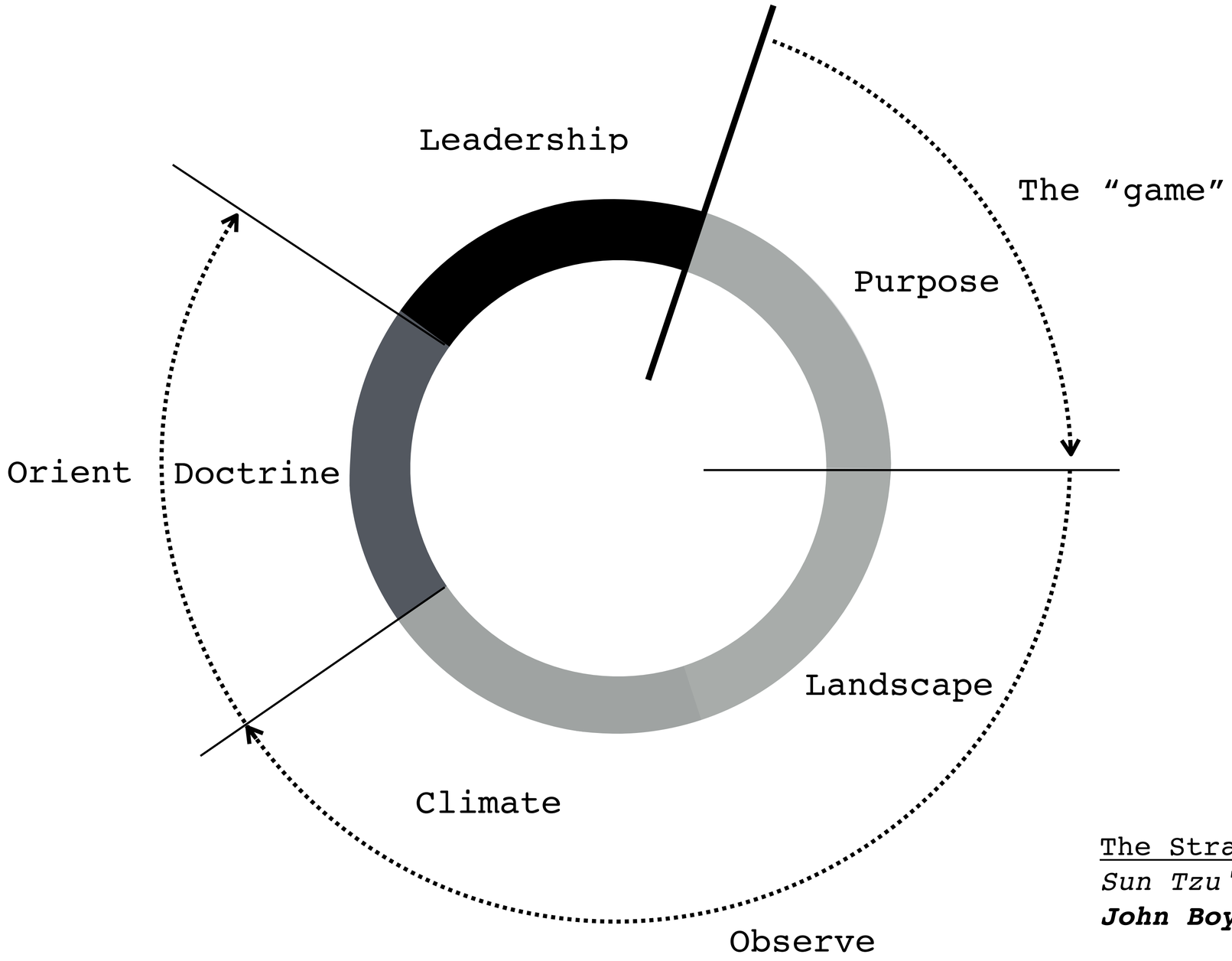

The Strategy Cycle
*Sun Tzu's five factors*
***John Boyd's OODA loop***



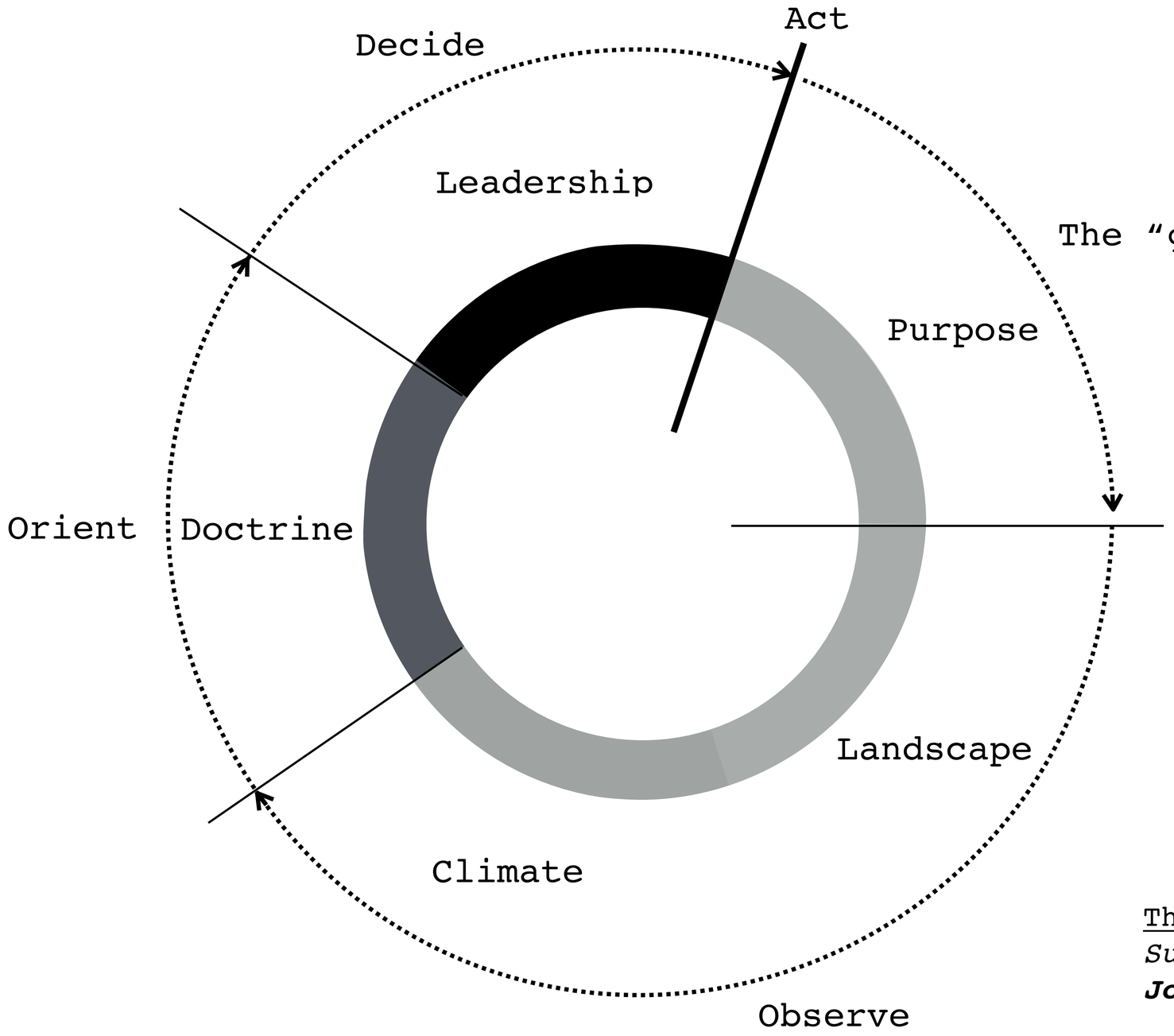

The Strategy Cycle

*Sun Tzu's five factors*

***John Boyd's OODA loop***




The Strategy Cycle
*Sun Tzu's five factors*
***John Boyd's OODA loop***

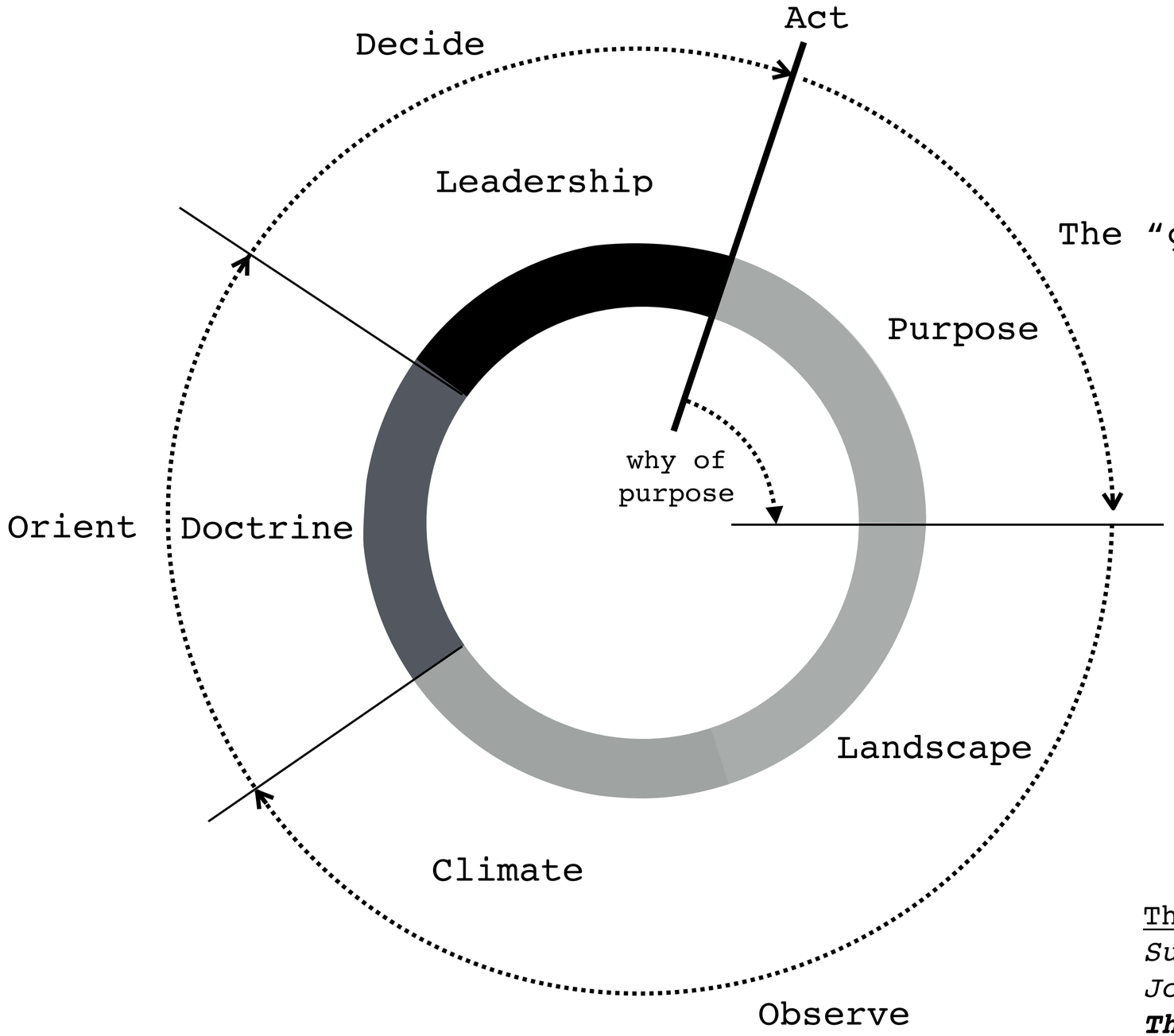



The Strategy Cycle

*Sun Tzu's five factors*

***John Boyd's OODA loop***

# Importance of why?

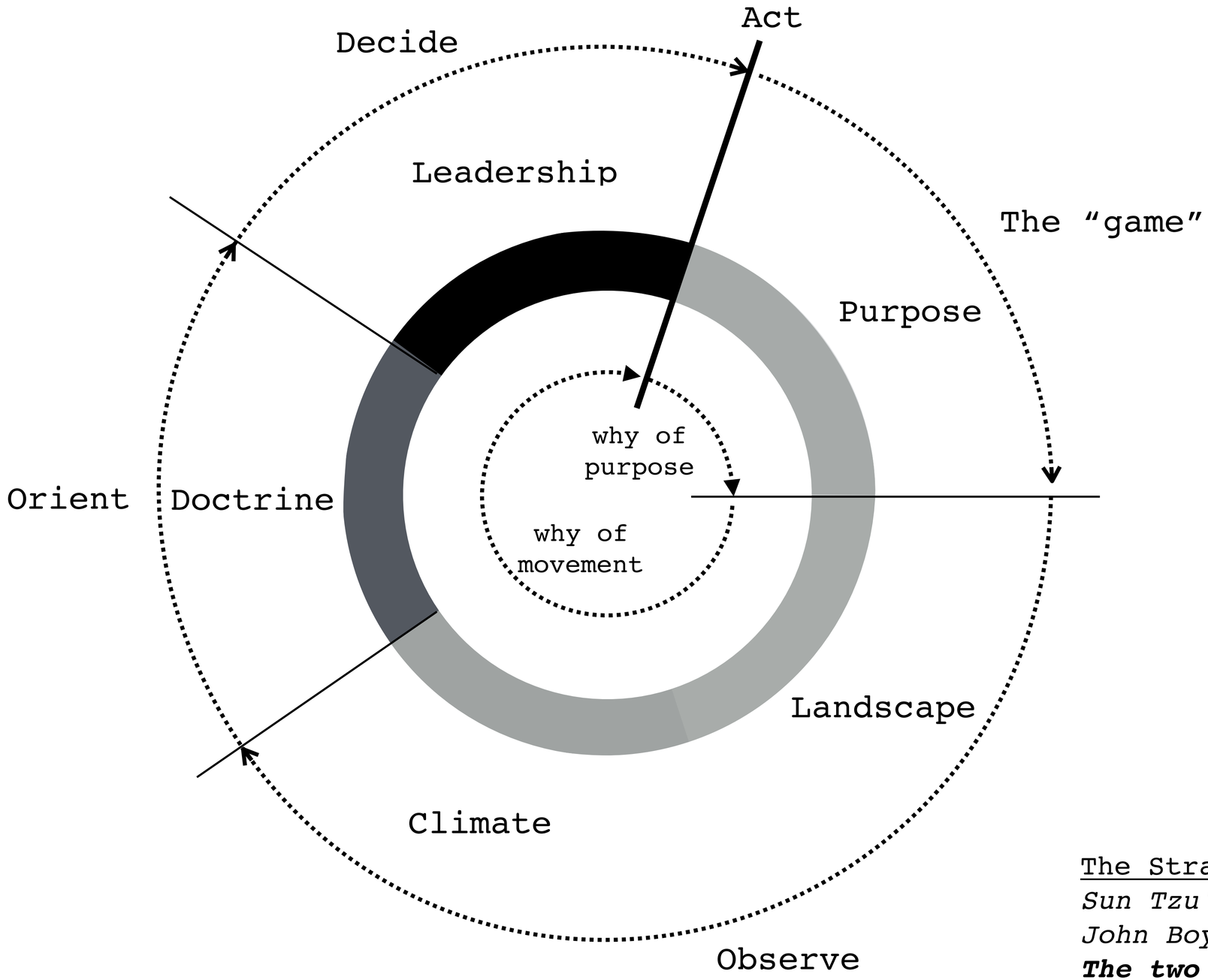



The Strategy Cycle

*Sun Tzu's five factors*

*John Boyd’s OODA loop*

***The two types of why***



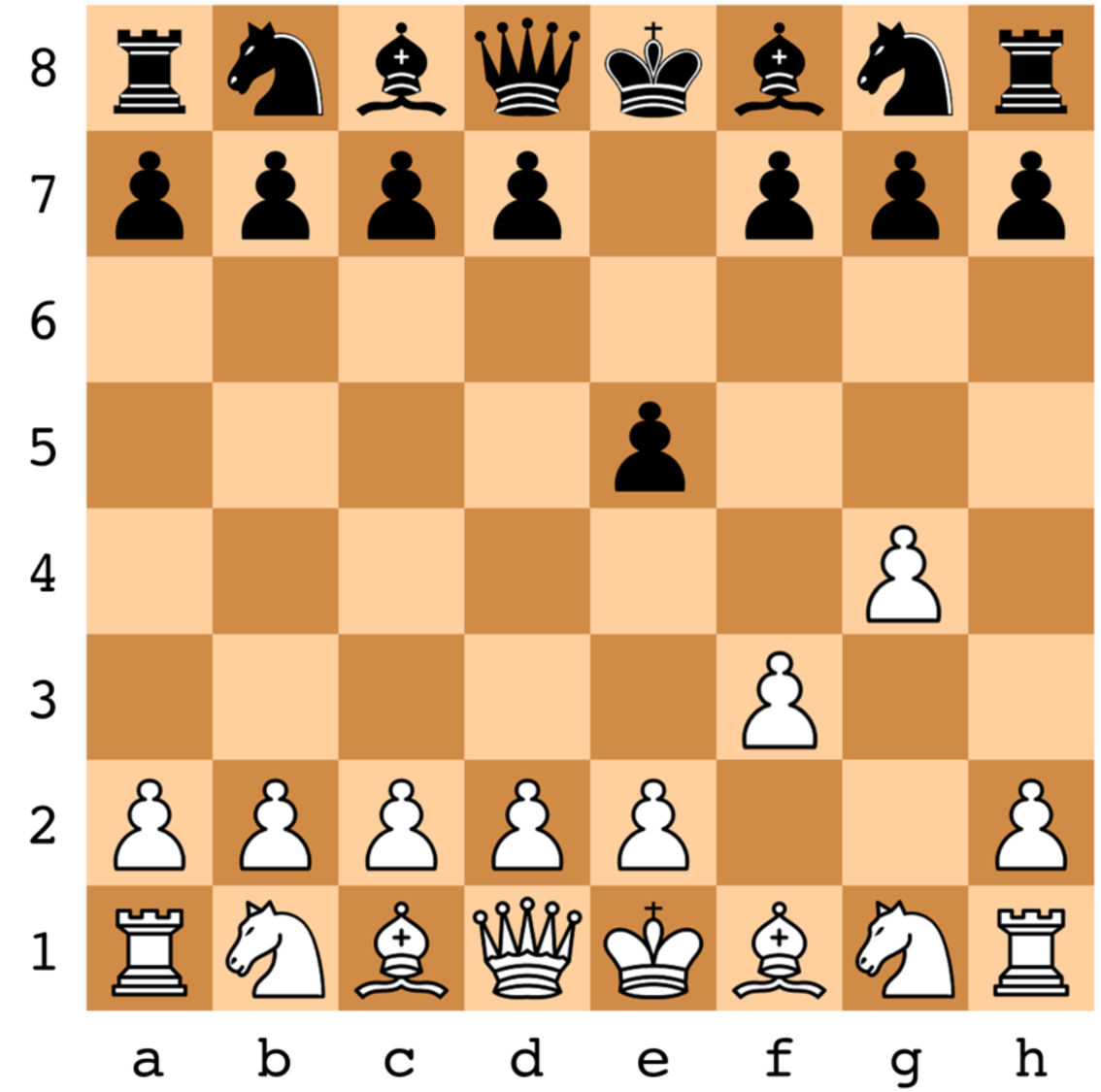

The Strategy Cycle

*Sun Tzu's five factors*

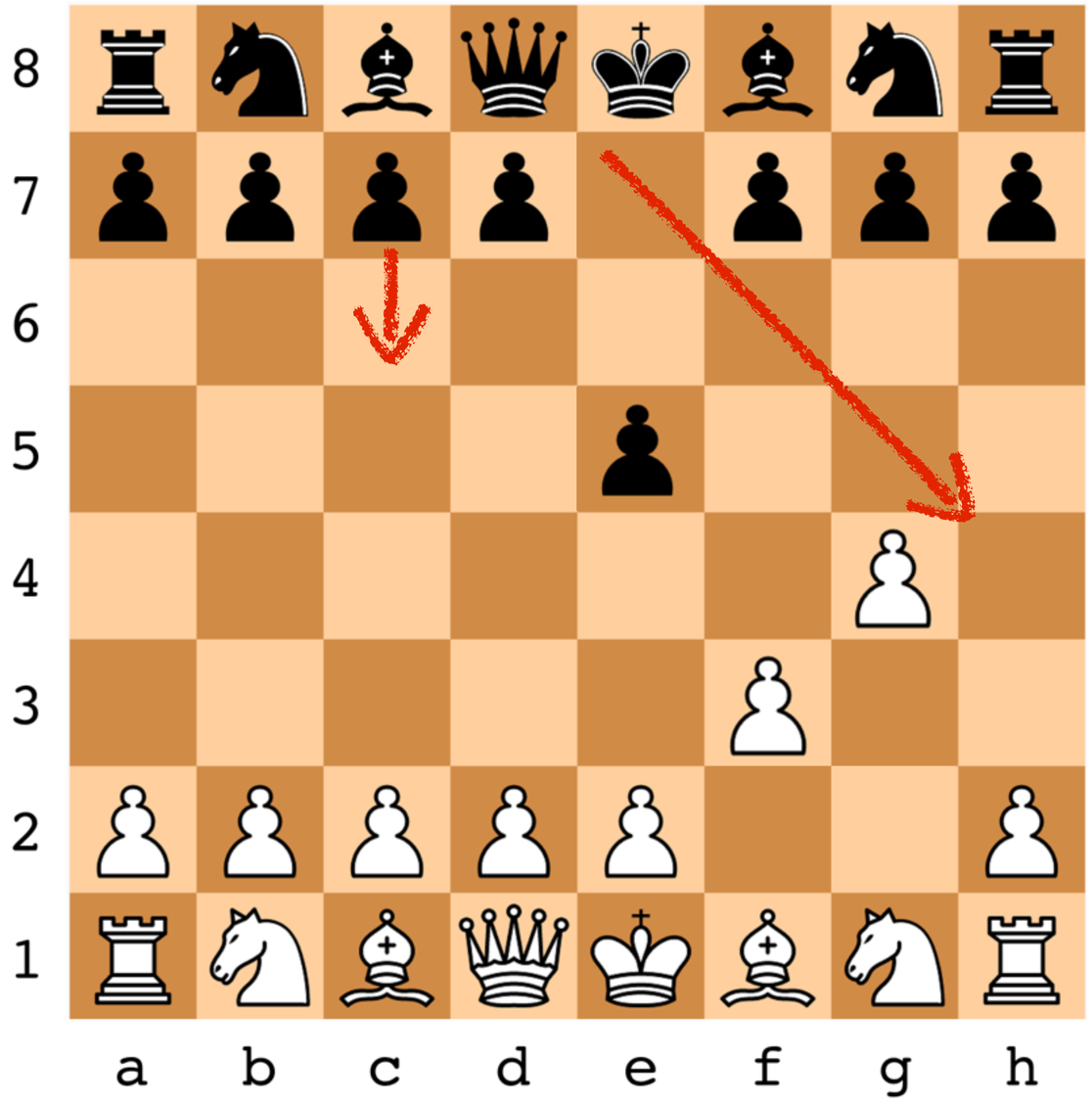
*John Boyd’s OODA loop*

***The two types of why***

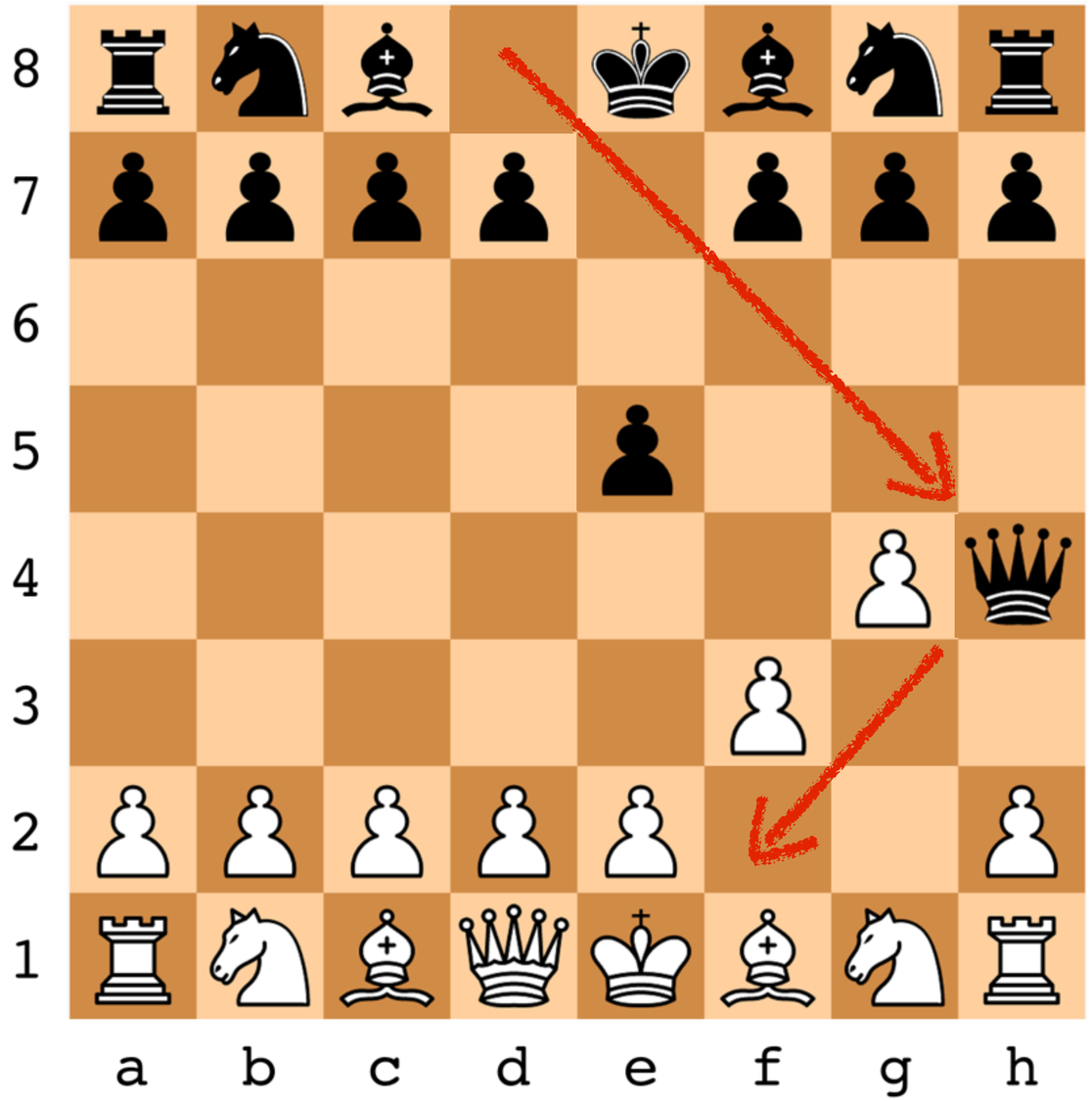
# Why of purpose = To Win!



# Why of movement = here or there?



# Movement = LEARNING




Checkmate

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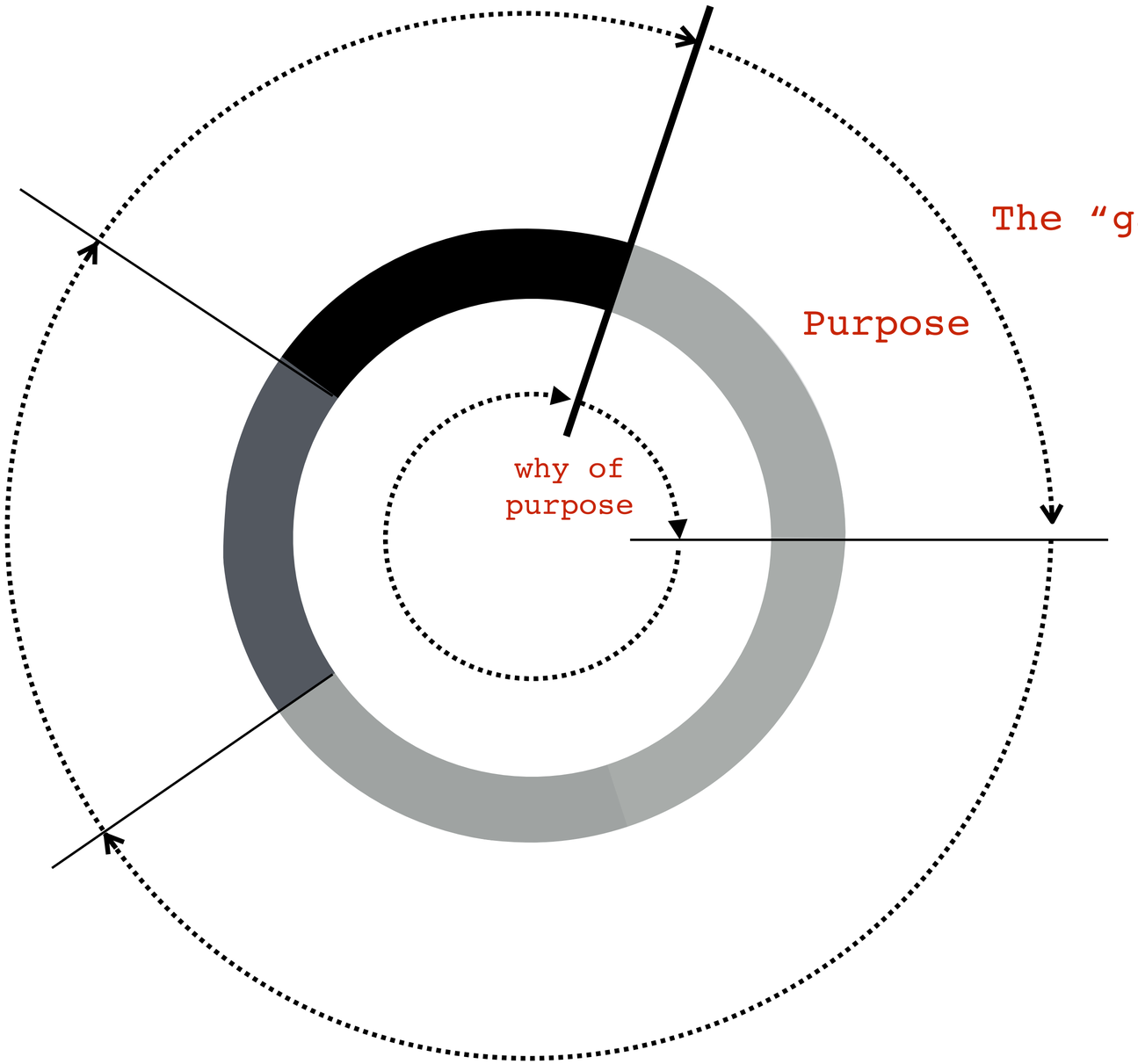
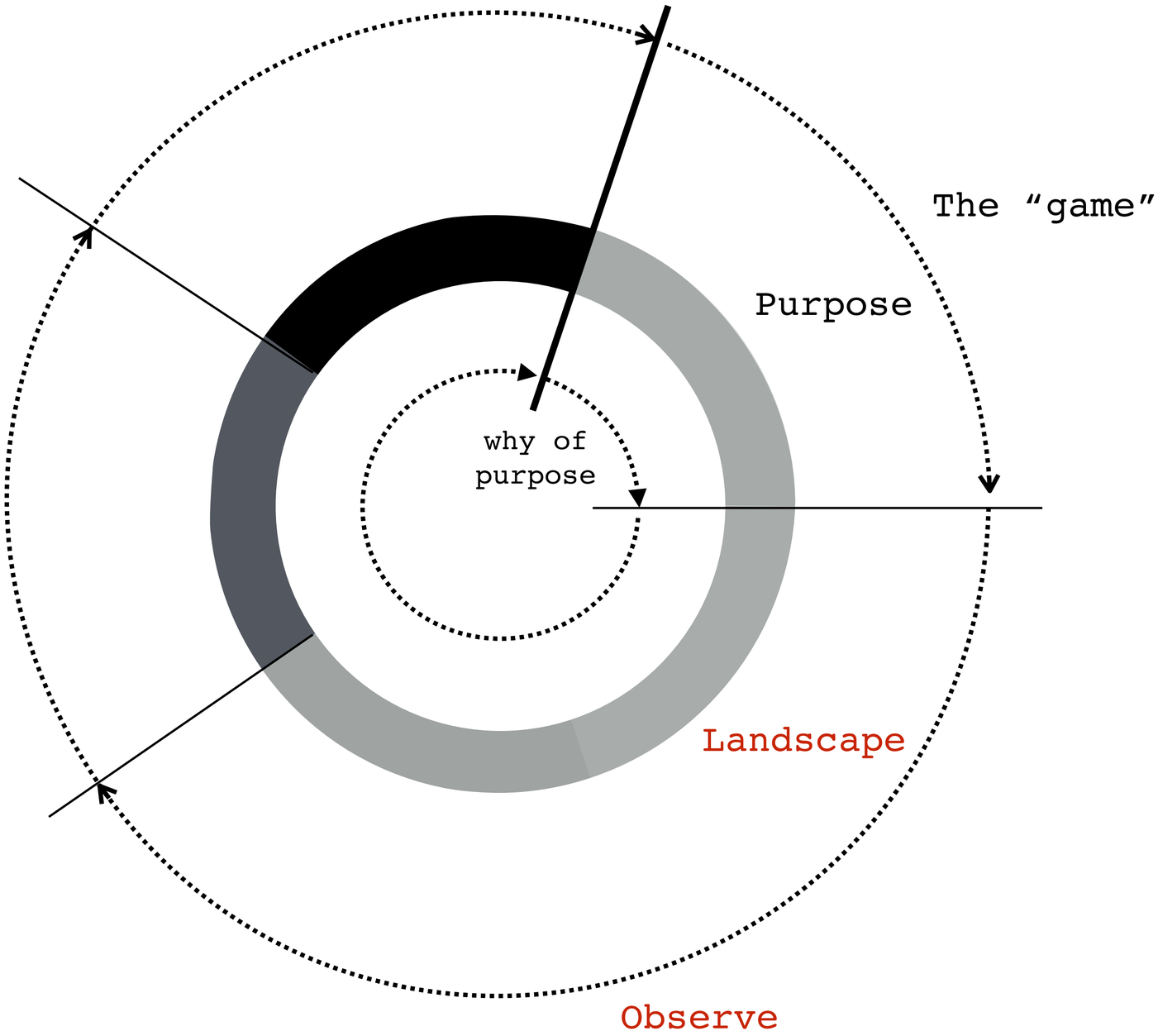
**Gifts Gallery**
Turn your photos into great gifts!

**Promotions**
Share pictures & when friend registers, you both get 3 free 6x4 prints.

Fotango website, 2005, courtesy of CEO.


The “game”
Purpose
why of
purpose


The “game”
Purpose
why of
purpose
Landscape
Observe

Vikings
Chess
Themistocles

Tristan Ferne, Nov 2011, CC by 2.0
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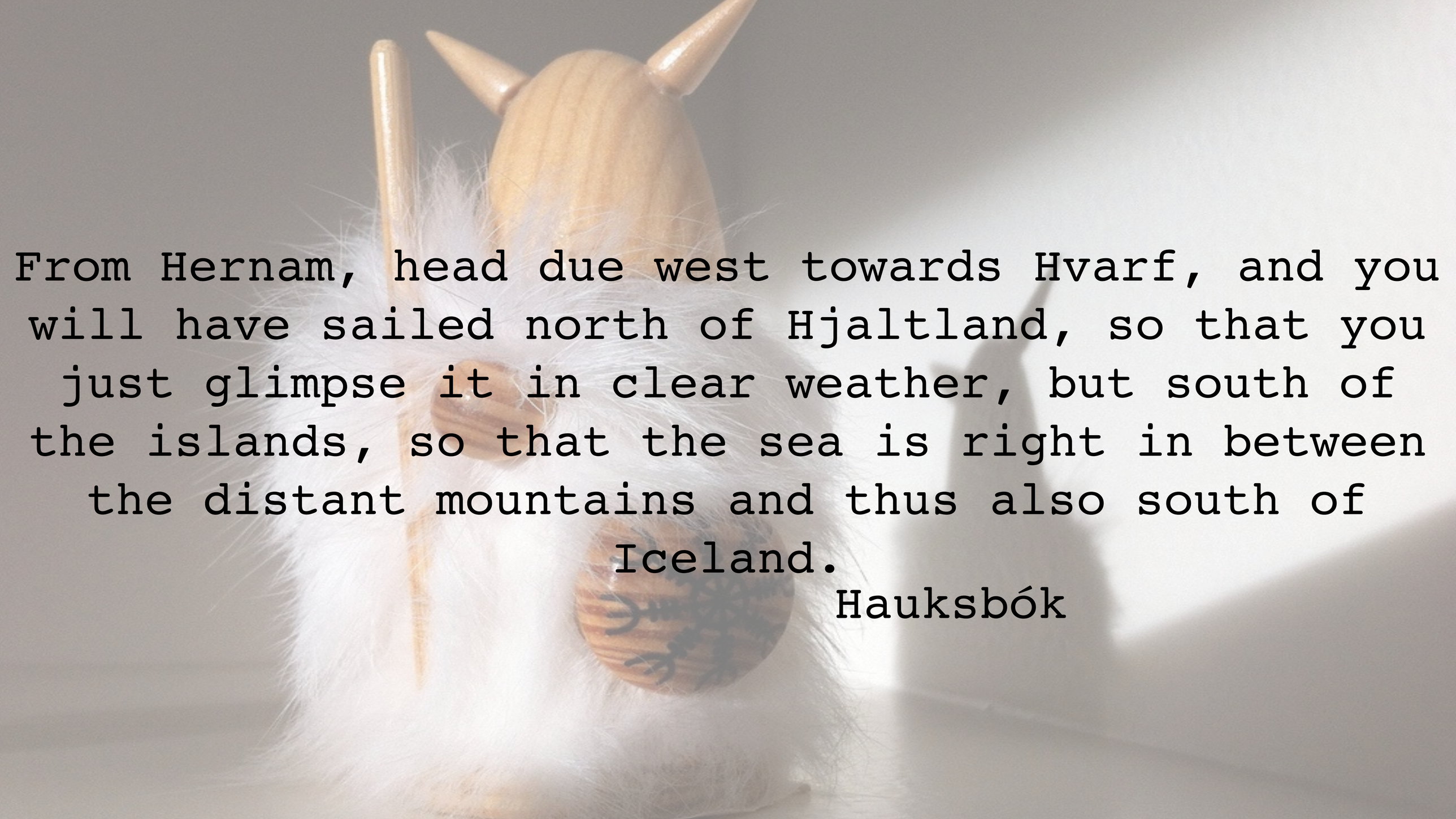
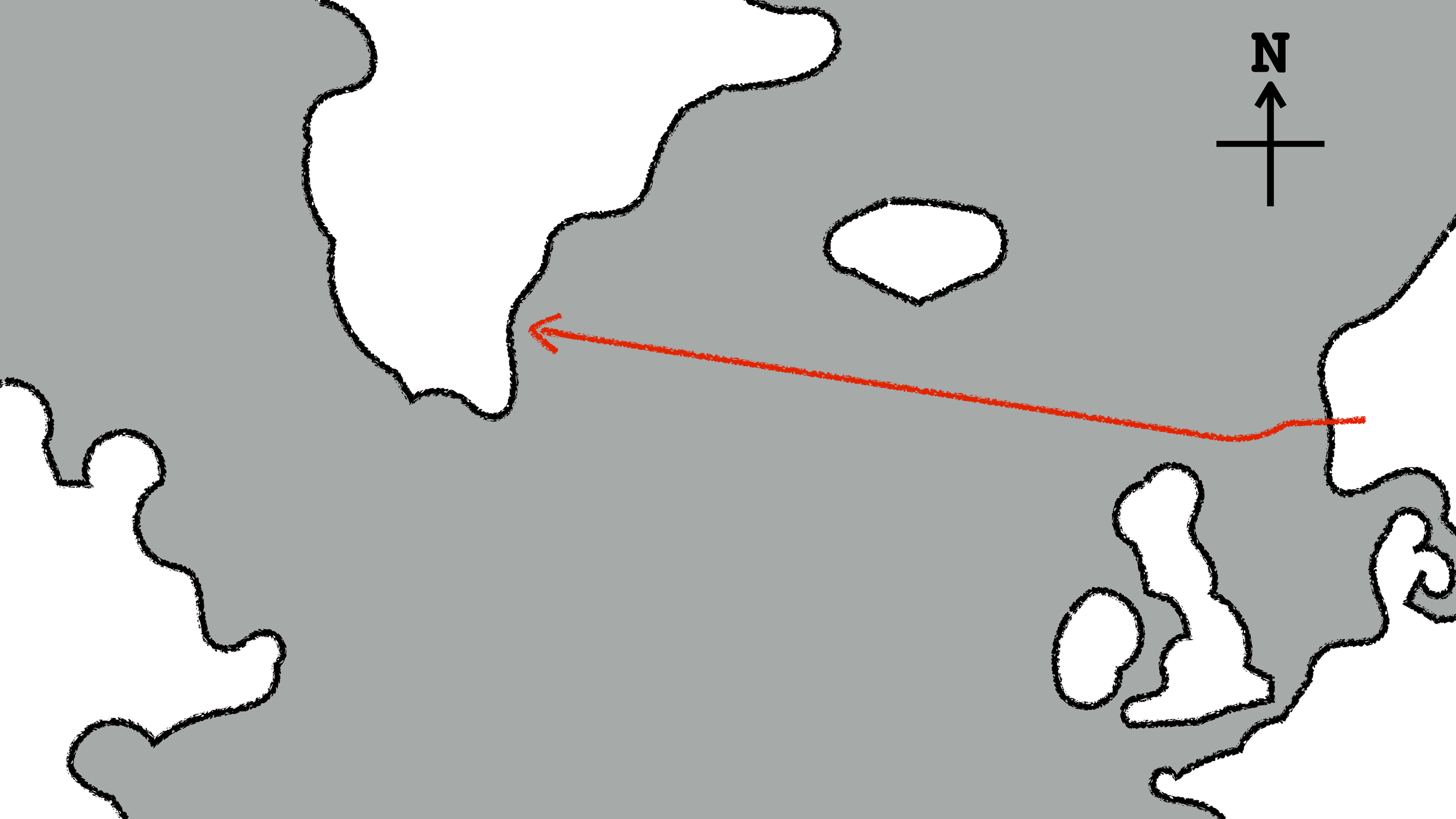
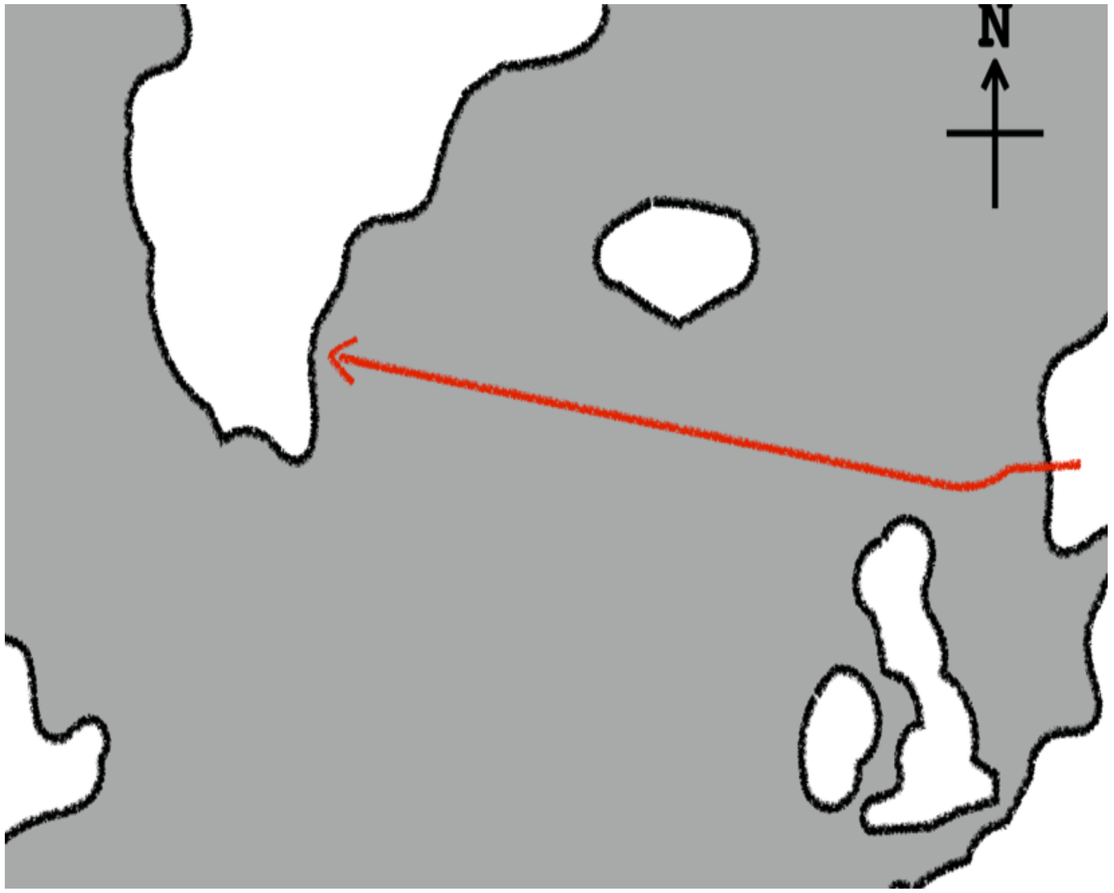


From Hernam, head due west towards Hvarf, and you will have sailed north of Hjaltland, so that you just glimpse it in clear weather, but south of the islands, so that the sea is right in between the distant mountains and thus also south of Iceland.

Hauksbók


N

# What would you use to navigate?




visual map

west towards Hvarf, and you will have sailed north of Hjaltland, so that you just glimpse it in clear weather, but south of the islands, so that the sea is right in between the distant mountains and thus also south of Iceland.

verbal story

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https://commons.wikimedia.org/wiki/File:Chess_rlt45.svg

Pawn (w)

Pawn (w)

Pawn (w), Pawn (b)

Pawn (w), Pawn (b)

Pawn (w), Pawn (b), Pawn (w)

Pawn (w), Pawn (b), Pawn (w)

Pawn (w), Pawn (b), Pawn (w), Queen (b)

Pawn (w), Pawn (b), Pawn (w), Queen (b)

Pawn(w), Pawn(b), Pawn(w), Queen(b), Pawn(w), Queen(b), Bishop(w), Knight(b), Queen(w), Pawn(b), Rook(w), Bishop(b),
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Pawn(b), Pawn(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Queen(w) ... **WINS**

Pawn(w), Pawn(b), Pawn(w), Queen(b), Pawn(w), Queen(b), Bishop(w), Knight(b), Queen(w), Pawn(b), Rook(w), Bishop(b),
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Pawn(b), Pawn(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Queen(w) ... **WINS**

# Secrets of Success

Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b),
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Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Pawn(w), Pawn(b), Queen(w),
King(b), Queen(w), Pawn(b), Knight(w), Knight(b), Knight(w), Pawn(b), Rook(w), Rook(b),Pawn(w), Knight(b), Pawn(w),
Pawn(b), Queen(w), Knight(b),King(w), Knight(b), Pawn(w), Queen(b), Knight(w), Pawn(b), Rook(w), Rook(b), Rook(w),
Knight(b), Pawn(w), Pawn(b), Queen(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w),
Bishop(b), Pawn(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Pawn(w), Knight(b), Pawn(w), Knight(b), Pawn(w),
Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w),
King(b), Pawn(w), Bishop(b), Rook(w), Pawn (b), Queen(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Rook(w),
Bishop(b), Pawn(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w),
Bishop(b), Queen(w), King(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Pawn(w), Knight(b),
Queen(w), ... **WINS**

Harvard Business Review

LEADERSHIP

# How Earlobes Can Signify Leadership Potential

by Carl Senior, Robin Martin, Michael West, and Rowena M. Yeats

FROM THE NOVEMBER 2011 ISSUE

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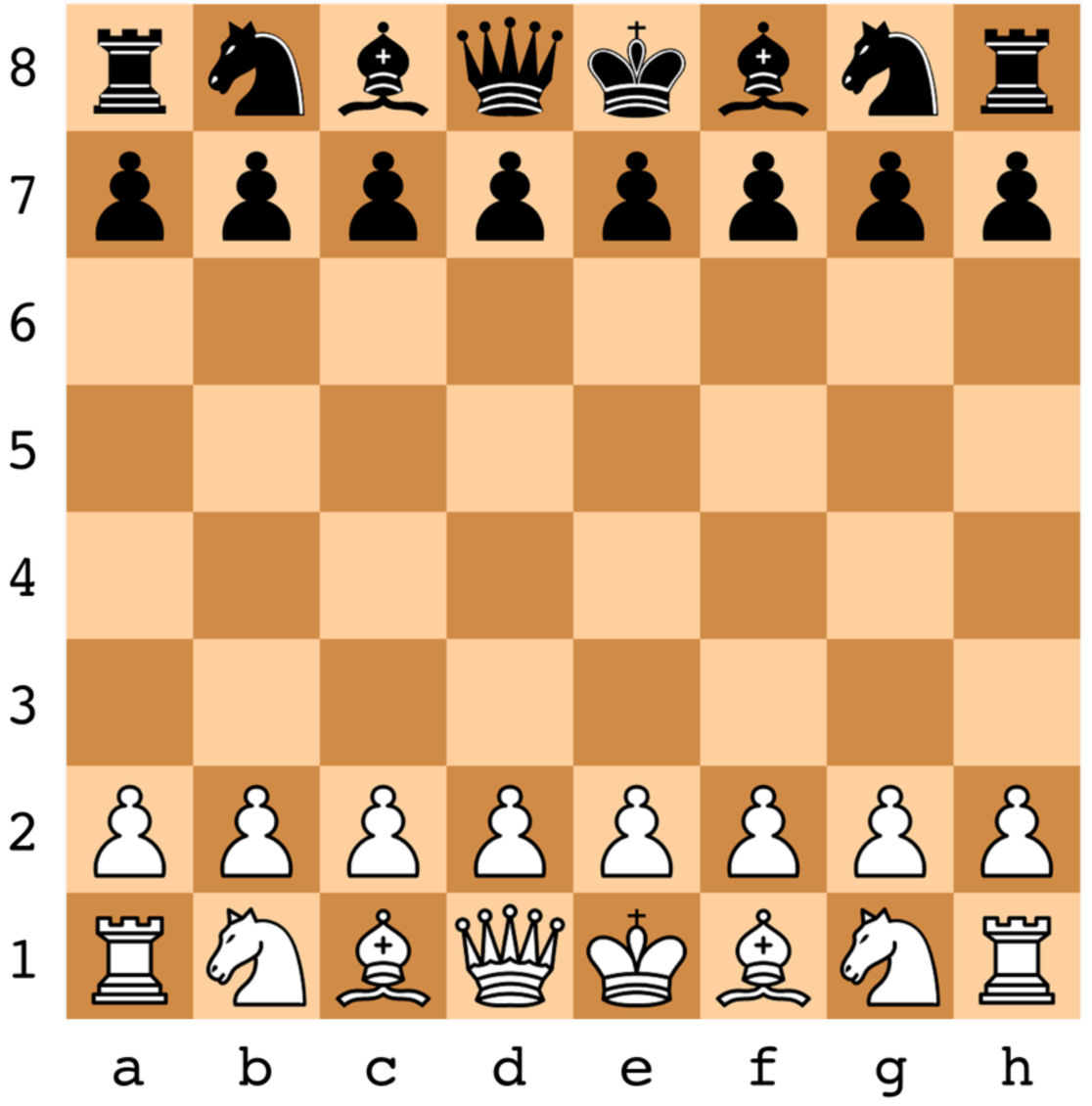
Evolutionary biologists have learned that people with greater "genetic fitness," as manifested by a high degree of left-right body symmetry, are not just considered better looking but also tend to be healthier, more intelligent, and more dominant than others. They're the classic alphas who rise to the top of rigidly hierarchical organizations such as the military.

But our research shows that people with subtle asymmetries—for example, imbalances in ear or finger length—are often better "transformational" leaders, able to inspire followers to put self-interest aside for the good of the group. Furthermore, teams they lead outperform teams whose leaders have more-symmetrical bodies.


8
7
6
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1
a
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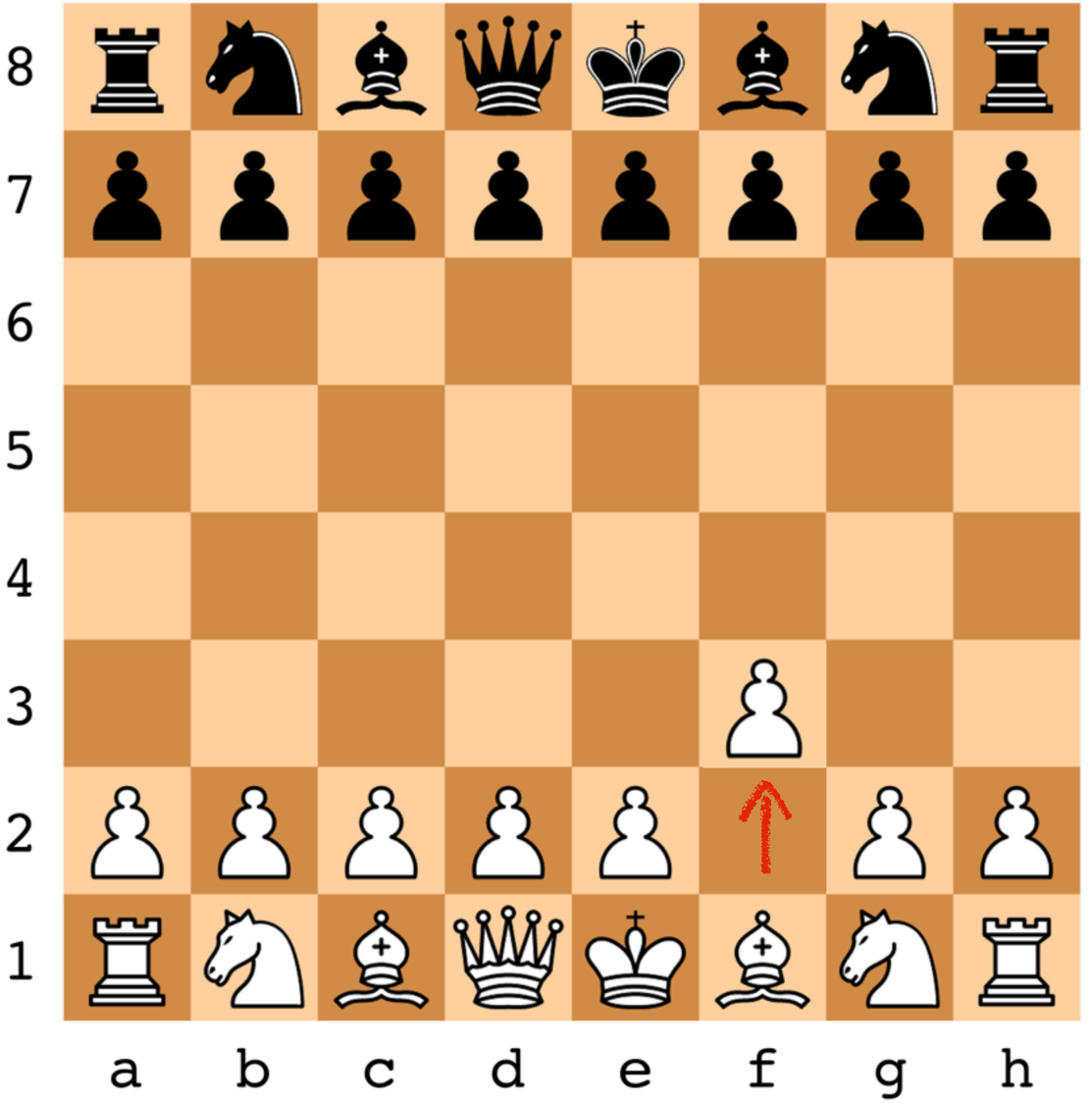
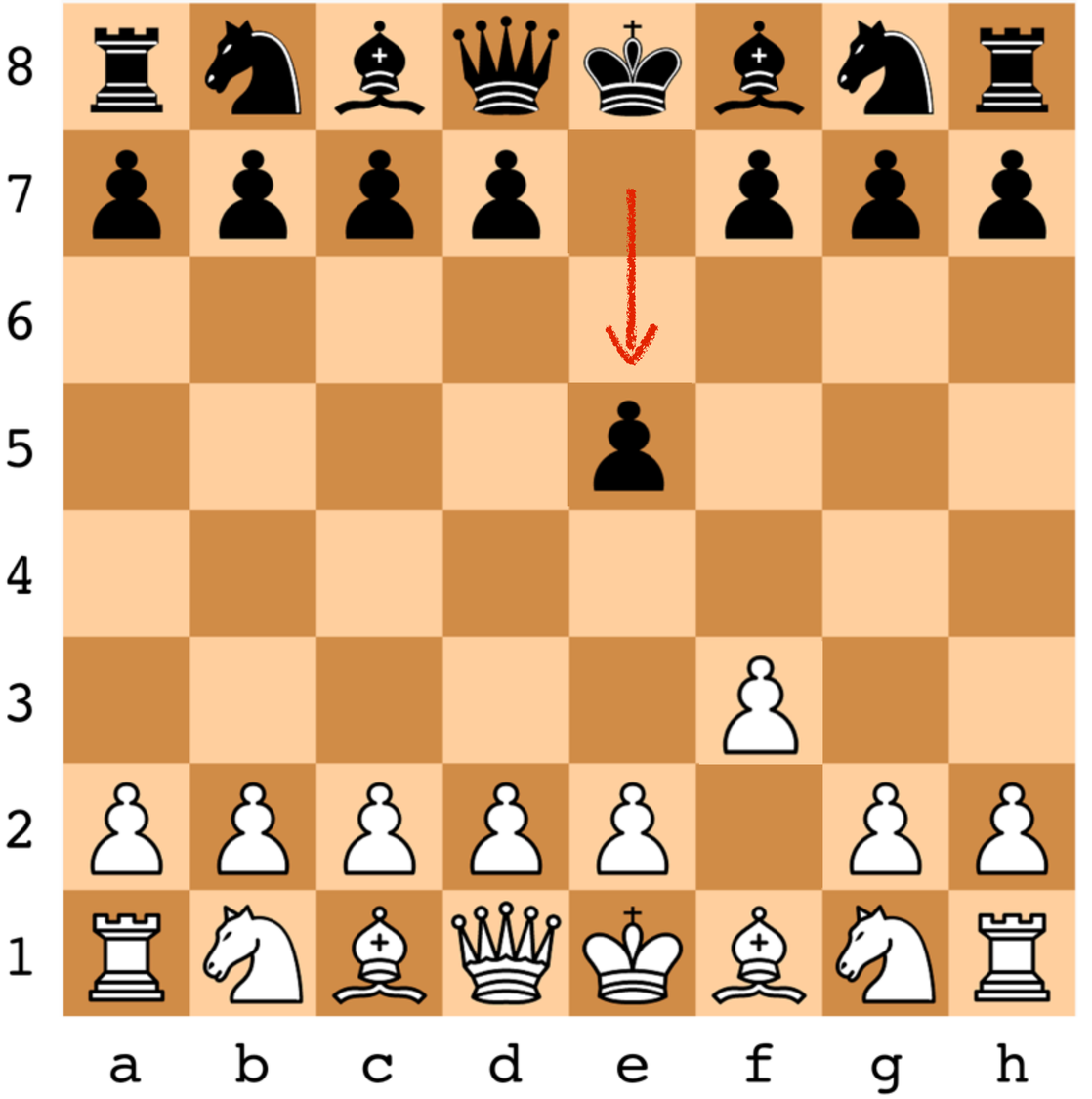
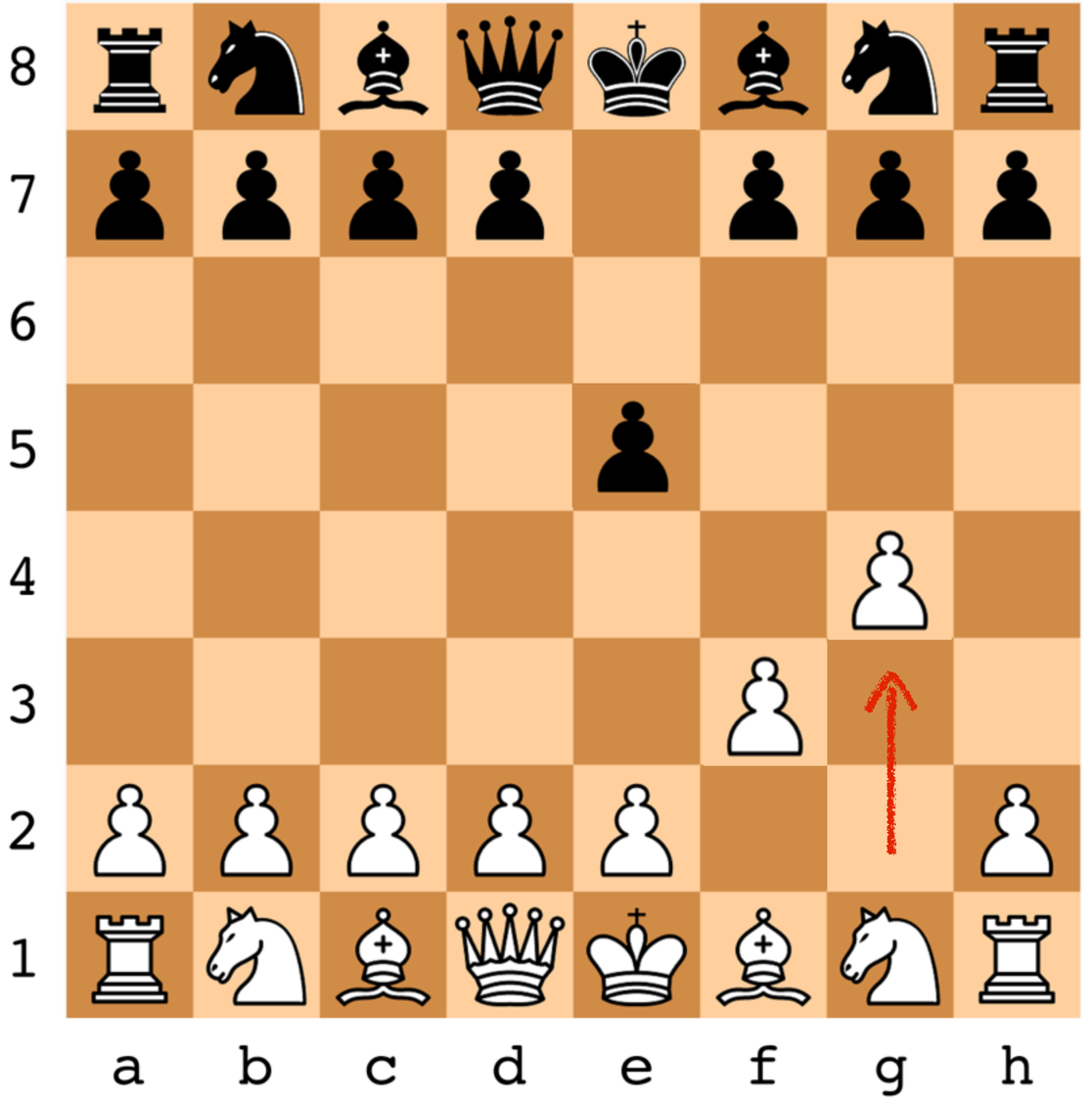
Pawn (w)



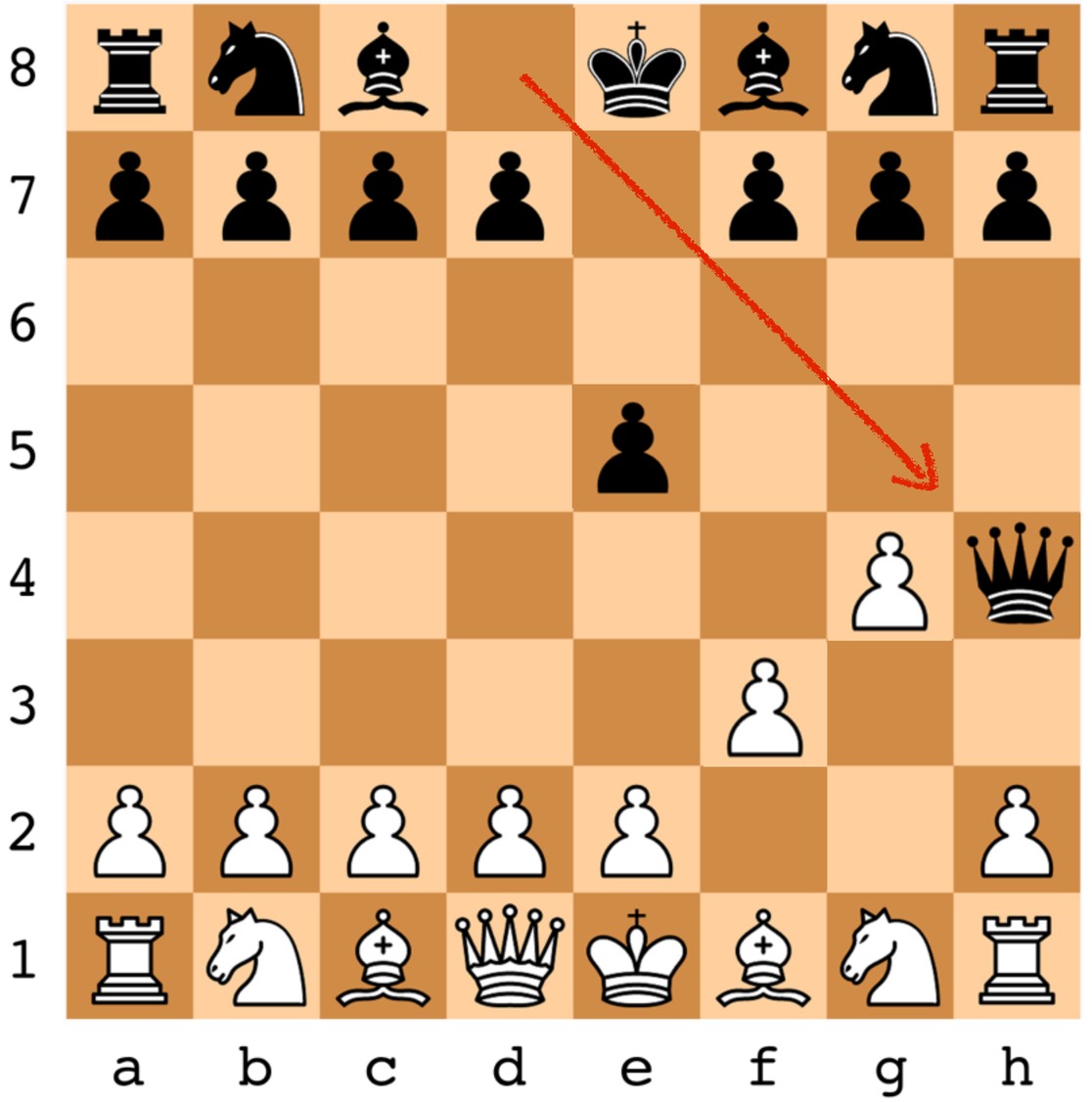
Pawn (w), Pawn (b)



Pawn (w), Pawn (b), Pawn (w)



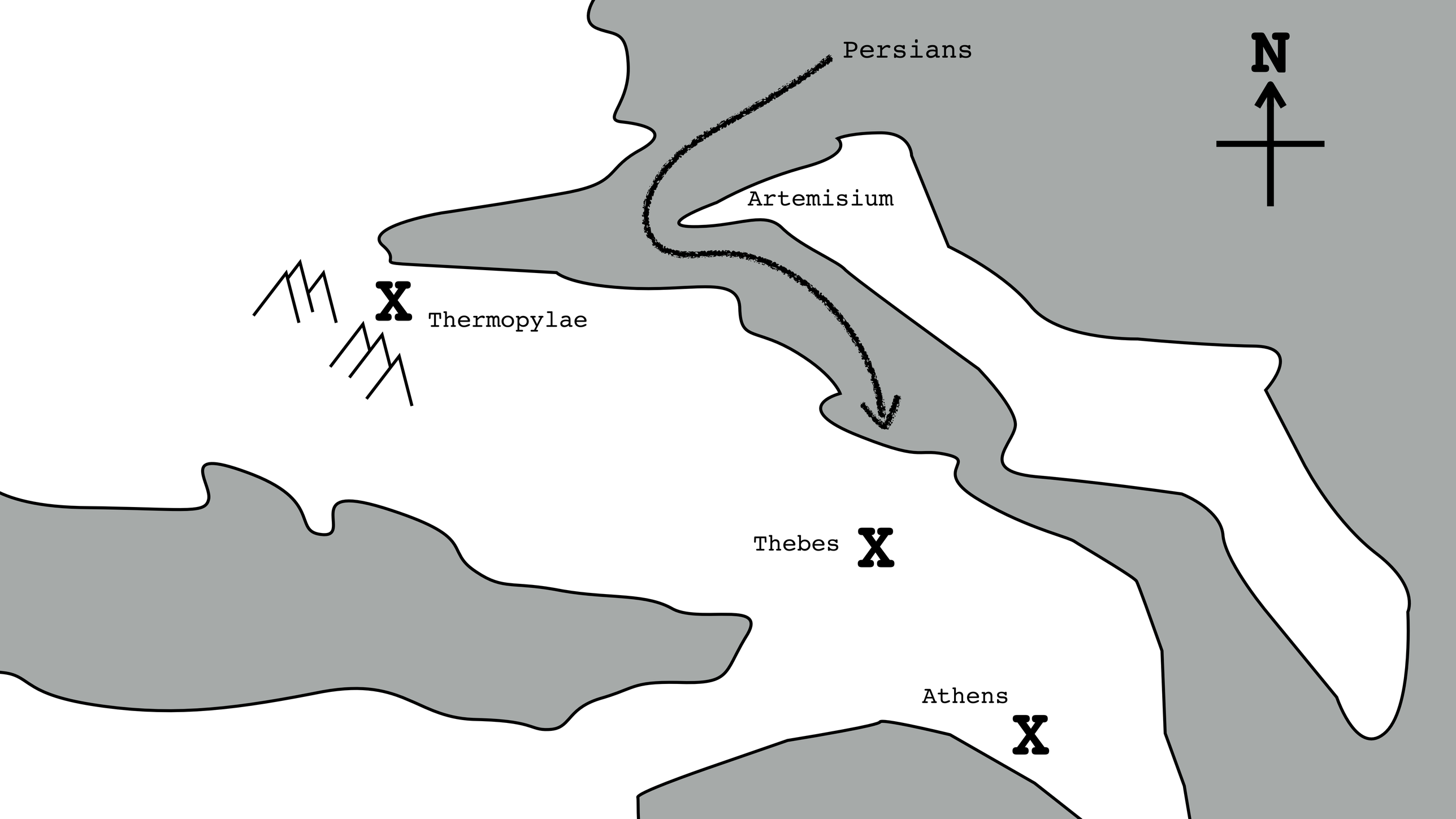
Pawn (w), Pawn (b), Pawn (w), Queen (b)
... LOST.

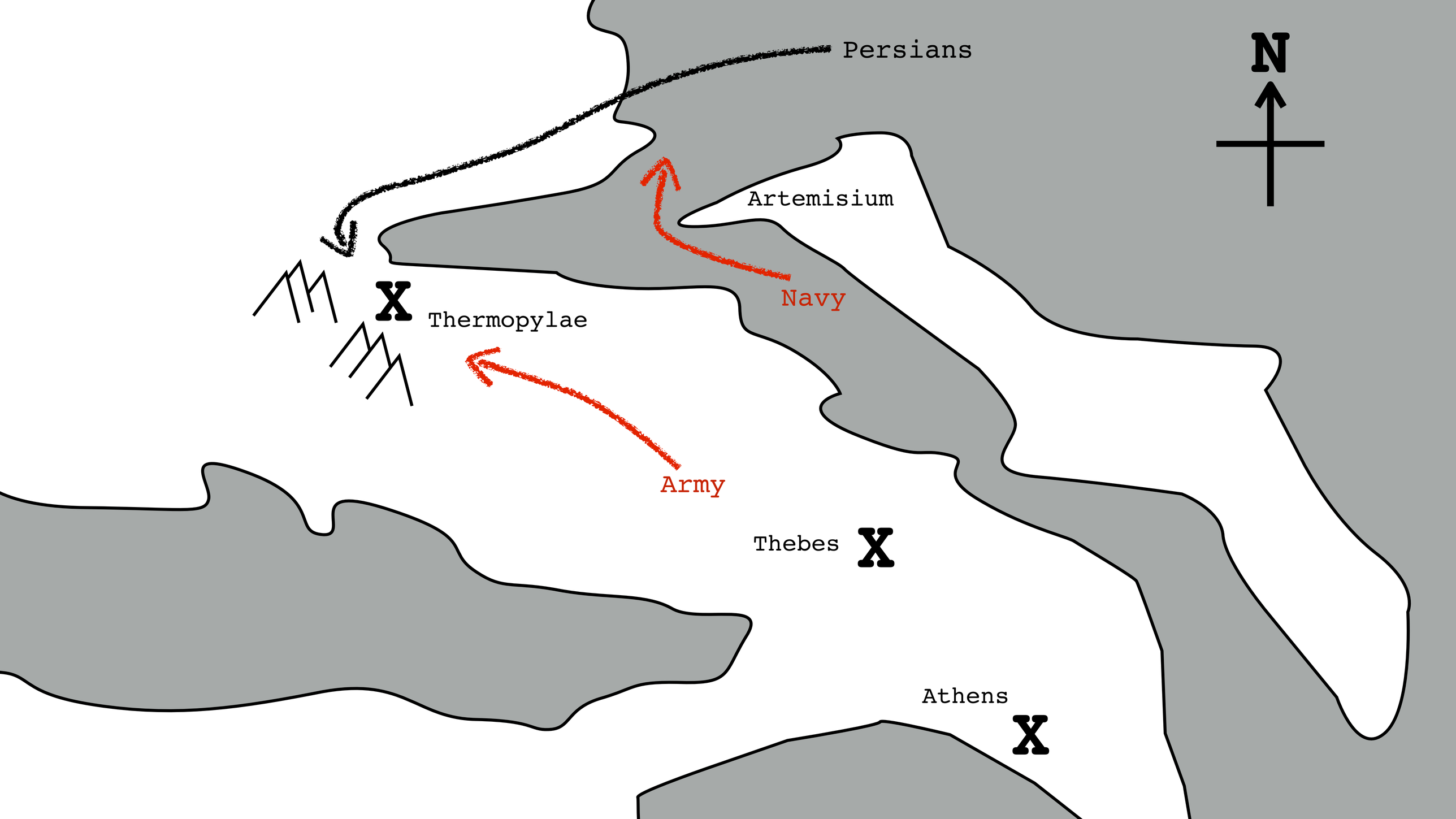


# What would you use to learn?

Pawn(w), Pawn(b), Pawn(w), Queen(b), Pawn(w), Queen(b), Bishop(w), Knight(b), Queen(w), Pawn(b), Rook(w), Bishop(b), Knight(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Queen(w), King(b), Pawn(w), Bishop(b), Rook(w), Pawn (b), Queen(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Queen(w), King(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Pawn(w), Pawn(b), Queen(w), King(b), Queen(w), Pawn(b), Knight(w), Knight(b), Knight(w), Pawn(b), Rook(w), Rook(b),Pawn(w), Knight(b), Pawn(w), Pawn(b), Queen(w), Knight(b),King(w), Knight(b), Pawn(w), Queen(b), Knight(w), Pawn(b), Rook(w), Rook(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Queen(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Pawn(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Rook(w), Knight(b), Pawn(w), King(b), Pawn(w), Bishop(b), Rook(w), Pawn (b), Queen(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Queen(w), King(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Pawn(w), Knight(b), Pawn(w), Knight(b), Knight(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Pawn(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Knight(b), Knight(w), Pawn(b), Rook(w), Rook(b),Pawn(w), Knight(b), Pawn(w), Pawn(b), Queen(w), Pawn(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Knight(w), Pawn(b), Nook(w), Nook(b),Pawn(w), Knight(b), Pawn(w), Pawn(b), Queen(w), Knight(b), King(w), Knight(b), Pawn(w), Queen(b), Knight(w), Pawn(b), Rook(w), Rook(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Pawn(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Queen(w) ... **WINS**

Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Pawn(w), Pawn(b), Queen(w), King(b), Queen(w), Pawn(b), Knight(w), Knight(b), Knight(w), Pawn(b), Rook(w), Rook(b),Pawn(w), Knight(b), Pawn(w), Pawn(b), Queen(w), Pawn(w), Knight(b), Pawn(w), Knight(b), Pawn(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Knight(w), Pawn(b), Rook(w), Rook(b),Pawn(w), Knight(b), Pawn(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Queen(b), Pawn(w), Queen(b), Bishop(w), Knight(b), Queen(w), Pawn(b), Rook(w), Bishop(b), Knight(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Queen(w), King(b), Pawn(w), Bishop(b), Rook(w), Pawn (b), Queen(w), Knight(b), Pawn(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Queen(w), King(b), Queen(w), Pawn(b), Knight(w), Knight(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Pawn(w), Pawn(b), Queen(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Bishop(b), Pawn(w), Pawn(b), Knight(w), Pawn(b), Rook(w), Knight


Persians
N
Artemisium
Thermopylae
Thebes
Athens


Persians
N
Artemisium
Navy
Thermopylae
Army
Thebes
Athens

## Strengths

A well trained Spartan army

A high level of motivation not to become a Persian slave

## Weaknesses

The Ephors might stop the Spartans turning up

A lot of Persians ARE turning up

## Opportunities

Get rid of the Persians

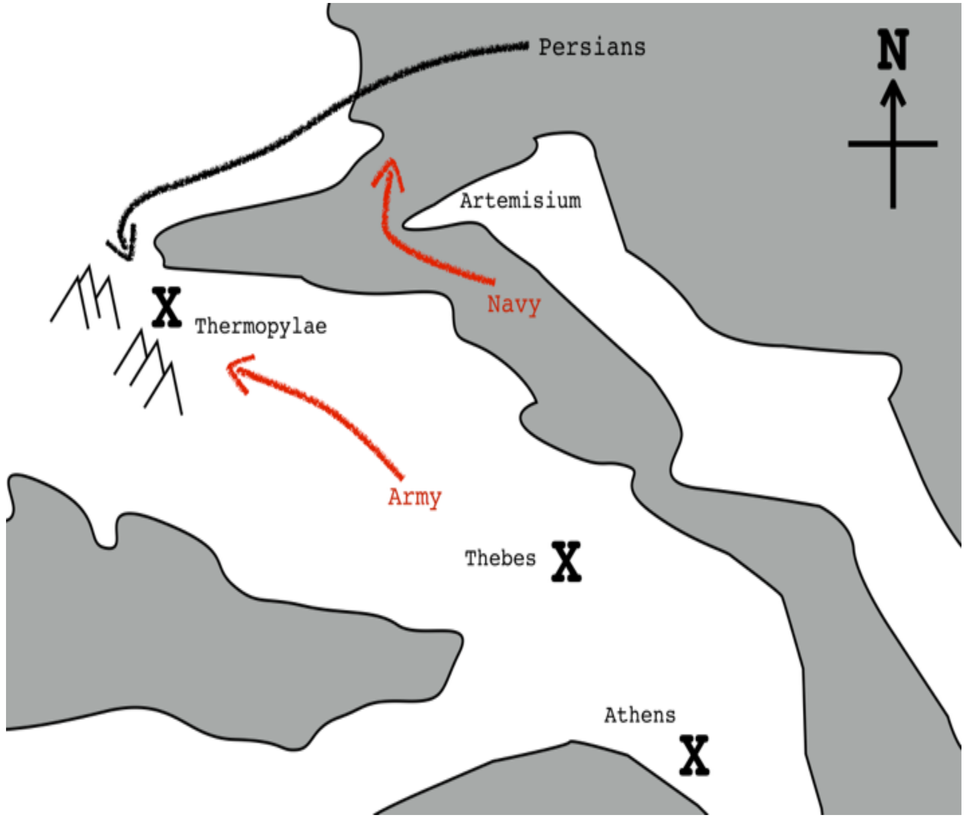
Get rid of the Spartans

## Threats

Persians get rid of us

The Oracle says a really dodgy film might be produced over 2,000 years later

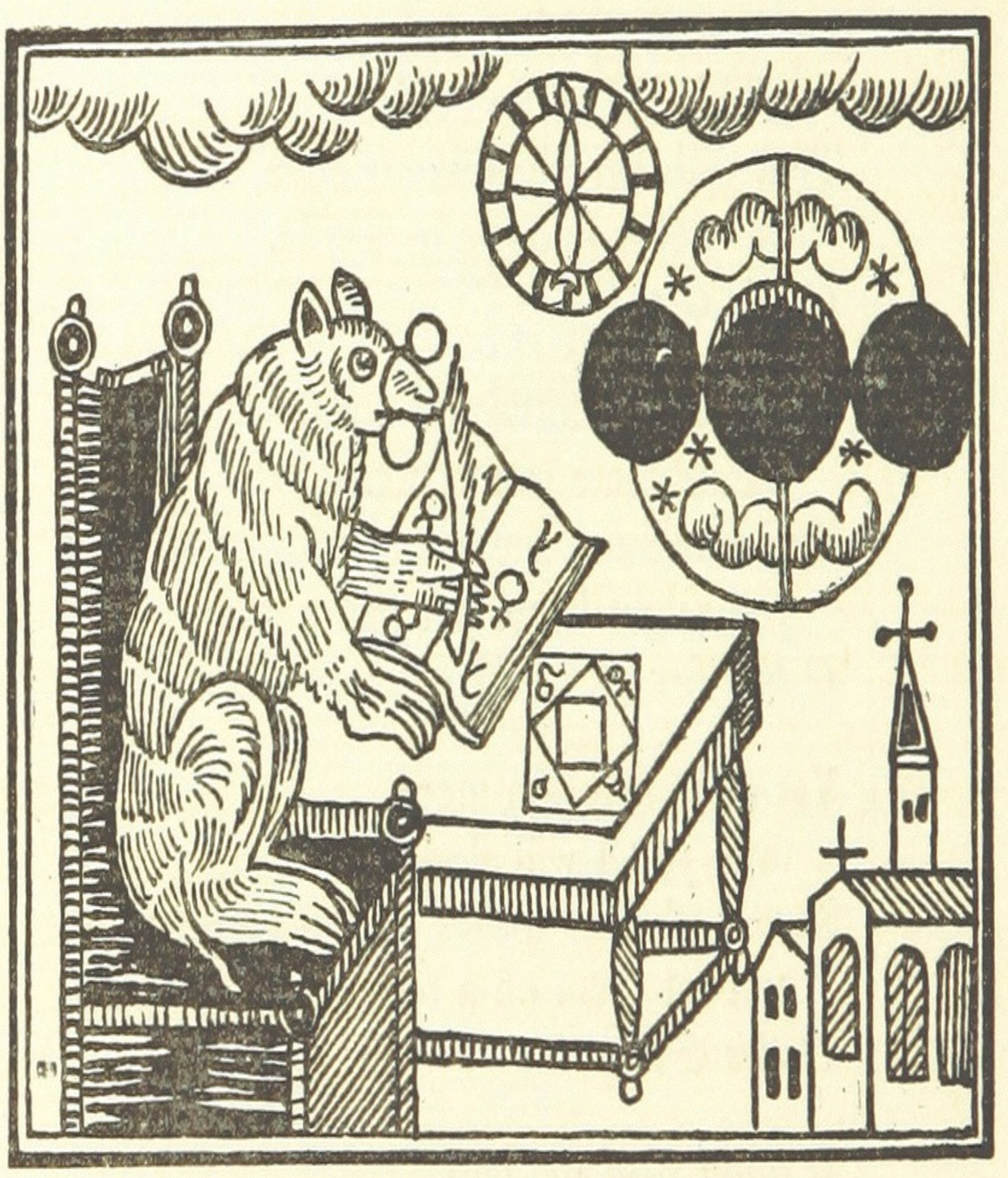
# What would you use to communicate and determine strategy in battle?

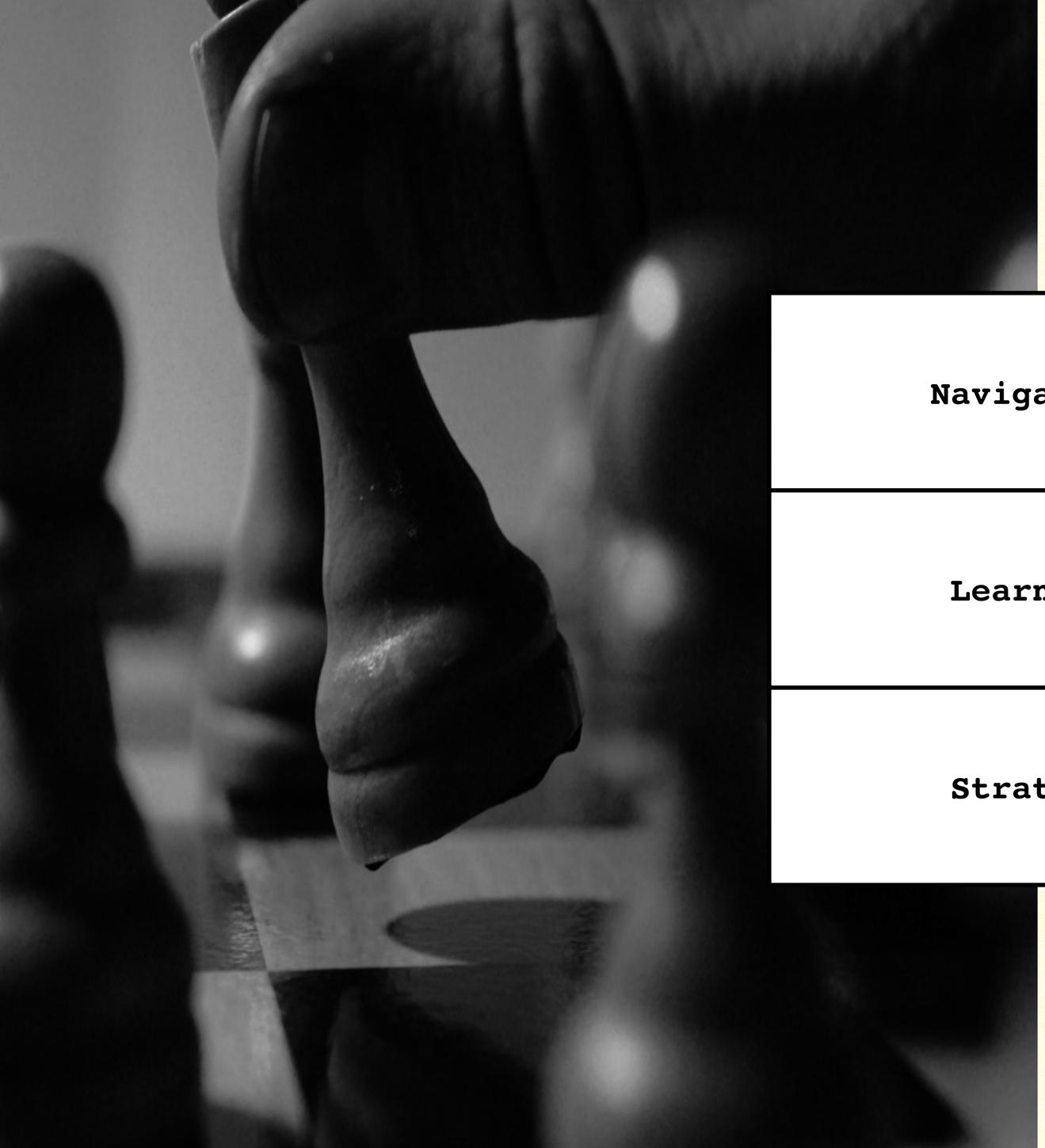



position and movement

| Strengths | Weaknesses |
| --- | --- |
| A well trained Spartan army<br><br>A high level of motivation not to become a Persian slave | The Ephors might stop the Spartans turning up<br><br>A lot of Persians ARE turning up |
| **Opportunities** | **Threats** |
| Get rid of the Persians<br><br>Get rid of the Spartans | Persians get rid of us<br><br>The Oracle says a really dodgy film might be produced over 2,000 years later |

magic framework

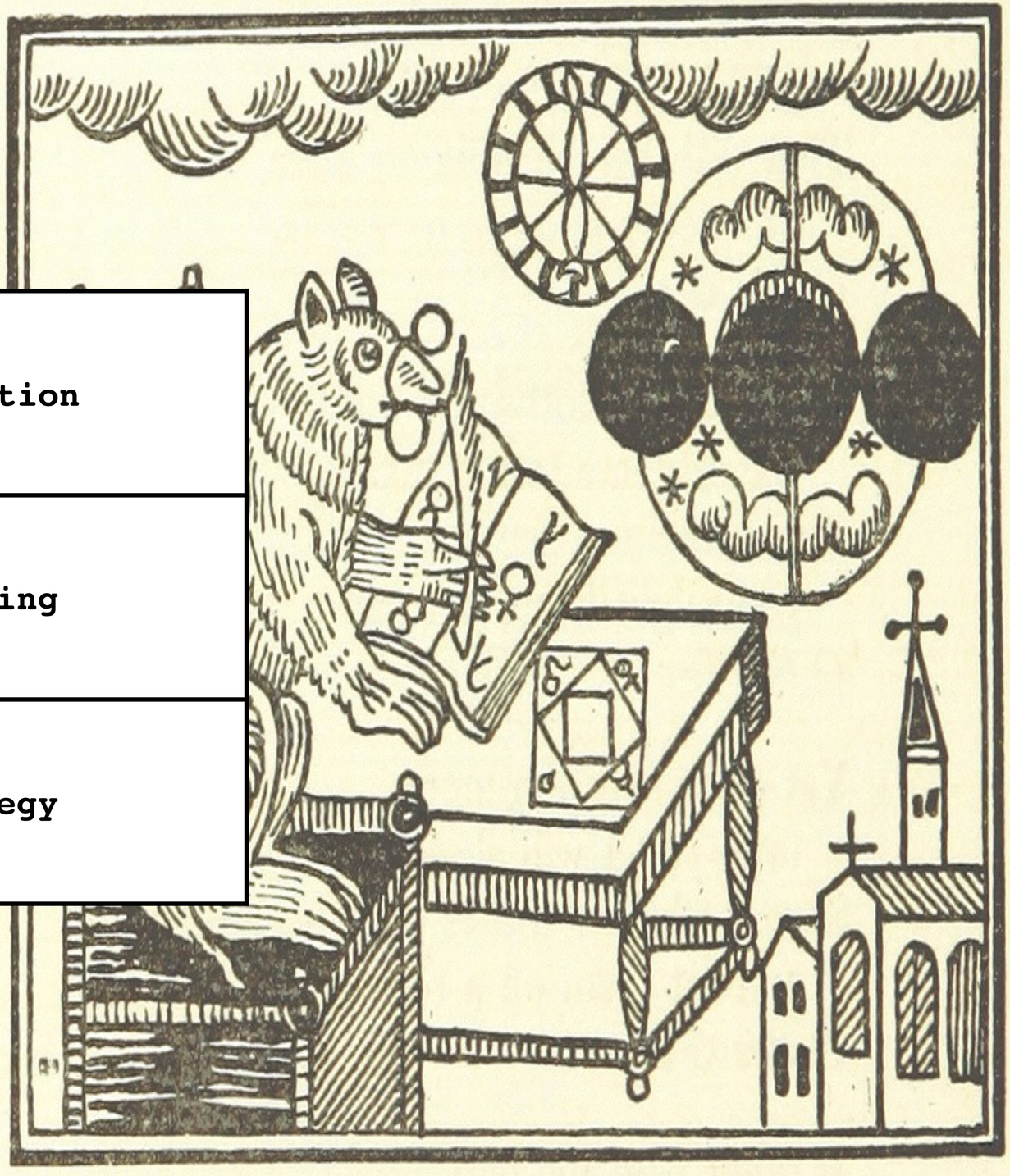




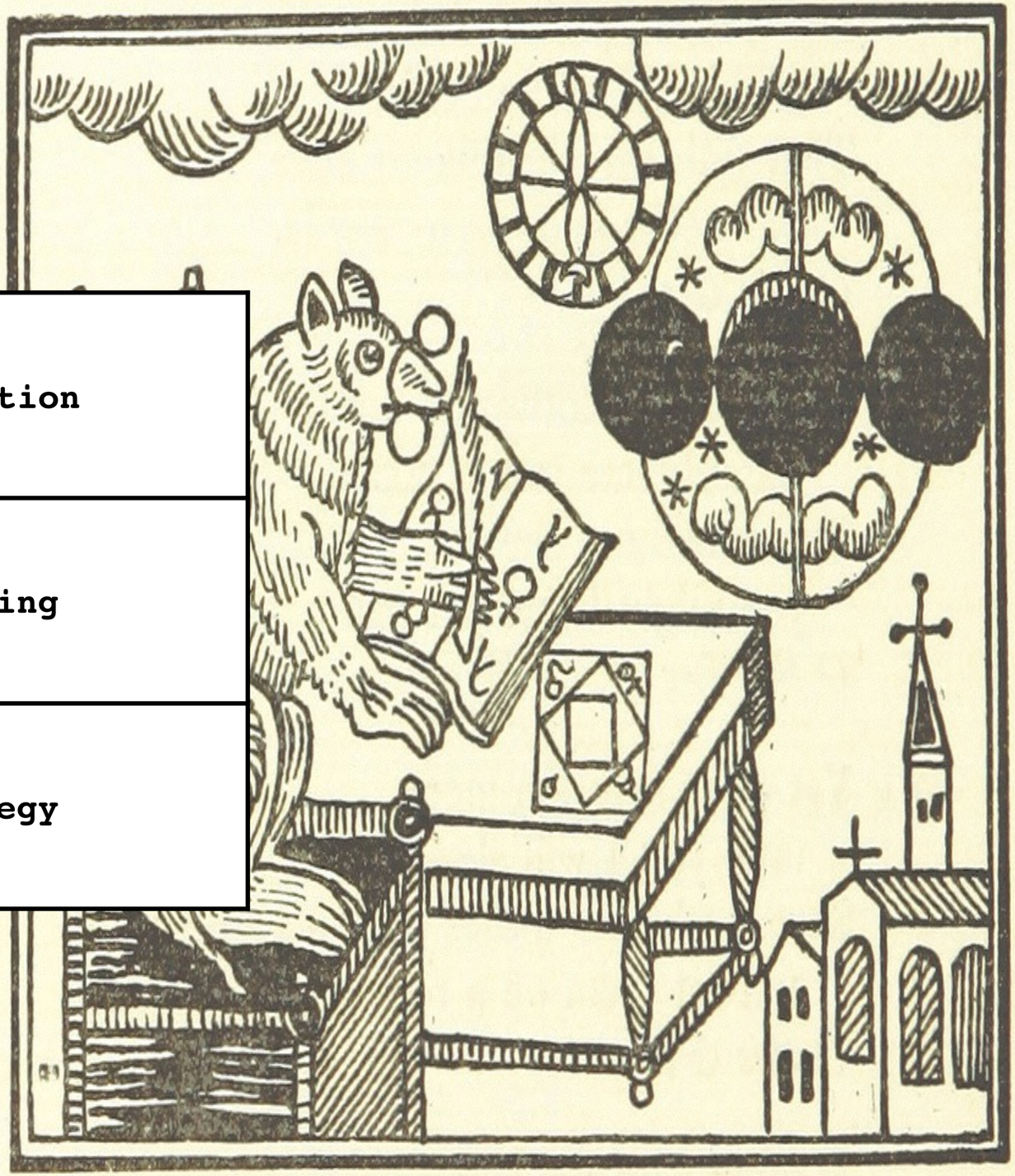
Navigation

Learning

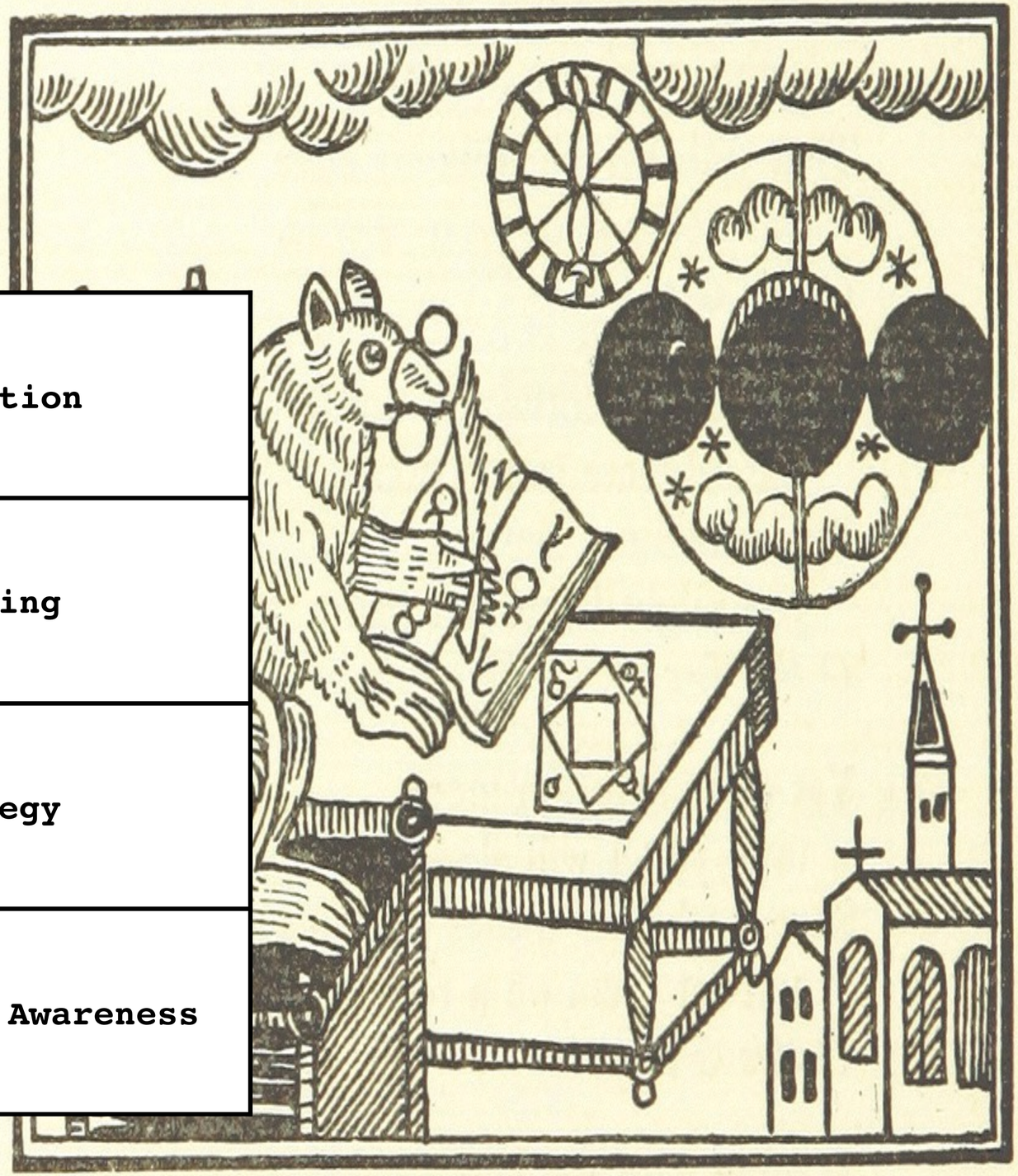
Strategy

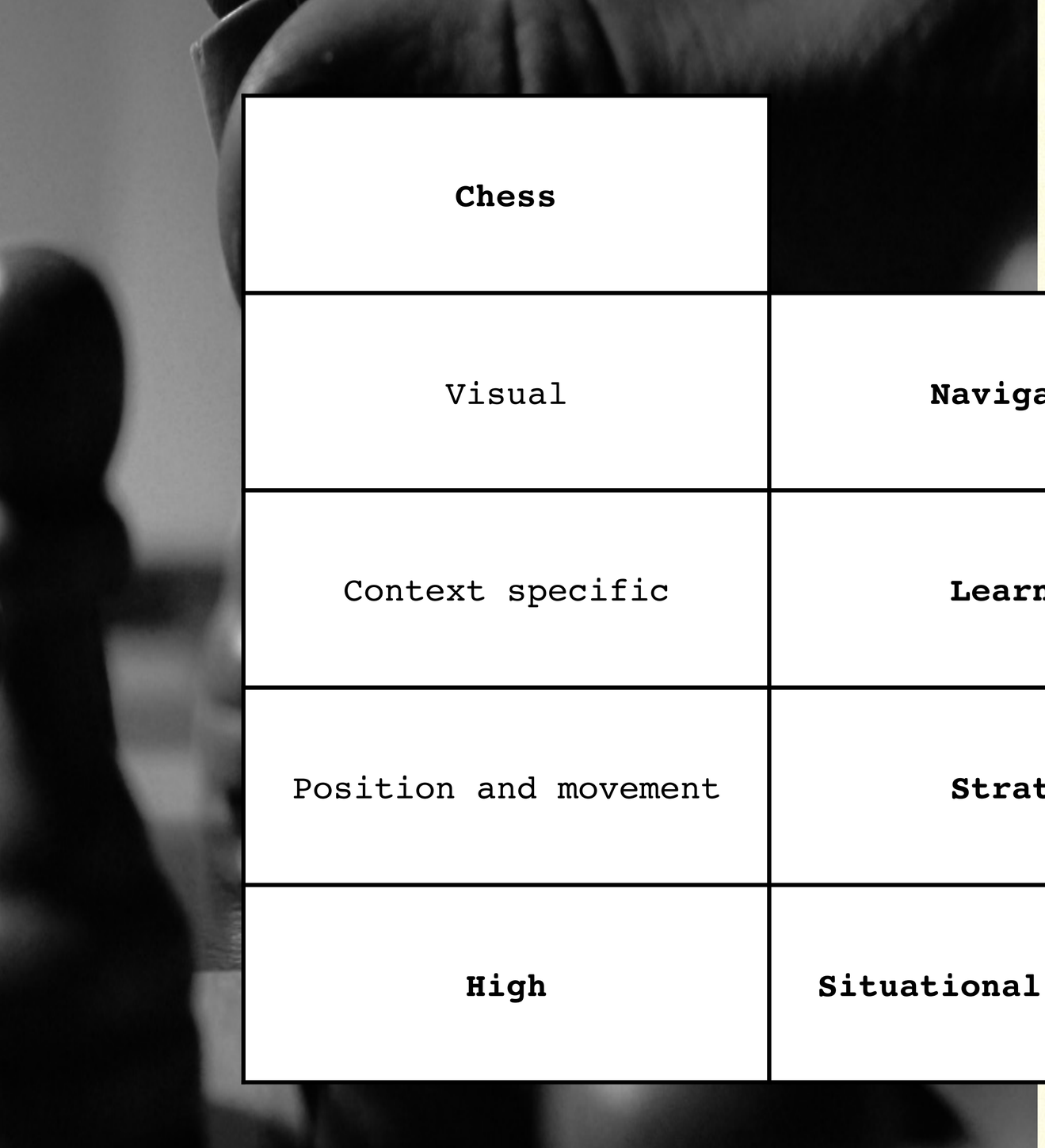


| Chess | |
|---|---|
| Visual | **Navigation** |
| Context specific | **Learning** |
| Position and movement | **Strategy** |

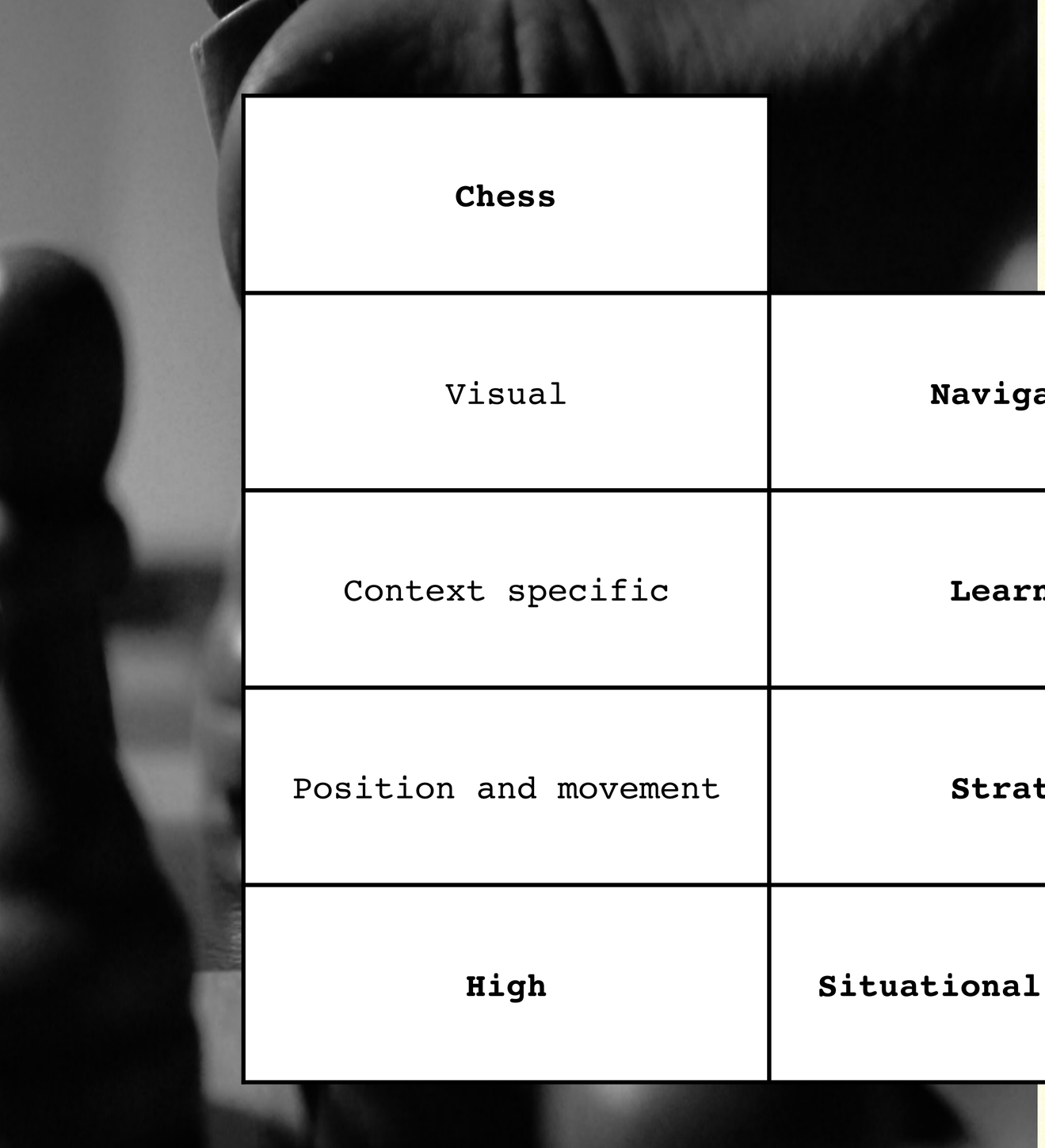


| **Chess** | |
|---|---|
| Visual | **Navigation** |
| Context specific | **Learning** |
| Position and movement | **Strategy** |
| **High** | **Situational Awareness** |



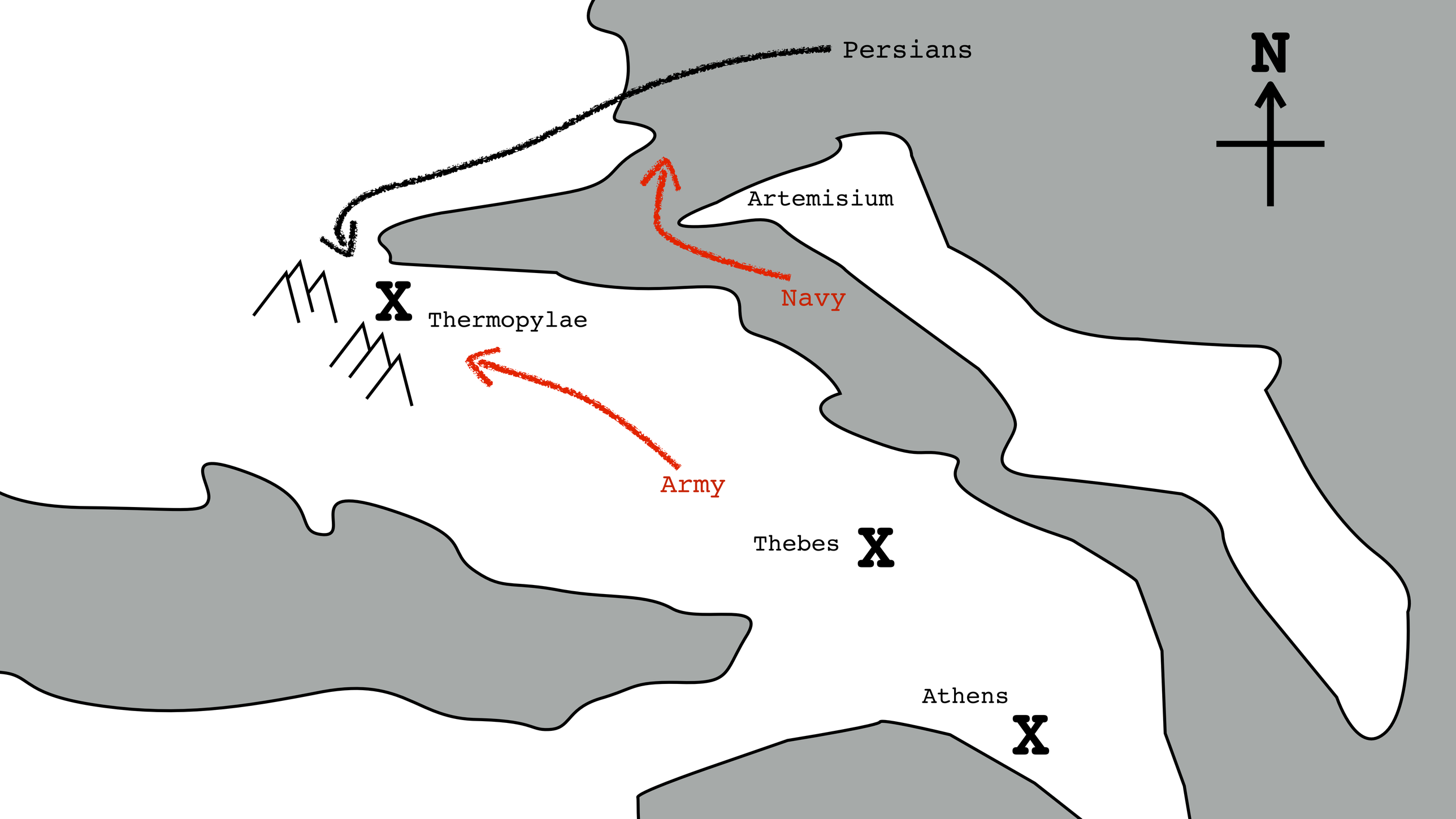


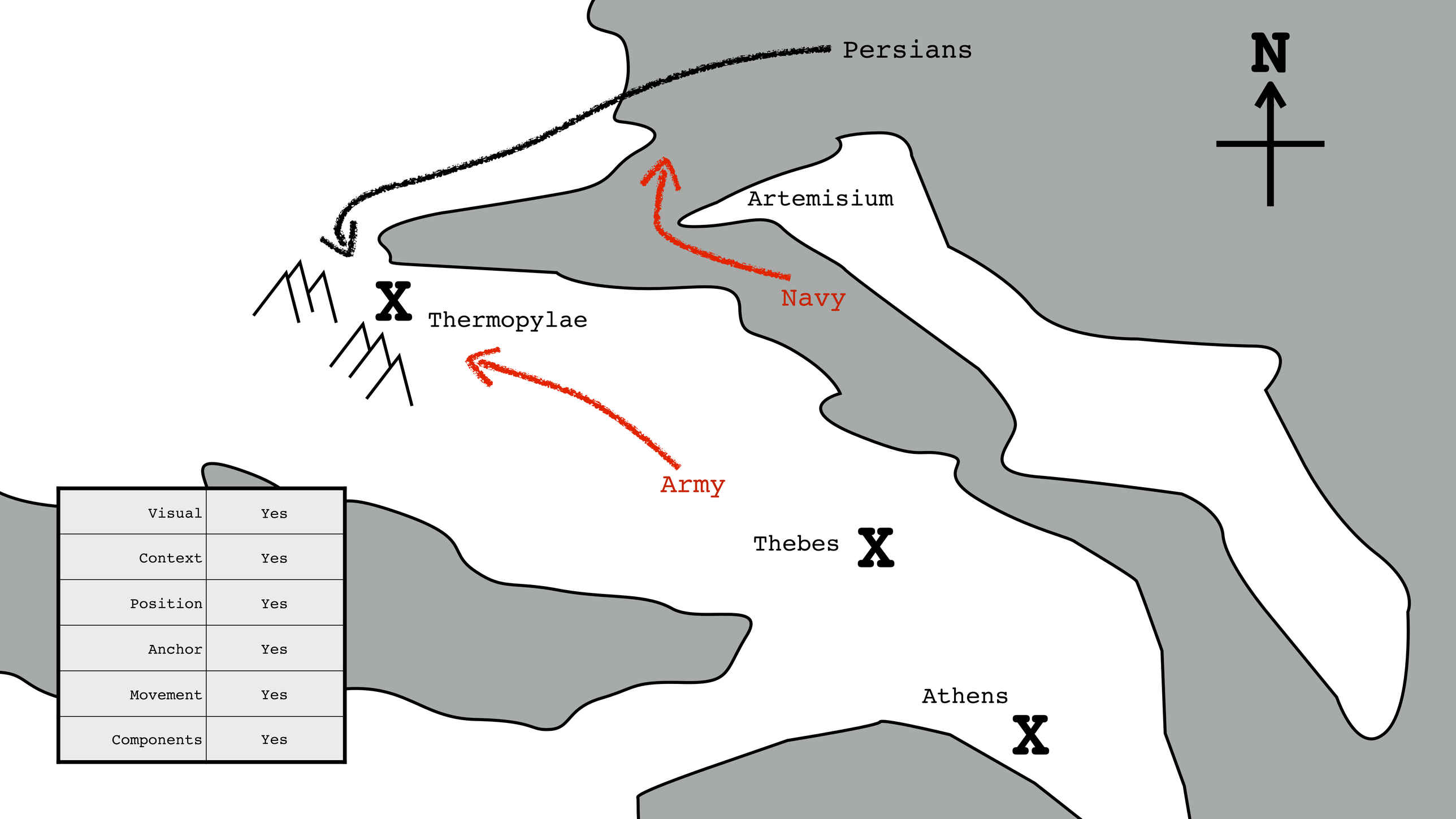
| Chess | | Alchemy |
|---|---|---|
| Visual | **Navigation** | Story telling |
| Context specific | **Learning** | Secrets of success |
| Position and movement | **Strategy** | Magic frameworks |
| **High** | **Situational Awareness** | **Low** |



| Chess | | Alchemy |
|---|---|---|
| Visual | **Navigation** | Story telling |
| Context specific | **Learning** | Secrets of success |
| Position and movement | **Strategy** | Magic frameworks |
| **High** | **Situational Awareness** | **Low** |

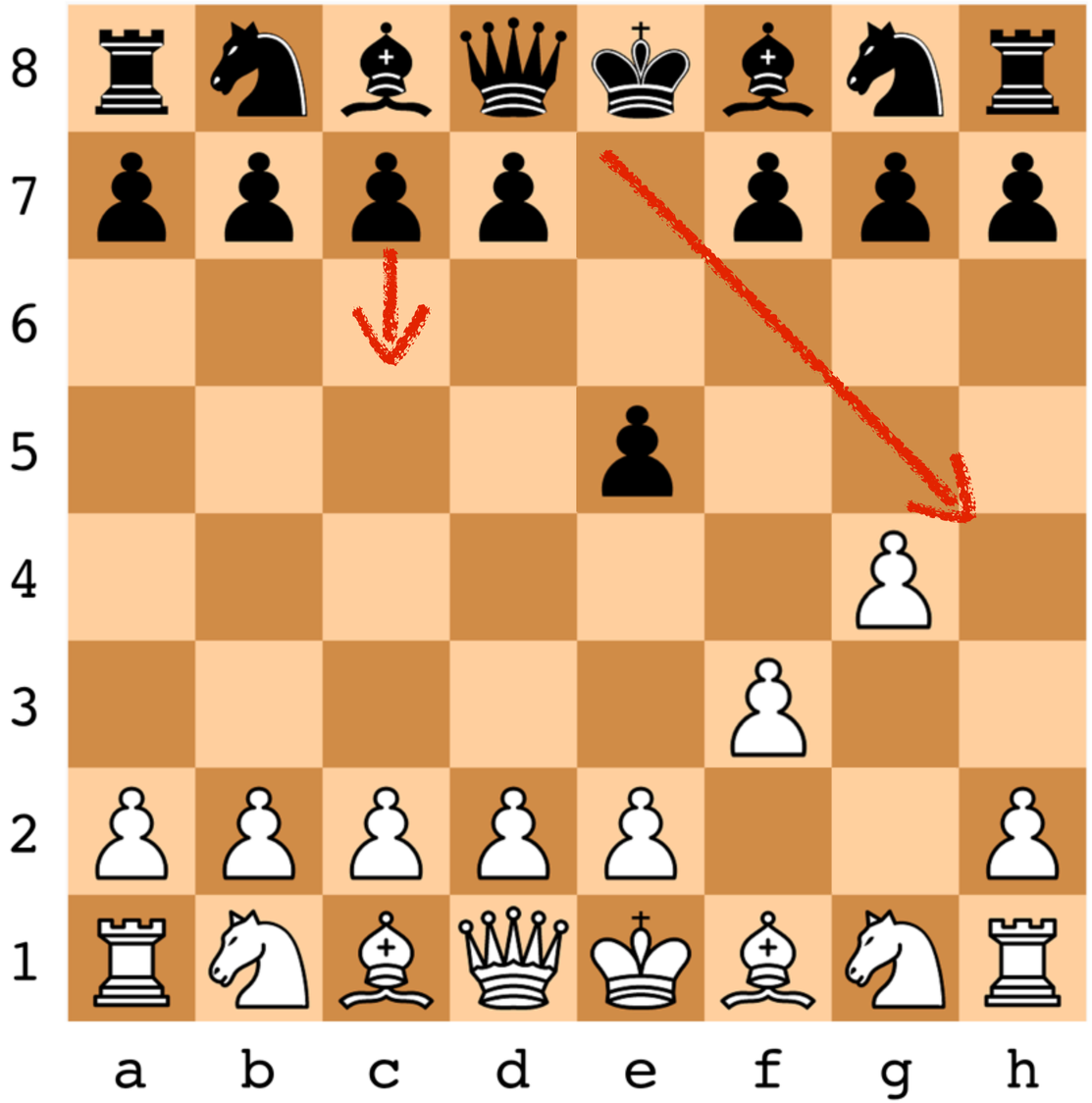
FAKE CEO


Persians
N
Artemisium
Navy
Thermopylae
Army
Thebes
Athens




| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | Yes |
| Components | Yes |

| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | Yes |
| Components | Yes |



| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | Yes |
| Components | Yes |

But we have maps!

# Systems Map

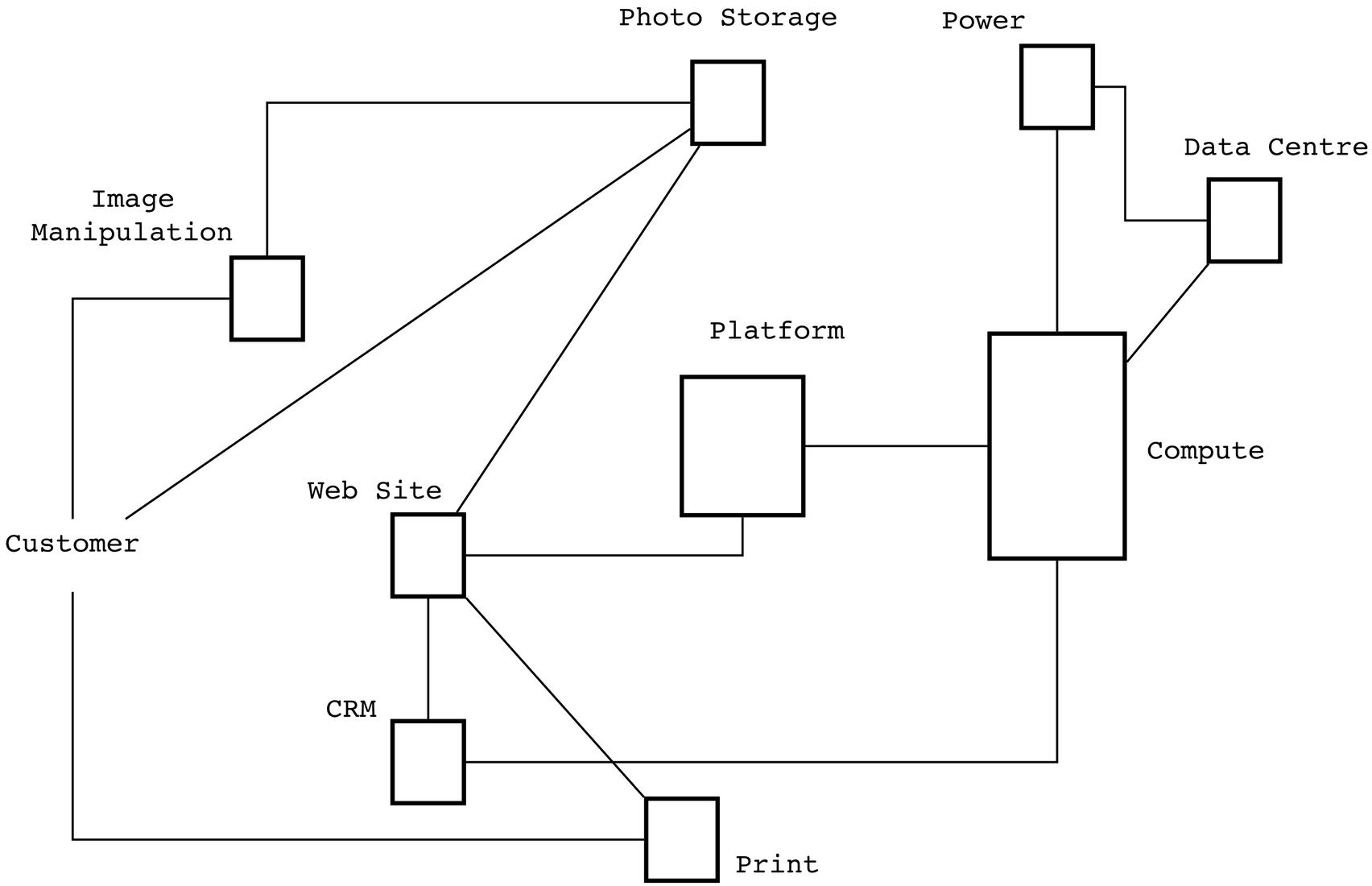


Photo Storage
Power
Data Centre
Image Manipulation
Platform
Compute
Web Site
Customer
CRM
Print

# Systems Map

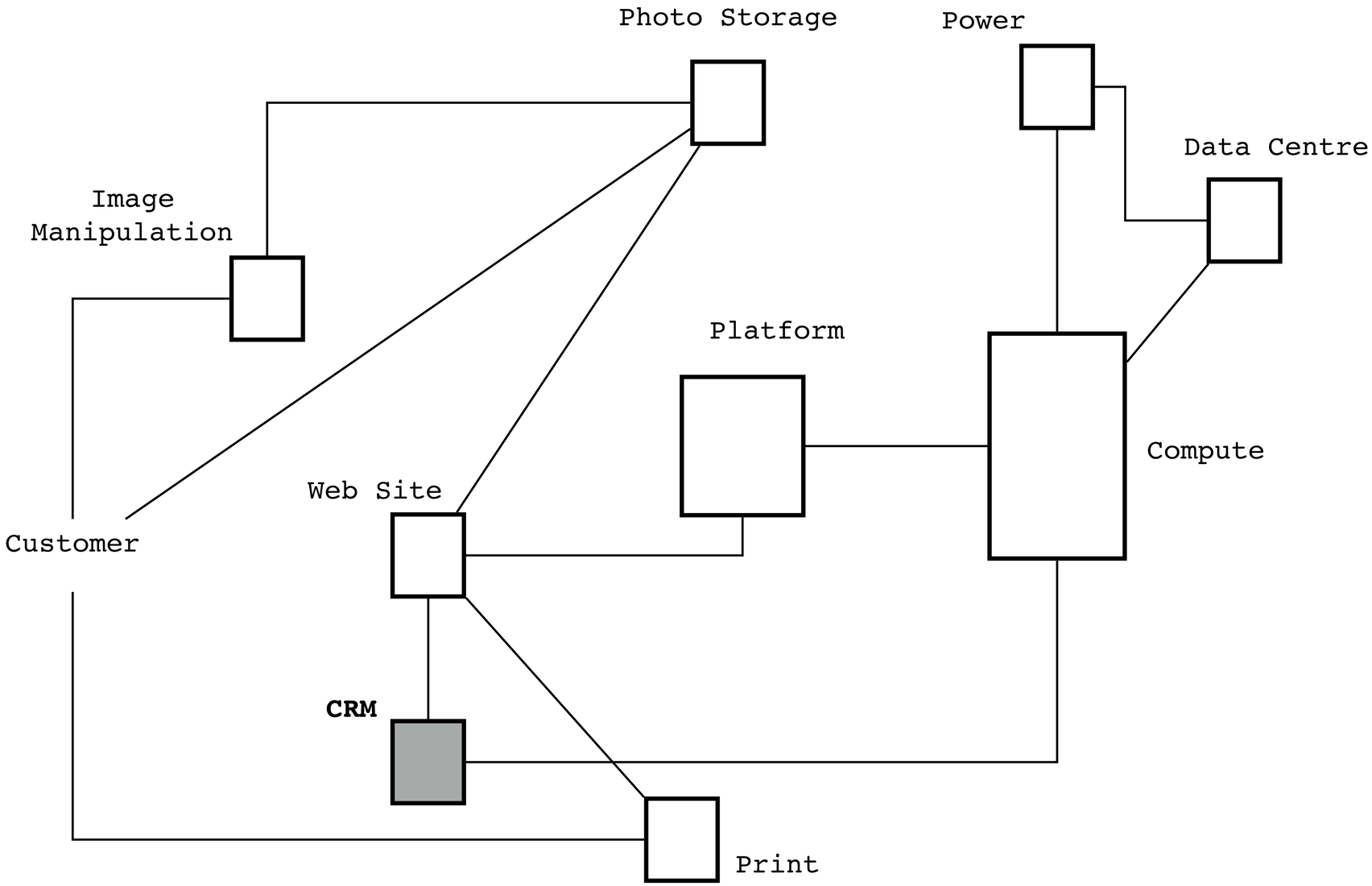


Photo Storage
Power
Data Centre
Image Manipulation
Platform
Compute
Web Site
Customer
CRM
Print

# Systems Map

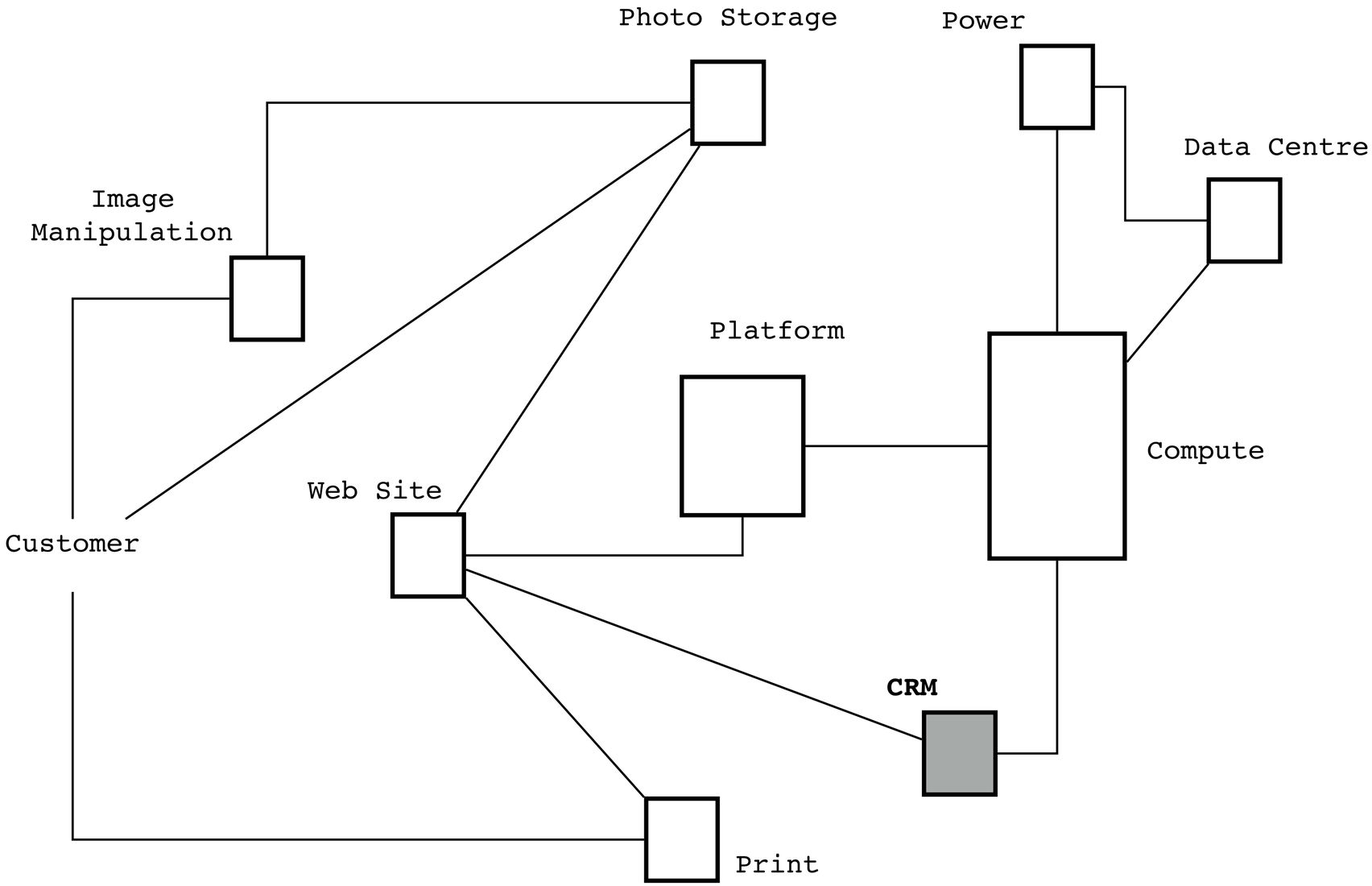
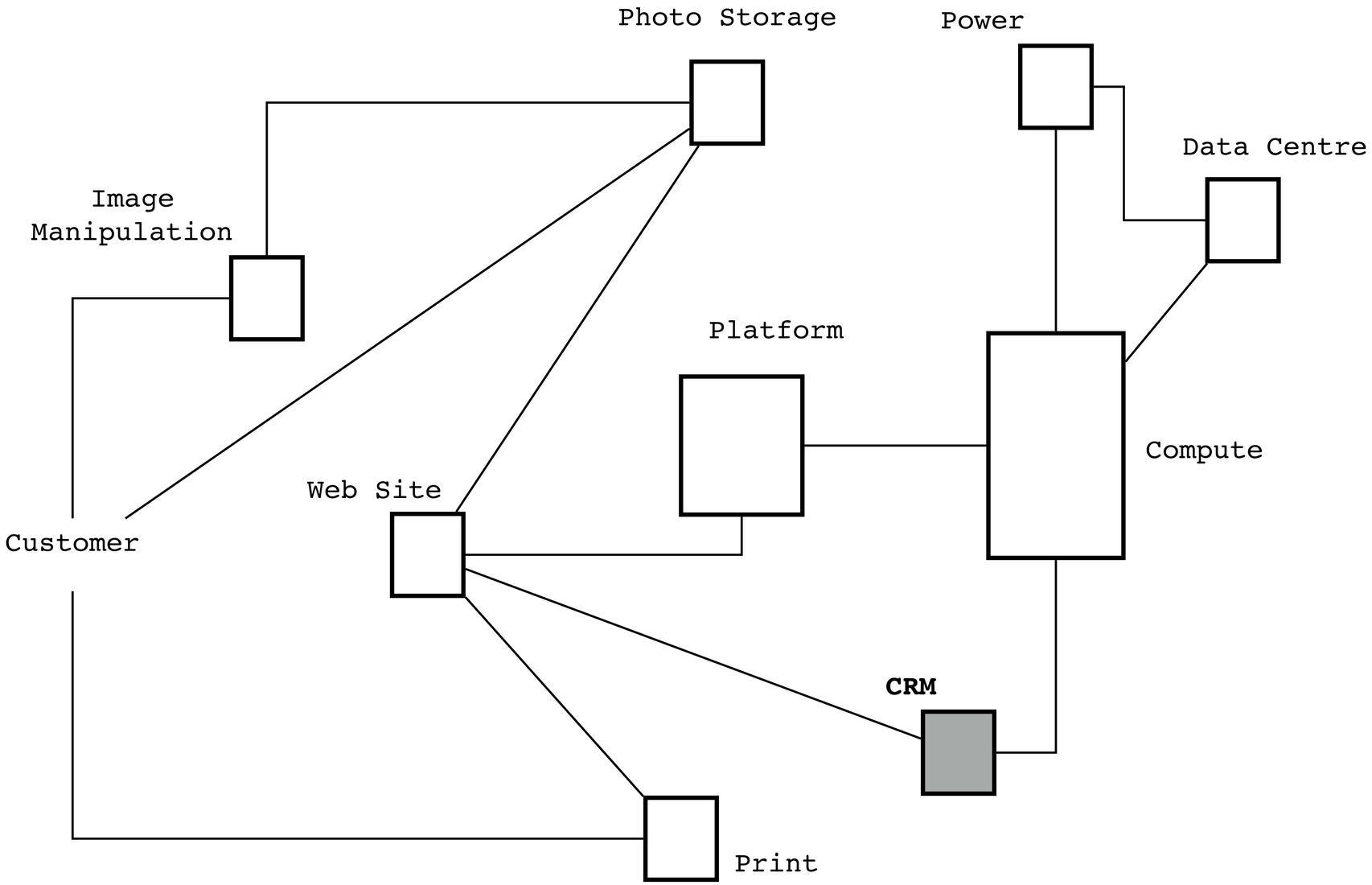


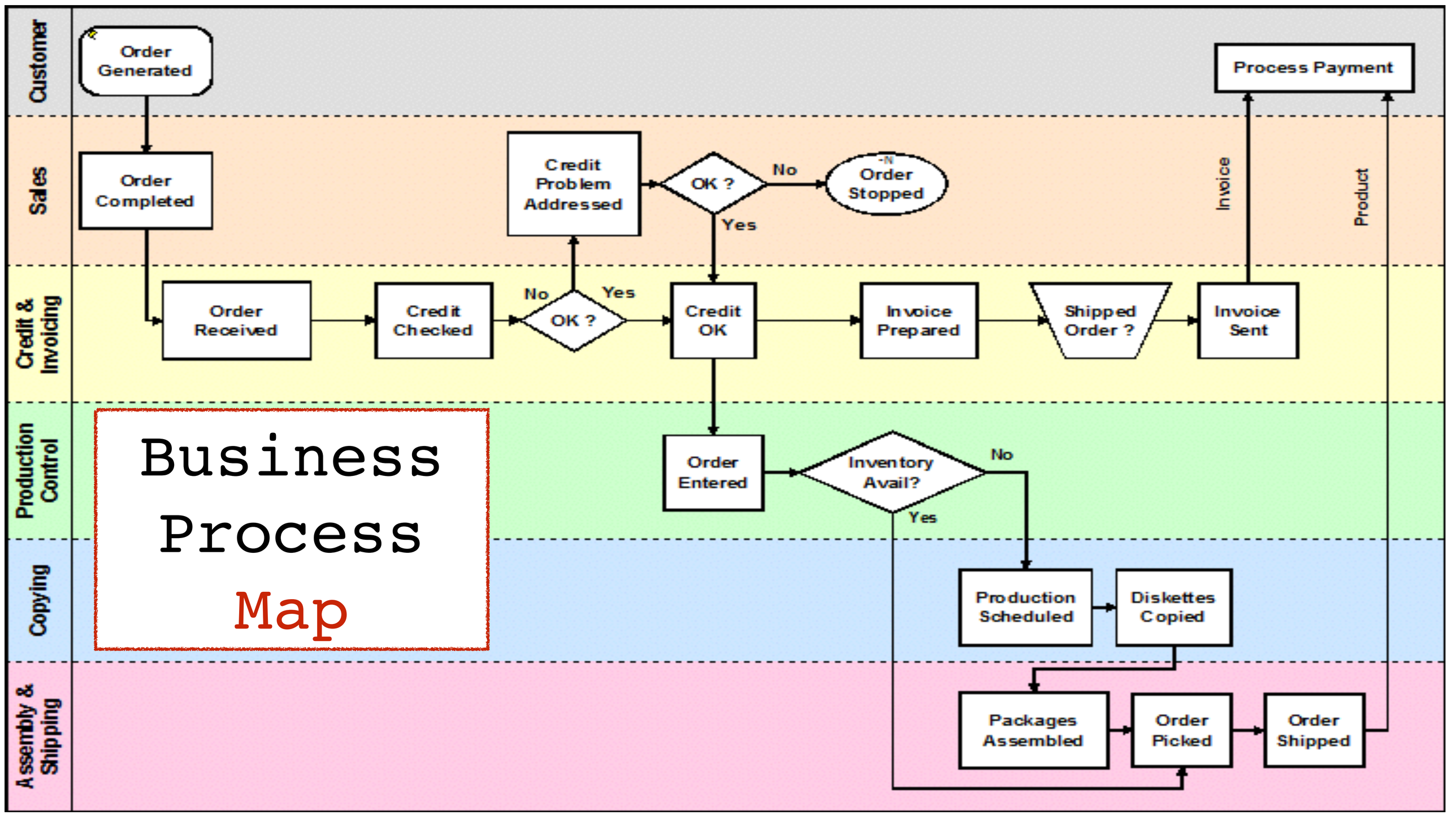
Photo Storage
Power
Data Centre
Image Manipulation
Platform
Compute
Web Site
Customer
CRM
Print

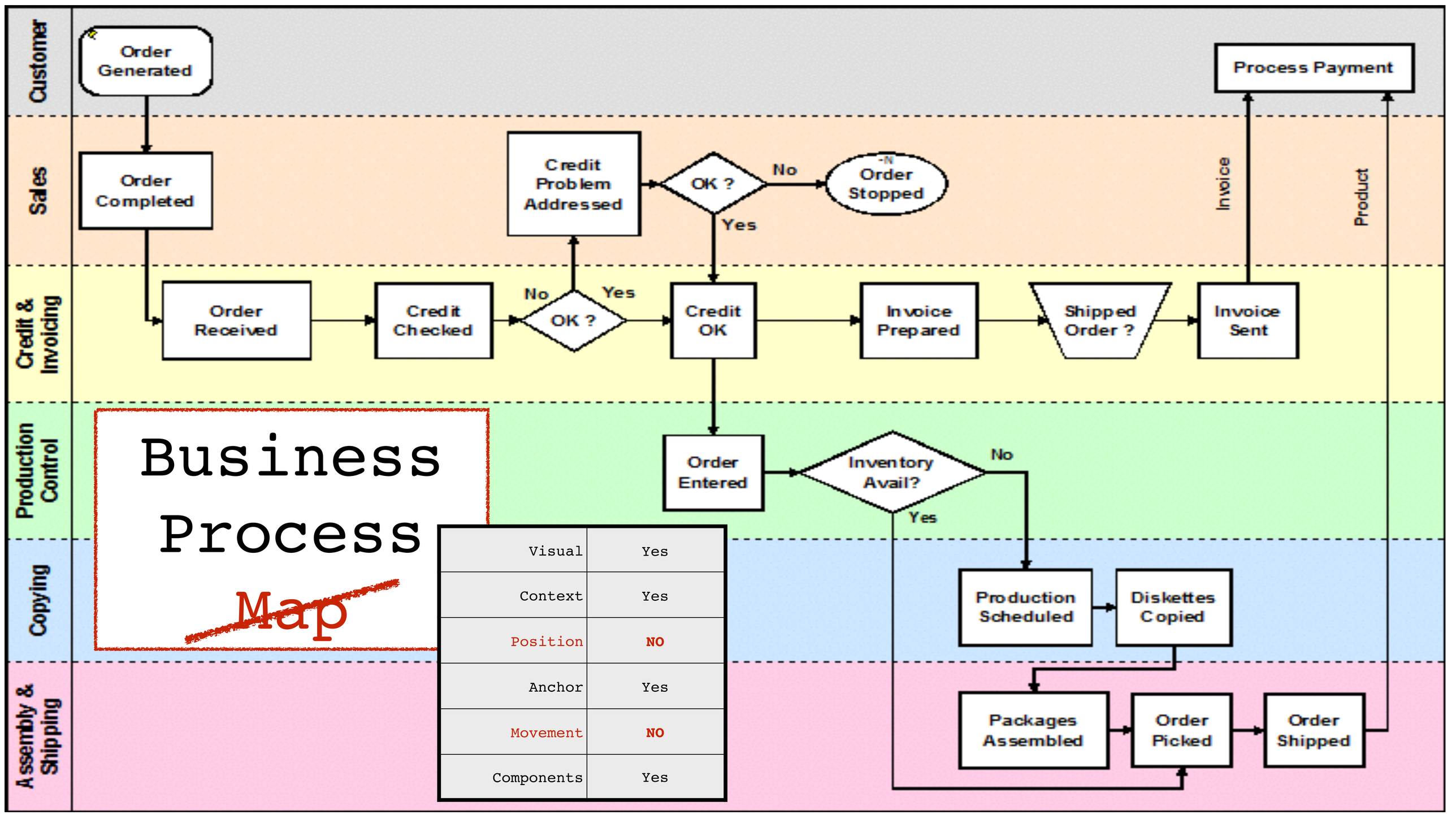
# Systems

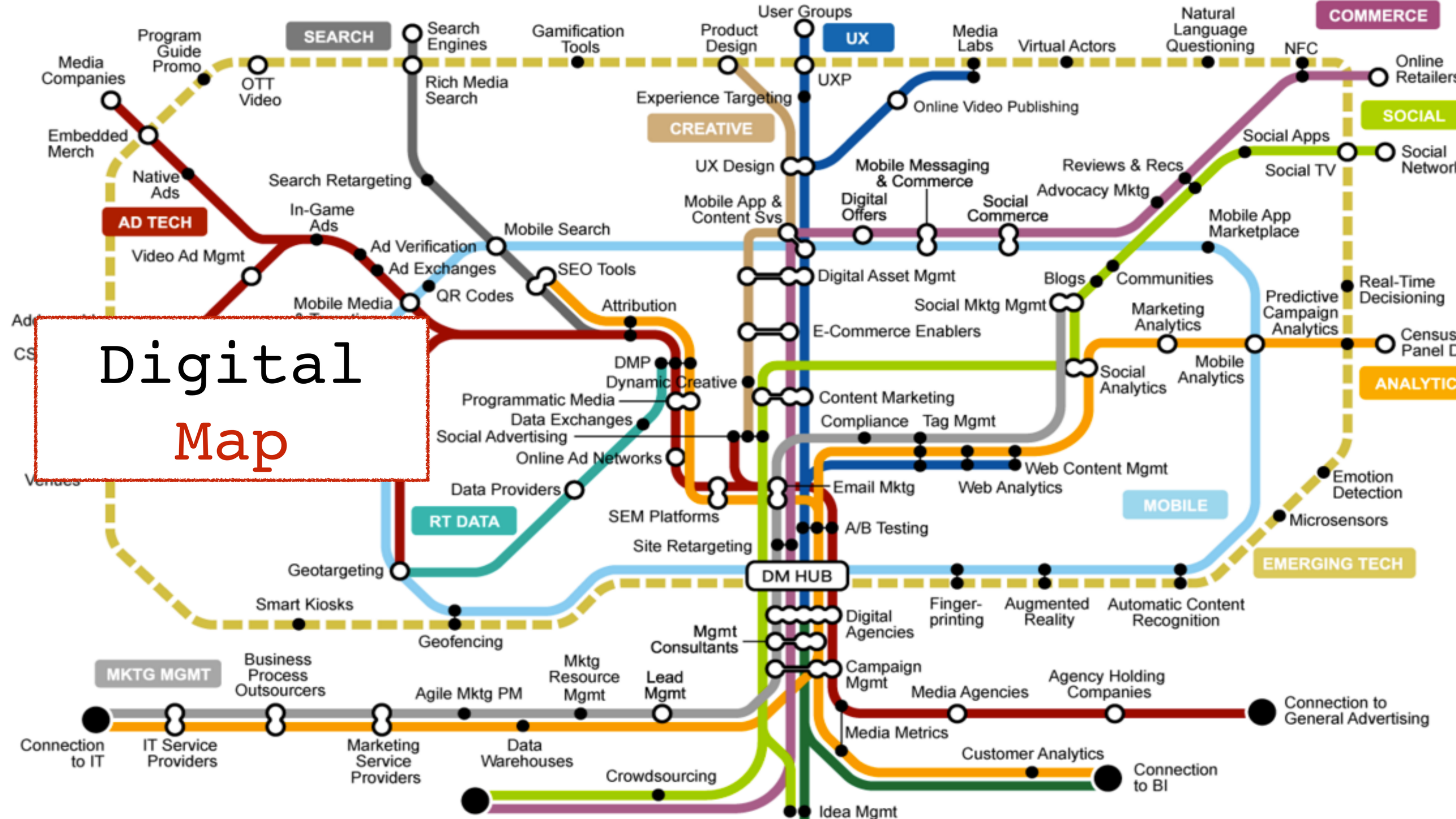
~~Map~~

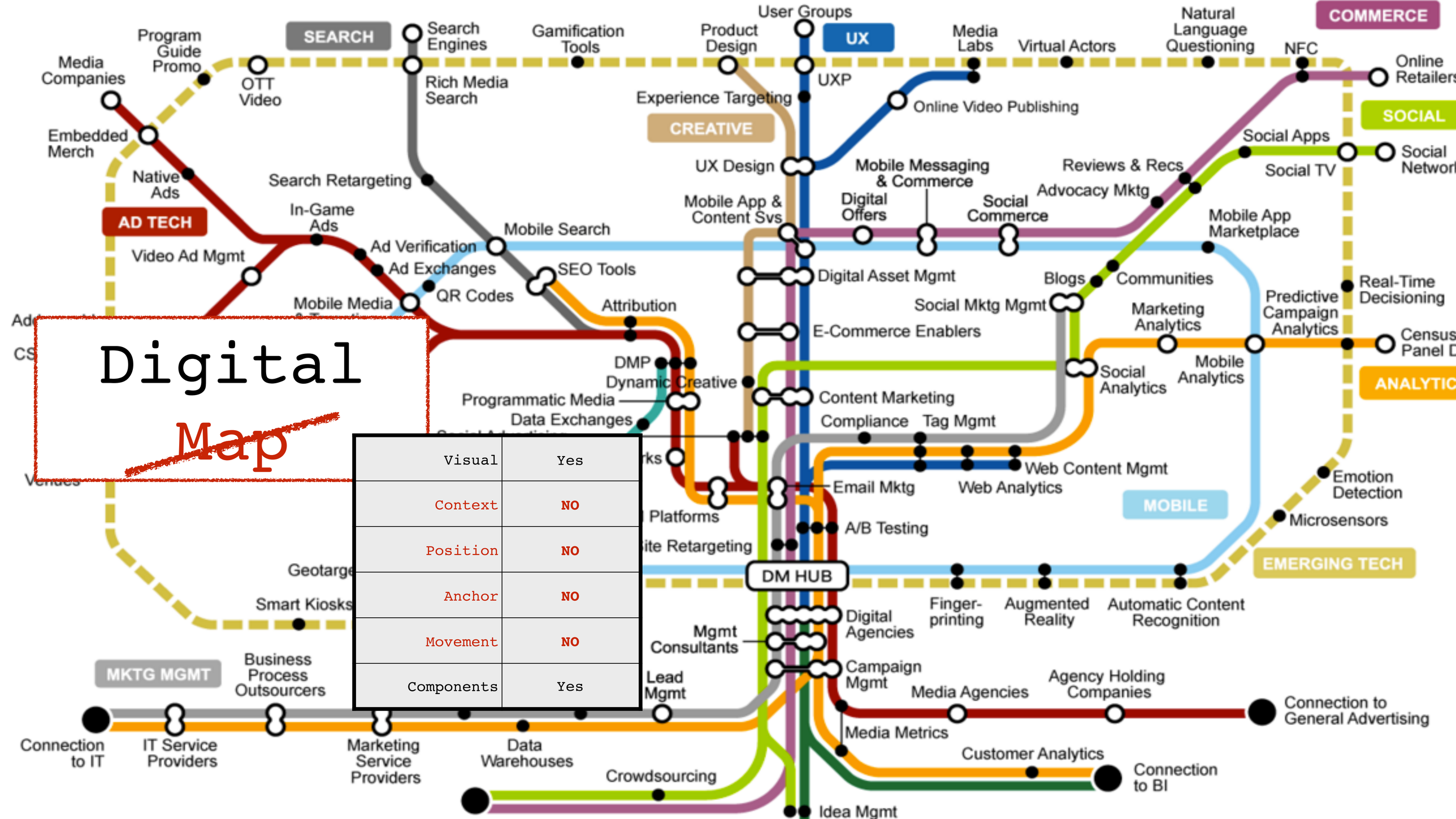


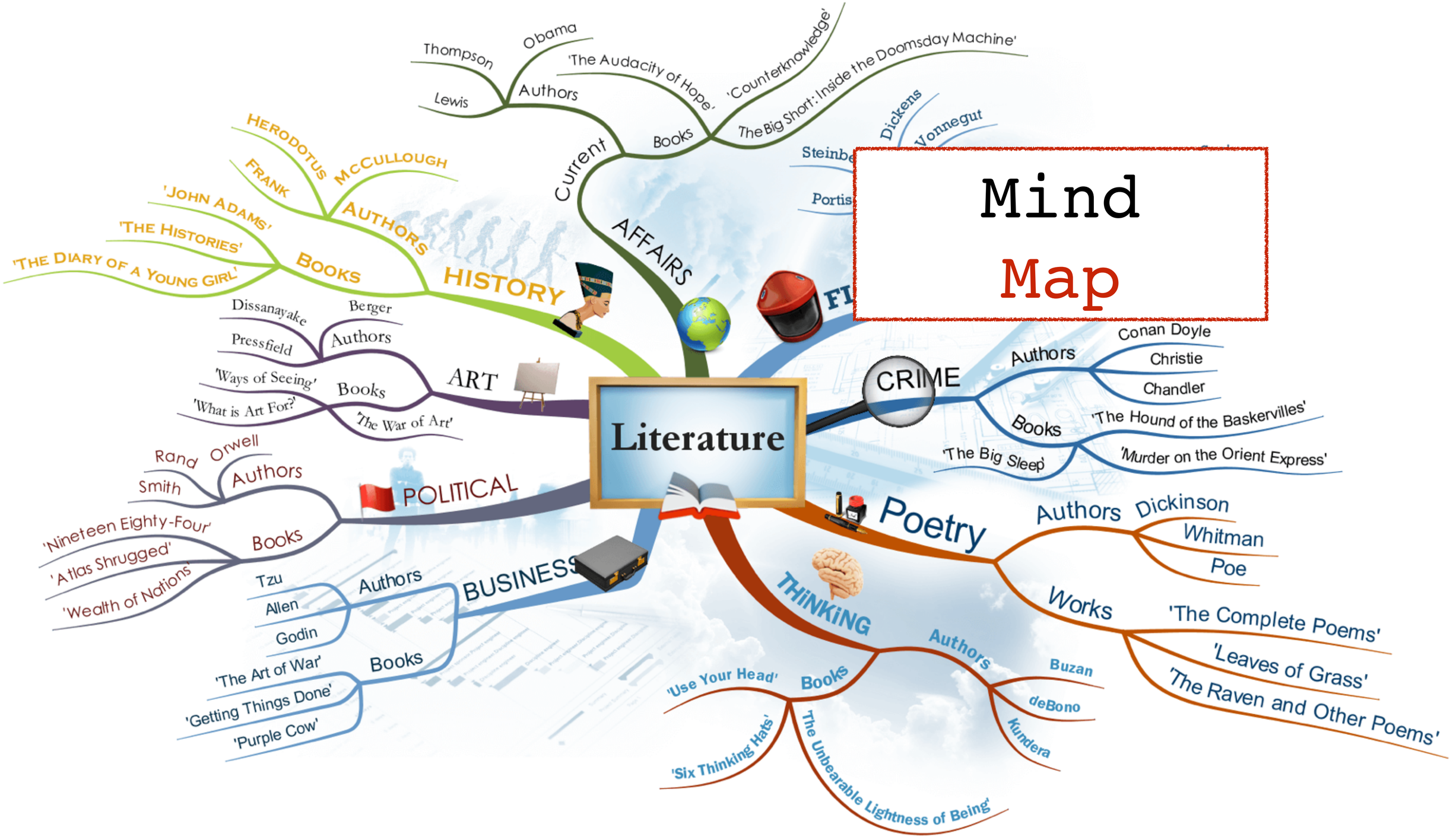

| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | **NO** |
| Anchor | **NO** |
| Movement | **NO** |
| Components | Yes |

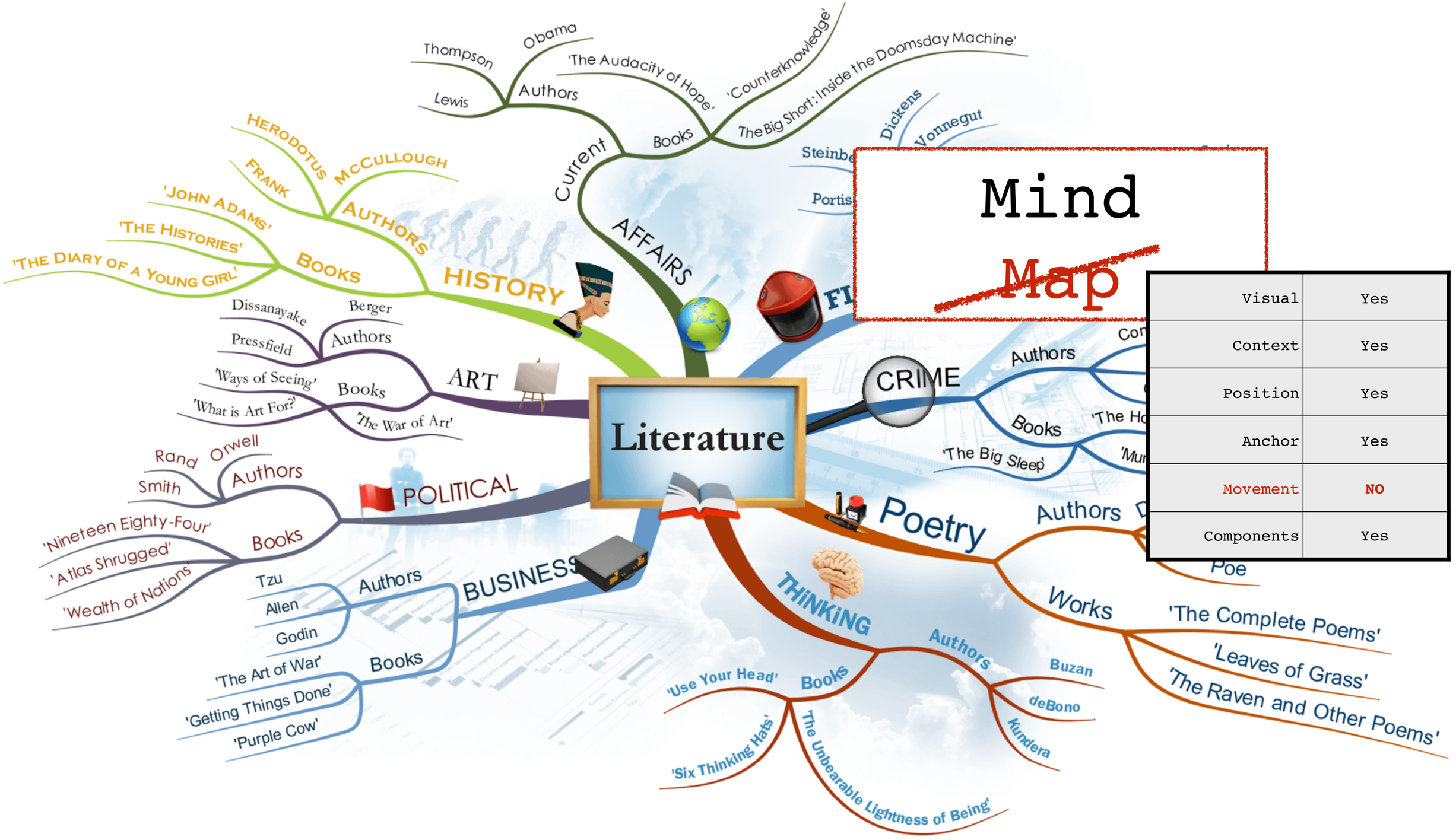

Customer
Sales
Credit & Invoicing
Production Control
Copying
Assembly & Shipping
Order Generated
Order Completed
Order Received
Credit Checked
OK ?
No
Yes
Credit Problem Addressed
OK ?
No
Order Stopped
Yes
Credit OK
Invoice Prepared
Shipped Order ?
Invoice Sent
Process Payment
Invoice
Product
Order Entered
Inventory Avail?
No
Yes
Production Scheduled
Diskettes Copied
Packages Assembled
Order Picked
Order Shipped
Business Process Map


Customer
Sales
Credit & Invoicing
Production Control
Copying
Assembly & Shipping
Order Generated
Order Completed
Order Received
Credit Checked
OK ?
No
Yes
Credit Problem Addressed
OK ?
No
Order Stopped
Yes
Credit OK
Invoice Prepared
Shipped Order ?
Invoice Sent
Process Payment
Invoice
Product
Order Entered
Inventory Avail?
No
Yes
Production Scheduled
Diskettes Copied
Packages Assembled
Order Picked
Order Shipped
Business Process
Map
Visual Yes
Context Yes
Position NO
Anchor Yes
Movement NO
Components Yes


Digital
Map
SEARCH
Search Engines
Gamification Tools
Product Design
User Groups
UX
Media Labs
Virtual Actors
Natural Language Questioning
NFC
COMMERCE
Program Guide Promo
Media Companies
OTT Video
Rich Media Search
UXP
Online Video Publishing
Online Retailers
Experience Targeting
CREATIVE
SOCIAL
Embedded Merch
Native Ads
Search Retargeting
UX Design
Mobile Messaging & Commerce
Reviews & Recs
Social Apps
Social Network
Social TV
Advocacy Mktg
AD TECH
In-Game Ads
Mobile App & Content Svs
Digital Offers
Social Commerce
Mobile App Marketplace
Video Ad Mgmt
Ad Verification
Mobile Search
Ad Exchanges
SEO Tools
Digital Asset Mgmt
Blogs
Communities
QR Codes
Mobile Media
Attribution
Social Mktg Mgmt
Predictive Campaign Analytics
Real-Time Decisioning
Marketing Analytics
E-Commerce Enablers
Census Panel
DMP
Dynamic Creative
Social Analytics
Mobile Analytics
ANALYTIC
Programmatic Media
Content Marketing
Data Exchanges
Compliance
Tag Mgmt
Social Advertising
Online Ad Networks
Web Content Mgmt
Email Mktg
Web Analytics
Emotion Detection
Data Providers
MOBILE
SEM Platforms
RT DATA
A/B Testing
Microsensors
Site Retargeting
EMERGING TECH
Geotargeting
DM HUB
Smart Kiosks
Digital Agencies
Finger-printing
Augmented Reality
Automatic Content Recognition
Geofencing
Mgmt Consultants
MKTG MGMT
Business Process Outsourcers
Mktg Resource Mgmt
Lead Mgmt
Campaign Mgmt
Agile Mktg PM
Media Agencies
Agency Holding Companies
Connection to General Advertising
Connection to IT
IT Service Providers
Marketing Service Providers
Data Warehouses
Media Metrics
Customer Analytics
Crowdsourcing
Connection to BI
Idea Mgmt

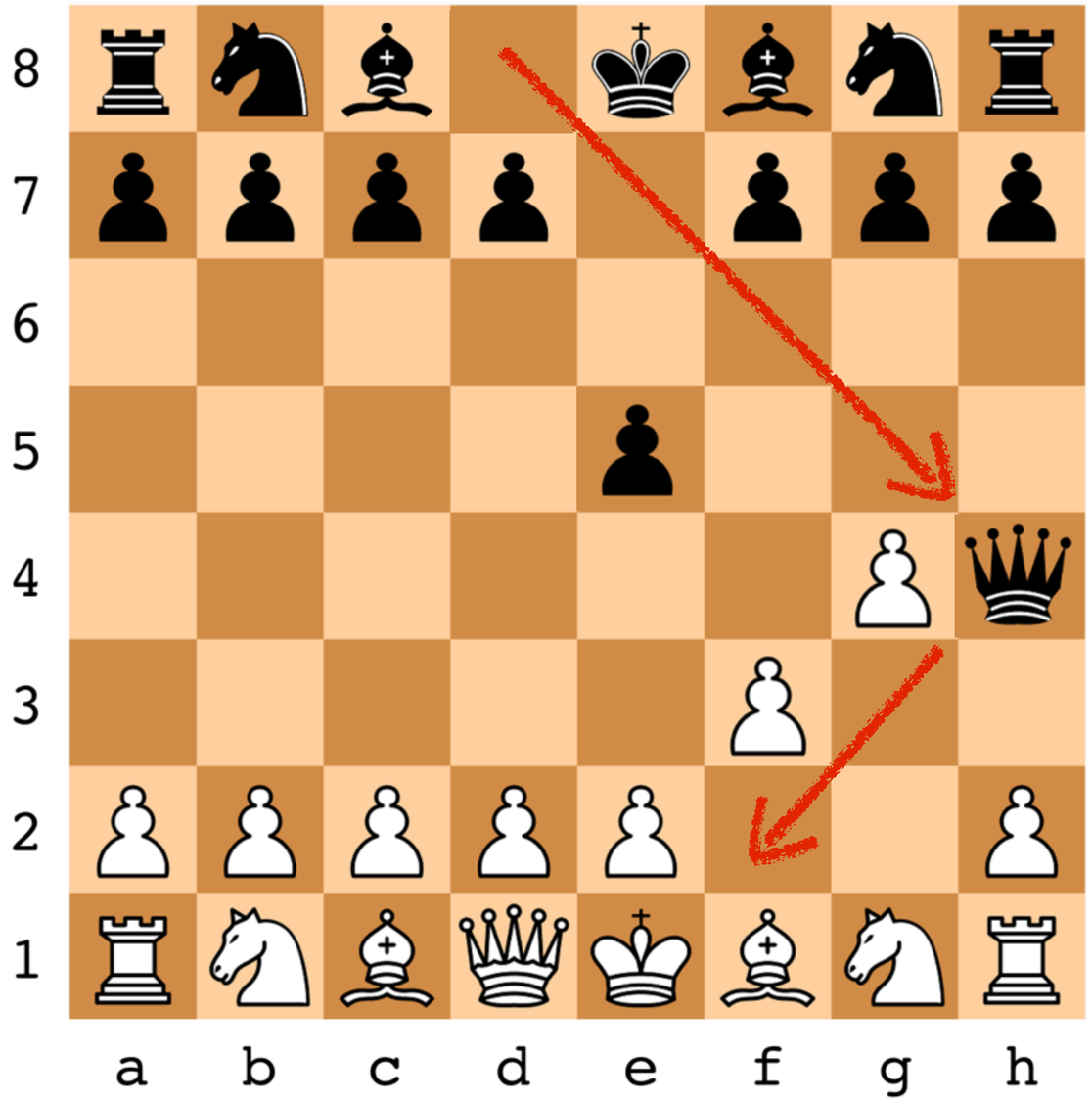

Digital
Map
SEARCH
Search Engines
Gamification Tools
Product Design
User Groups
UX
Media Labs
Virtual Actors
Natural Language Questioning
NFC
COMMERCE
Online Retailers
Program Guide Promo
Media Companies
OTT Video
Rich Media Search
UXP
Online Video Publishing
Experience Targeting
CREATIVE
SOCIAL
Social Apps
Social Network
Social TV
Embedded Merch
Native Ads
Search Retargeting
UX Design
Mobile Messaging & Commerce
Reviews & Recs
Advocacy Mktg
Mobile App & Content Svs
Digital Offers
Social Commerce
AD TECH
In-Game Ads
Mobile Search
Mobile App Marketplace
Video Ad Mgmt
Ad Verification
Ad Exchanges
SEO Tools
Digital Asset Mgmt
Blogs
Communities
Mobile Media
QR Codes
Attribution
Social Mktg Mgmt
Predictive Campaign Analytics
Real-Time Decisioning
Marketing Analytics
E-Commerce Enablers
Census Panel
DMP
Dynamic Creative
Programmatic Media
Data Exchanges
Content Marketing
Social Analytics
Mobile Analytics
ANALYTIC
Compliance
Tag Mgmt
Web Content Mgmt
Email Mktg
Web Analytics
MOBILE
Emotion Detection
Microsensors
A/B Testing
Platforms
ite Retargeting
EMERGING TECH
Geotarge
Smart Kiosks
DM HUB
Finger-printing
Augmented Reality
Automatic Content Recognition
Digital Agencies
Mgmt Consultants
Campaign Mgmt
MKTG MGMT
Business Process Outsourcers
Lead Mgmt
Media Agencies
Agency Holding Companies
Connection to General Advertising
Media Metrics
Customer Analytics
Connection to BI
Connection to IT
IT Service Providers
Marketing Service Providers
Data Warehouses
Crowdsourcing
Idea Mgmt
Visual
Yes
Context
NO
Position
NO
Anchor
NO
Movement
NO
Components
Yes


Mind
Map
Literature
Current AFFAIRS
Authors
Thompson
Lewis
Obama
Books
'The Audacity of Hope'
'Counterknowledge'
The Big Short: Inside the Doomsday Machine'
HISTORY
Authors
HERODOTUS
FRANK
MCCULLOUGH
Books
'JOHN ADAMS'
'THE HISTORIES'
'THE DIARY OF A YOUNG GIRL'
ART
Authors
Dissanayake
Pressfield
Berger
Books
'Ways of Seeing'
'What is Art For?'
'The War of Art'
POLITICAL
Authors
Rand
Orwell
Smith
Books
'Nineteen Eighty-Four'
'Atlas Shrugged'
'Wealth of Nations'
BUSINESS
Authors
Tzu
Allen
Godin
Books
'The Art of War'
'Getting Things Done'
'Purple Cow'
THINKING
Books
'Use Your Head'
'Six Thinking Hats'
'The Unbearable Lightness of Being'
Authors
Buzan
deBono
Kundera
Poetry
Authors
Dickinson
Whitman
Poe
Works
'The Complete Poems'
'Leaves of Grass'
'The Raven and Other Poems'
CRIME
Authors
Conan Doyle
Christie
Chandler
Books
'The Hound of the Baskervilles'
'Murder on the Orient Express'
'The Big Sleep'
Dickens
Vonnegut



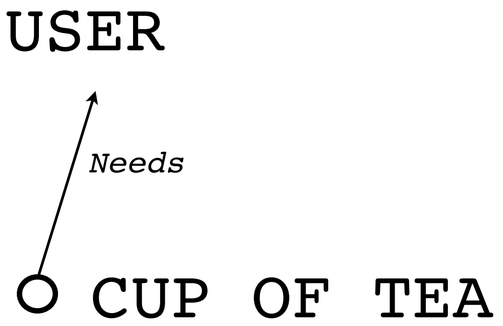

| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | NO |
| Components | Yes |

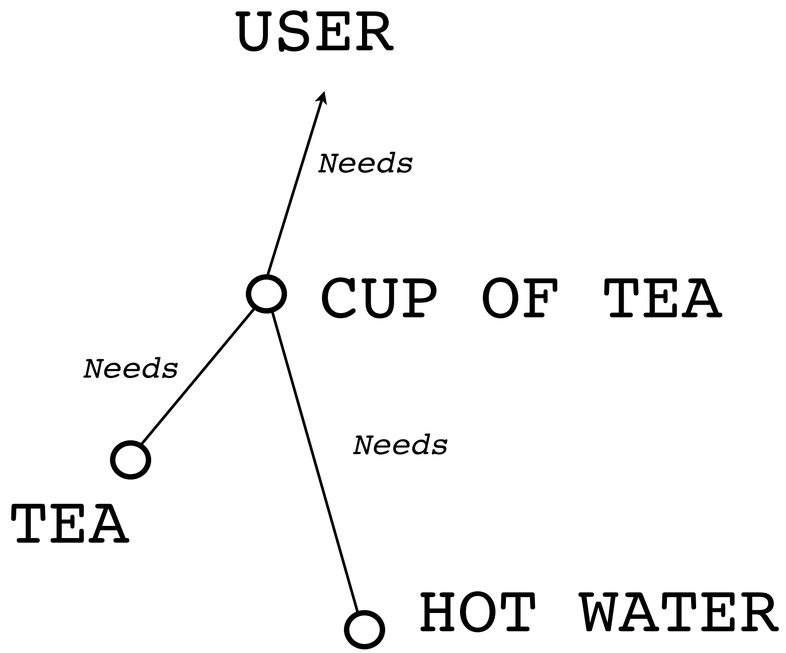
# Movement = LEARNING

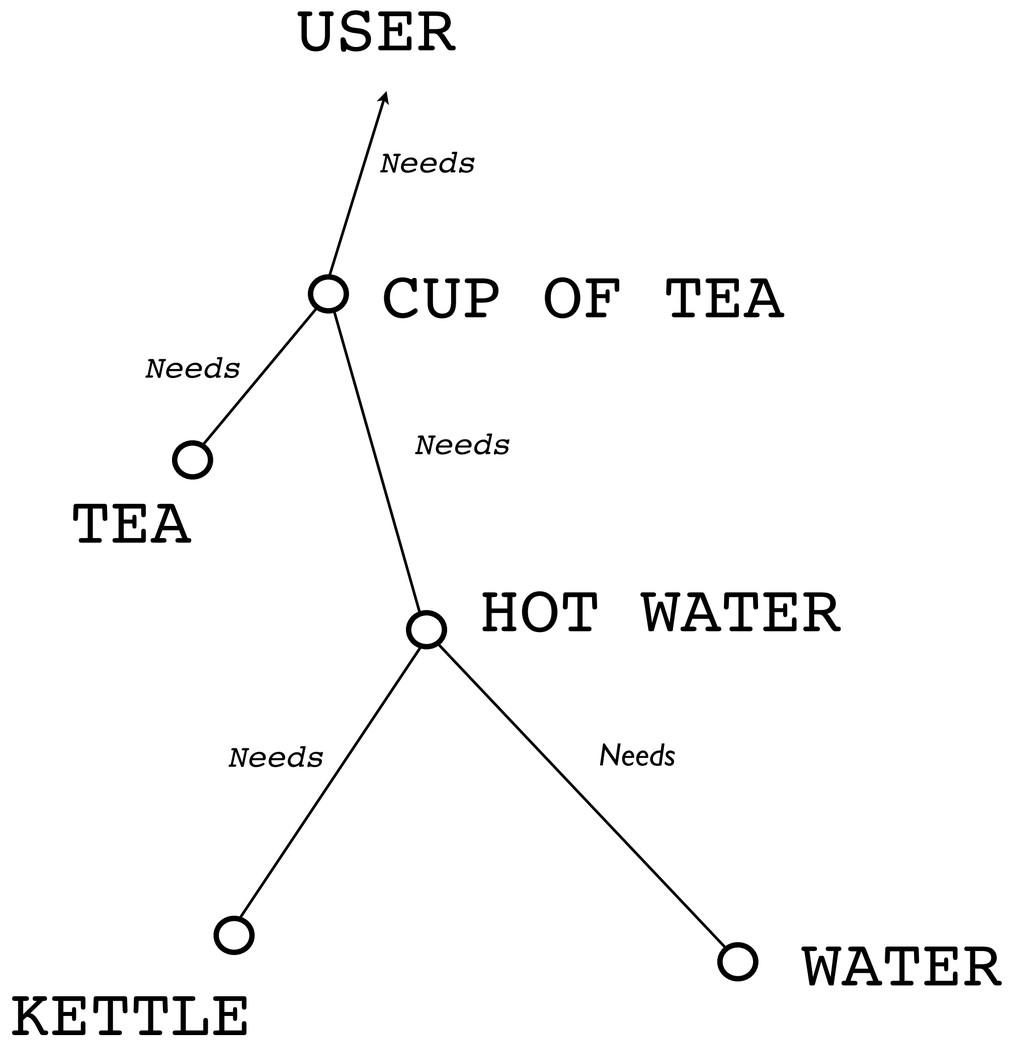


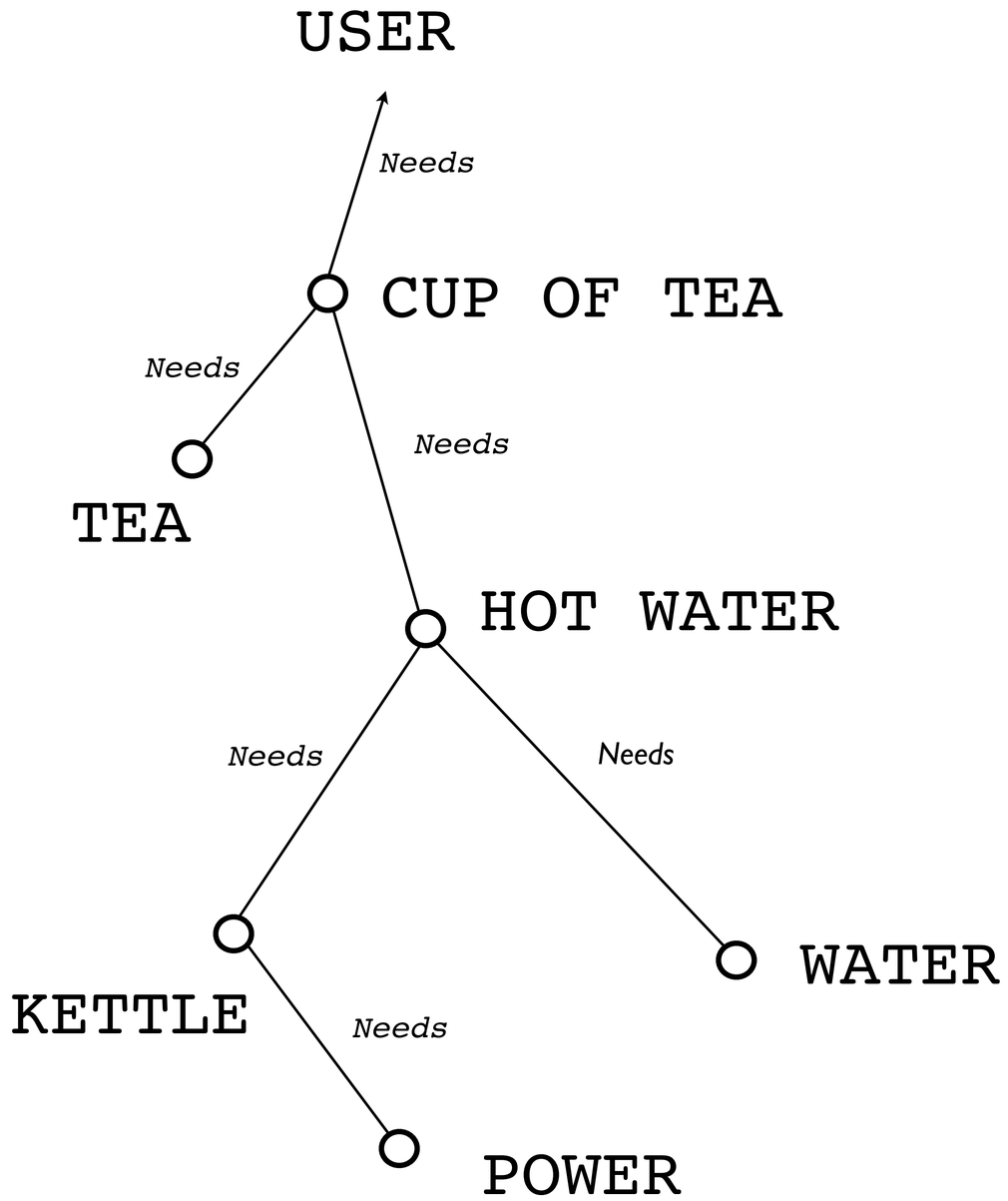

Checkmate

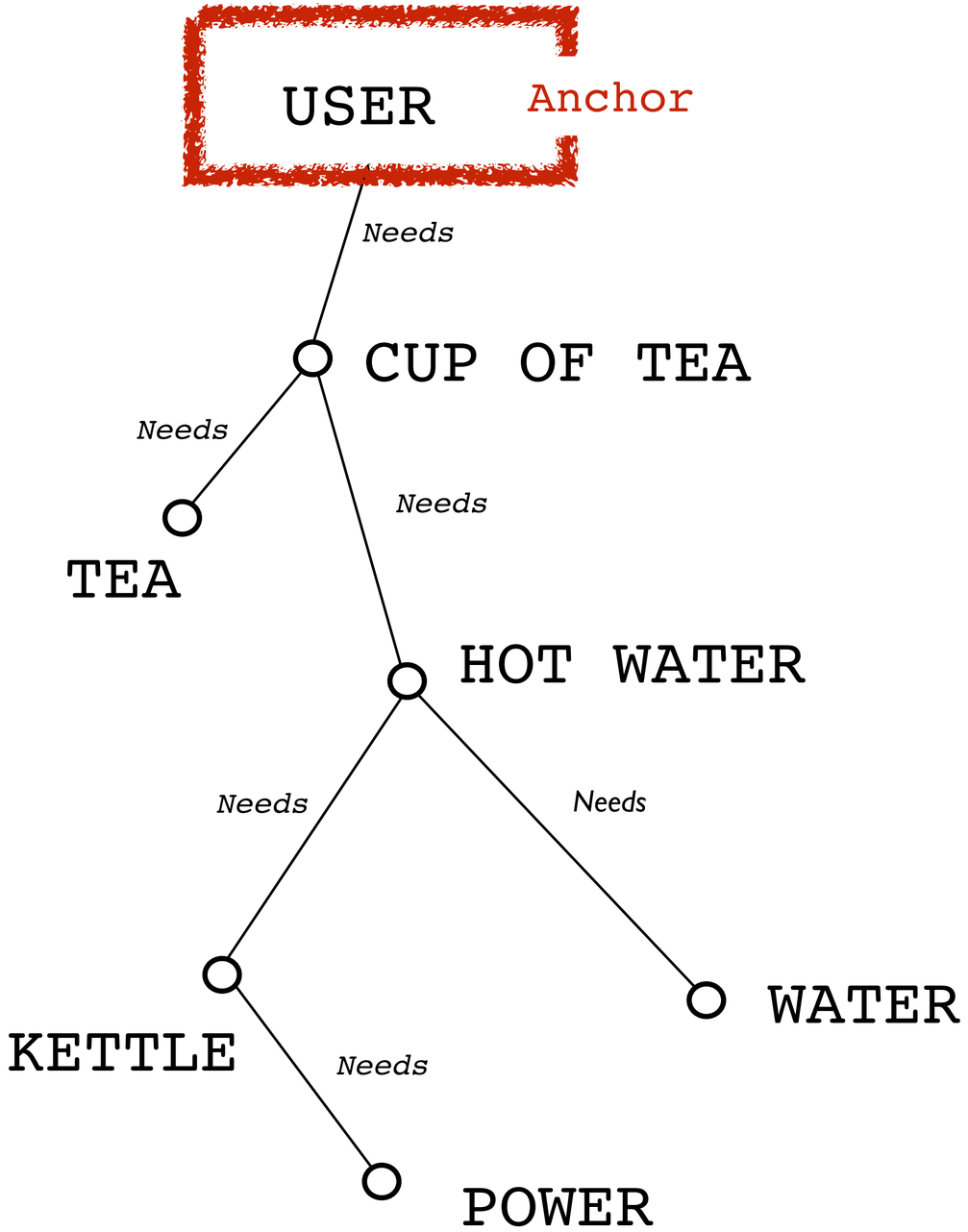
How to create
a map?

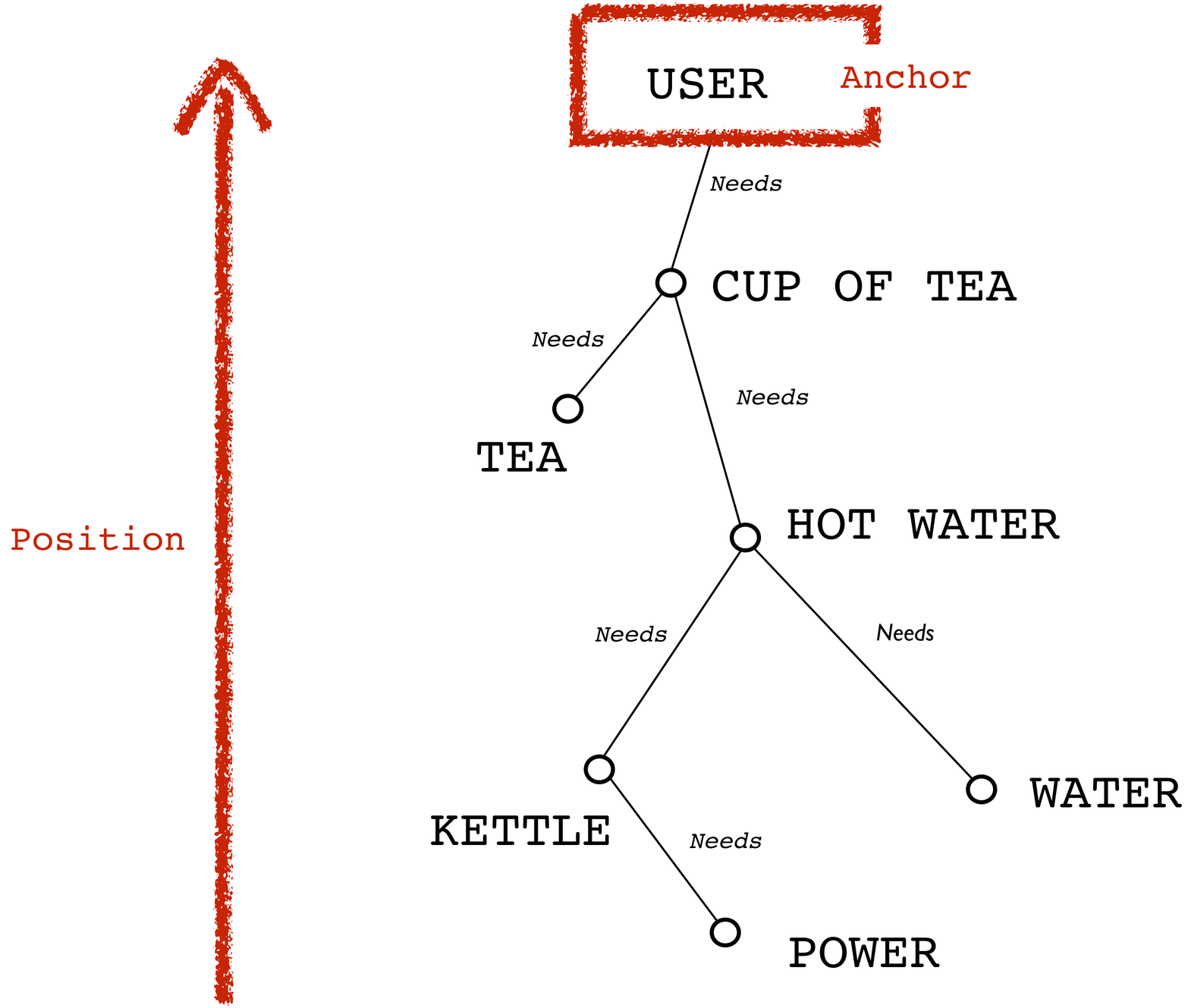

USER
Needs
CUP OF TEA

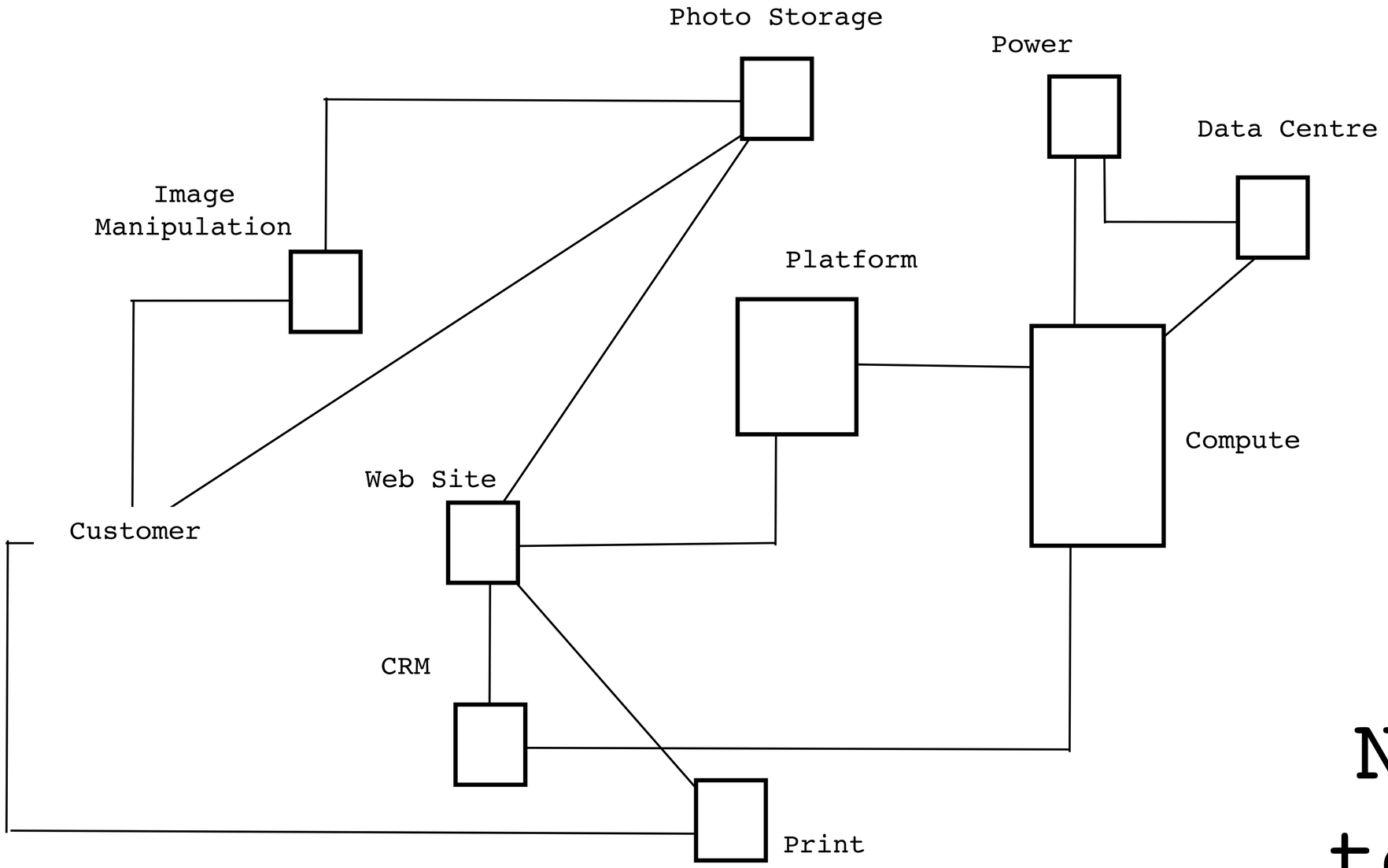

USER
Needs
CUP OF TEA
Needs
Needs
TEA
HOT WATER


USER
Needs
CUP OF TEA
Needs
Needs
TEA
HOT WATER
Needs
Needs
KETTLE
WATER


USER
Needs
CUP OF TEA
Needs
Needs
TEA
HOT WATER
Needs
Needs
WATER
KETTLE
Needs
POWER

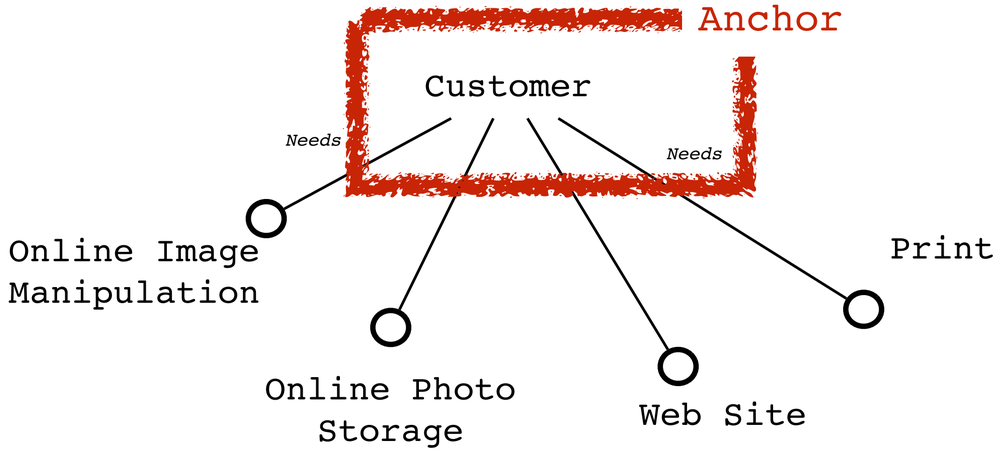

USER
Anchor
Needs
CUP OF TEA
Needs
Needs
TEA
HOT WATER
Needs
Needs
KETTLE
WATER
Needs
POWER


Position
USER
Anchor
Needs
CUP OF TEA
Needs
Needs
TEA
HOT WATER
Needs
Needs
KETTLE
WATER
Needs
POWER

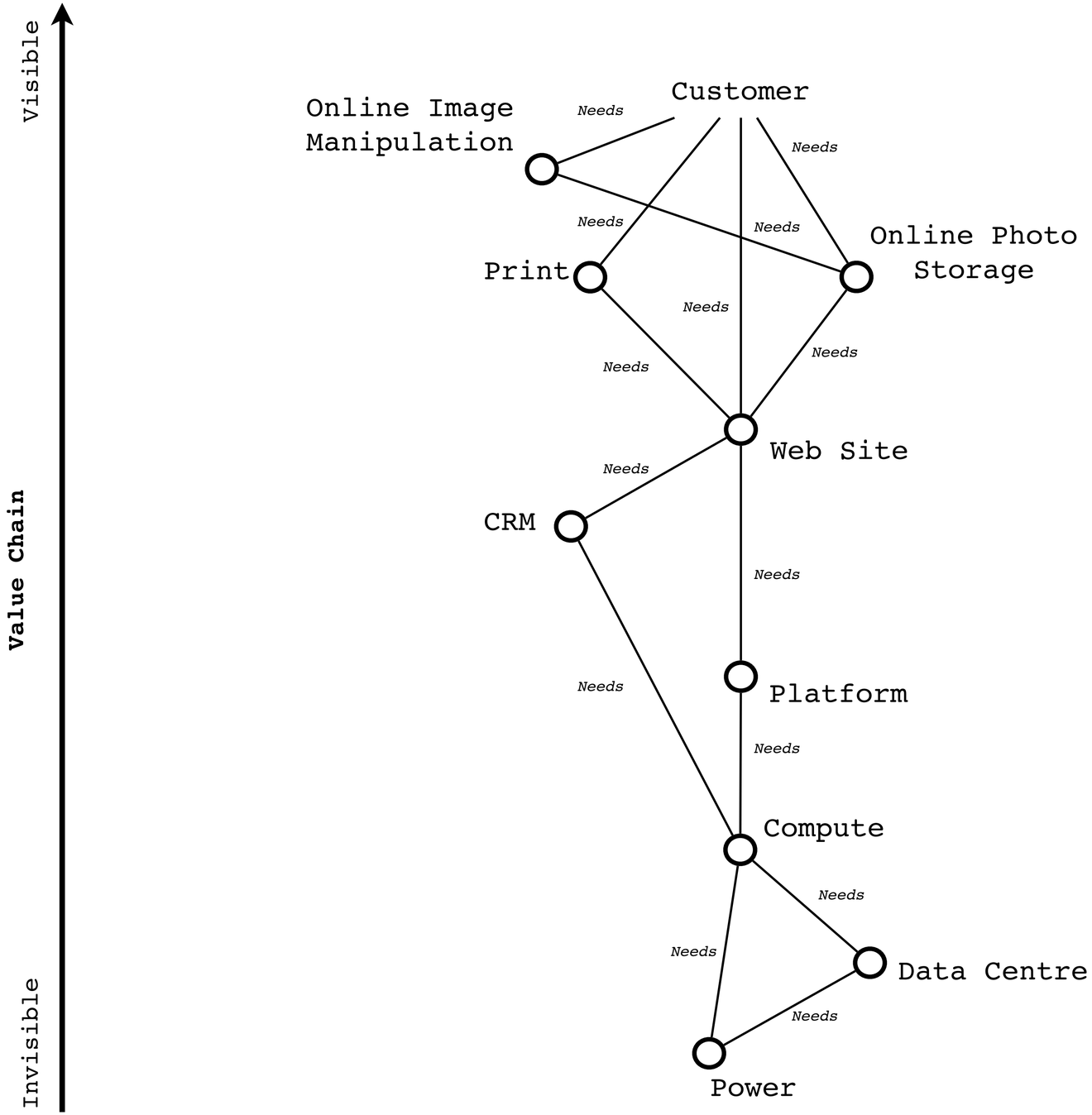



| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | **NO** |
| Anchor | **NO** |
| Movement | **NO** |
| Components | Yes |

# Network topology




| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | **NO** |
| Anchor | Yes |
| Movement | **NO** |
| Components | Yes |

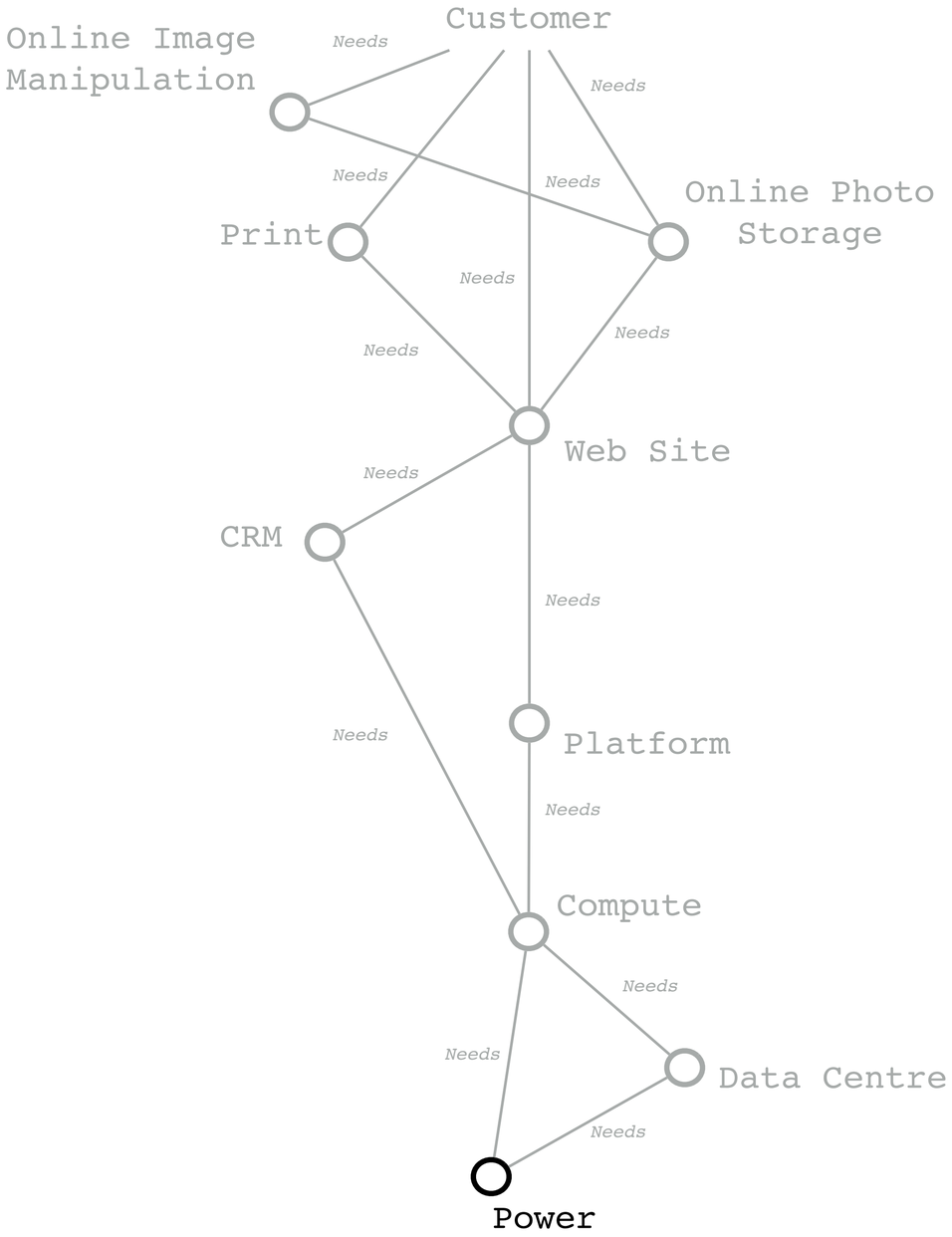



| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | **NO** |
| Components | Yes |

Visible

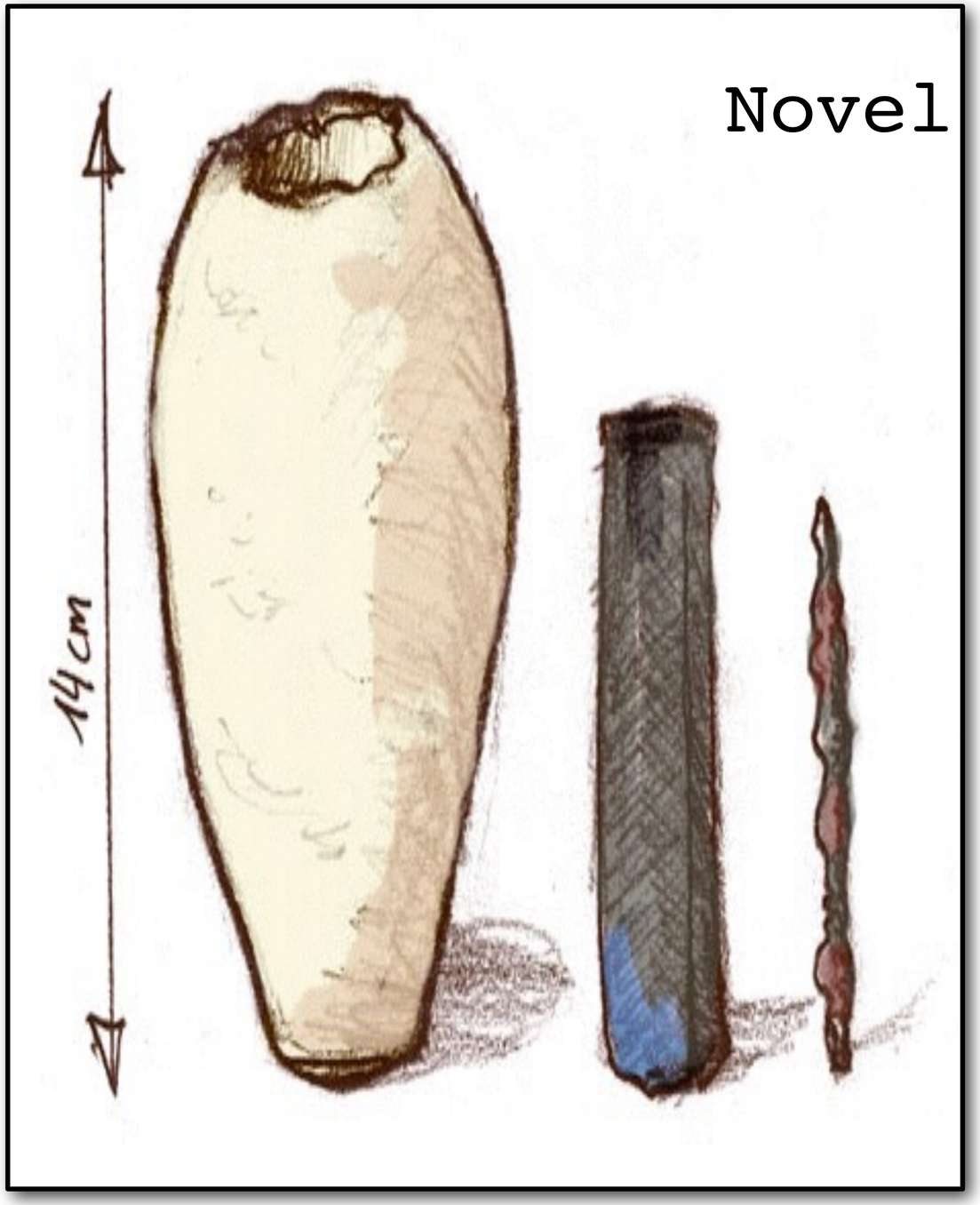
Value Chain

Invisible



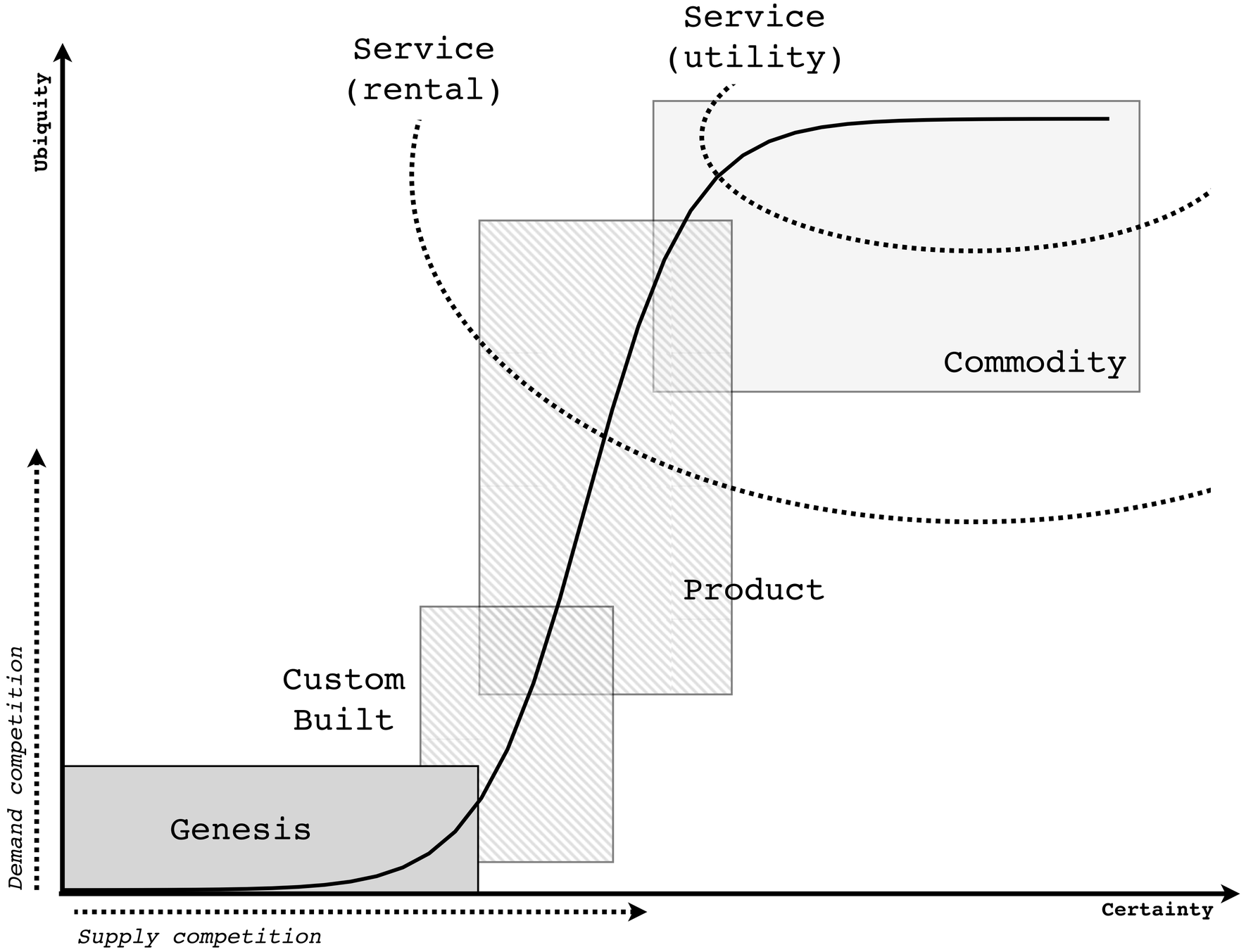

| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | **NO** |
| Components | Yes |

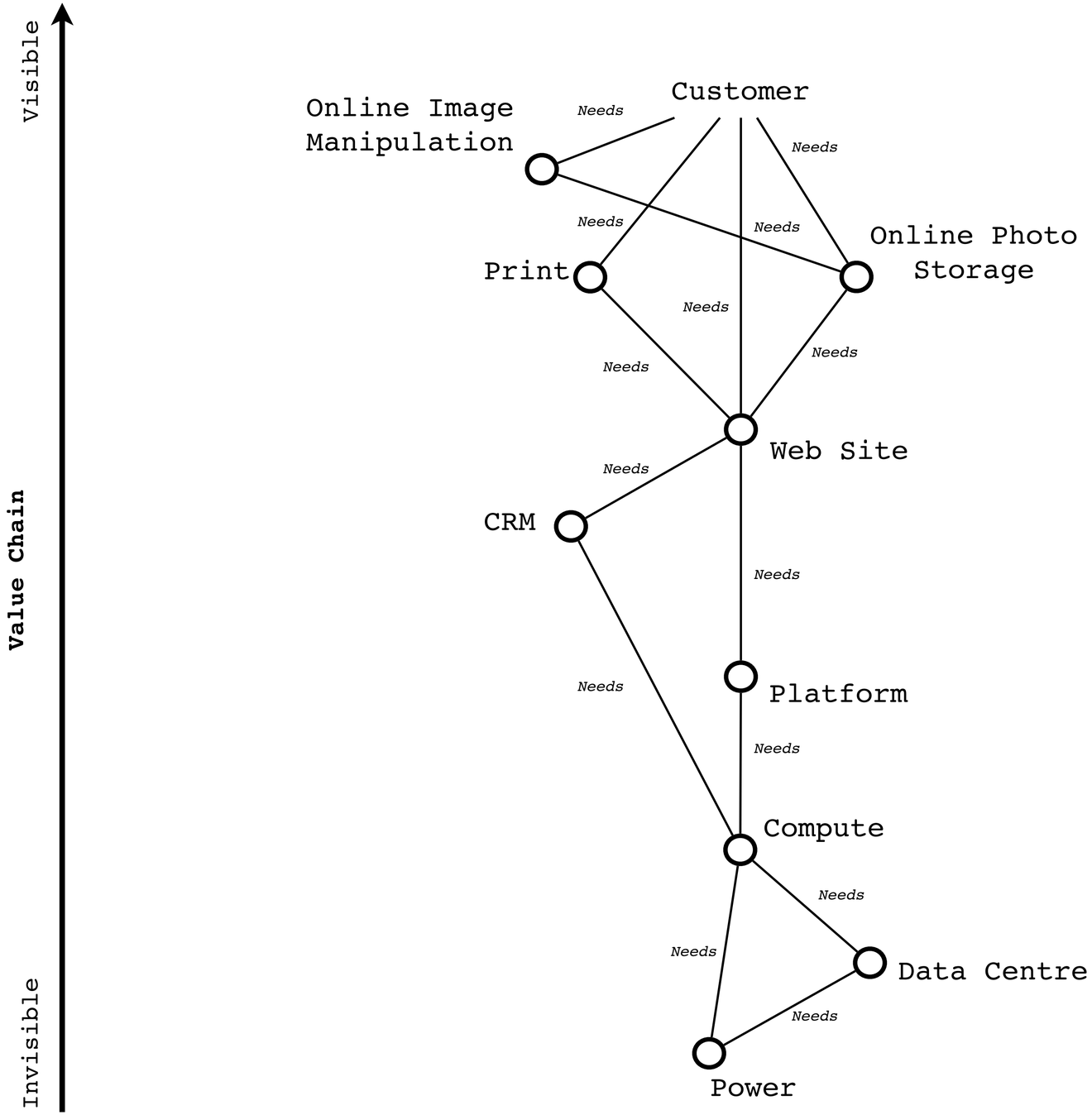
Novel



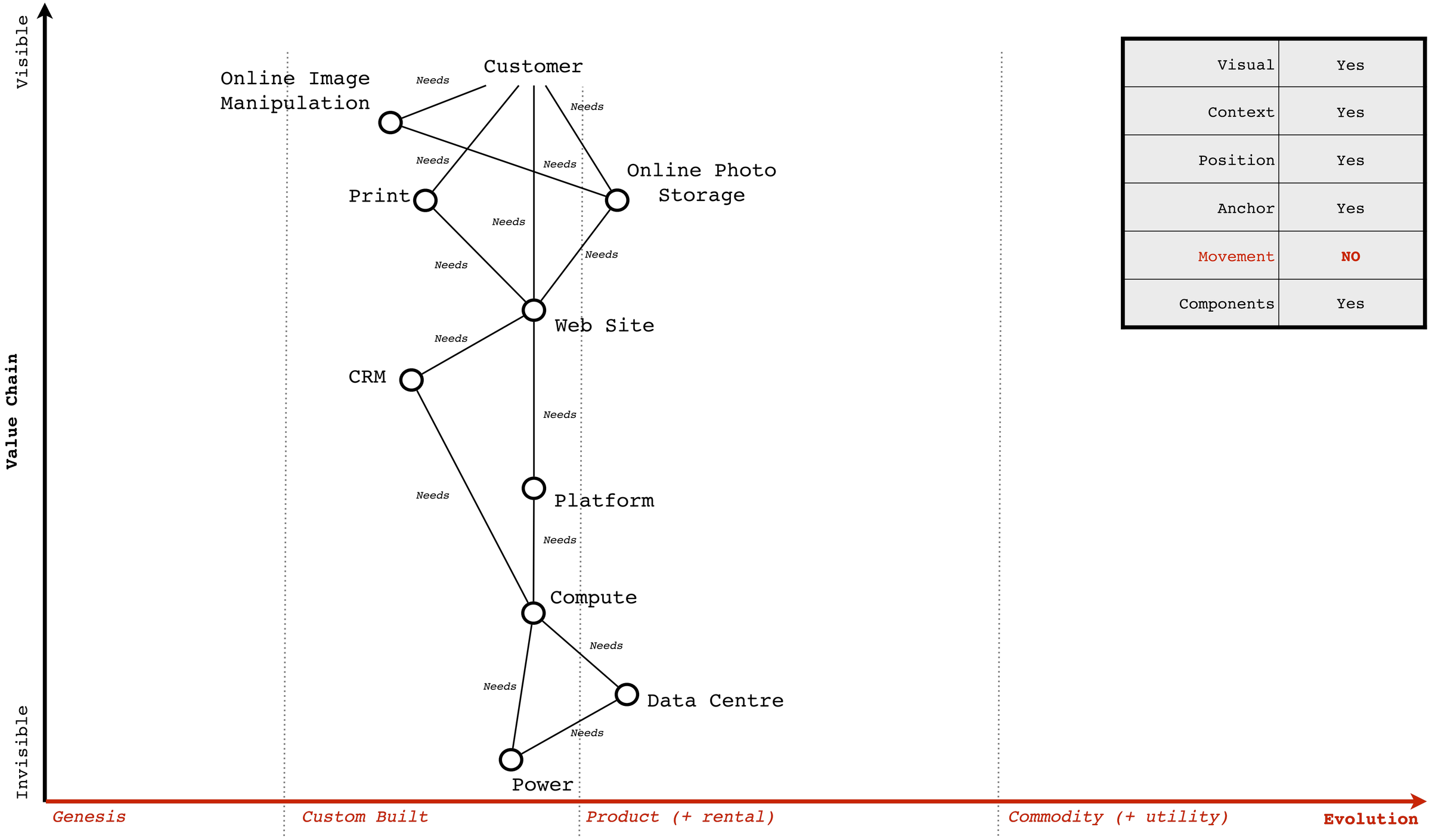

Commodity

Evolution = Change = Movement

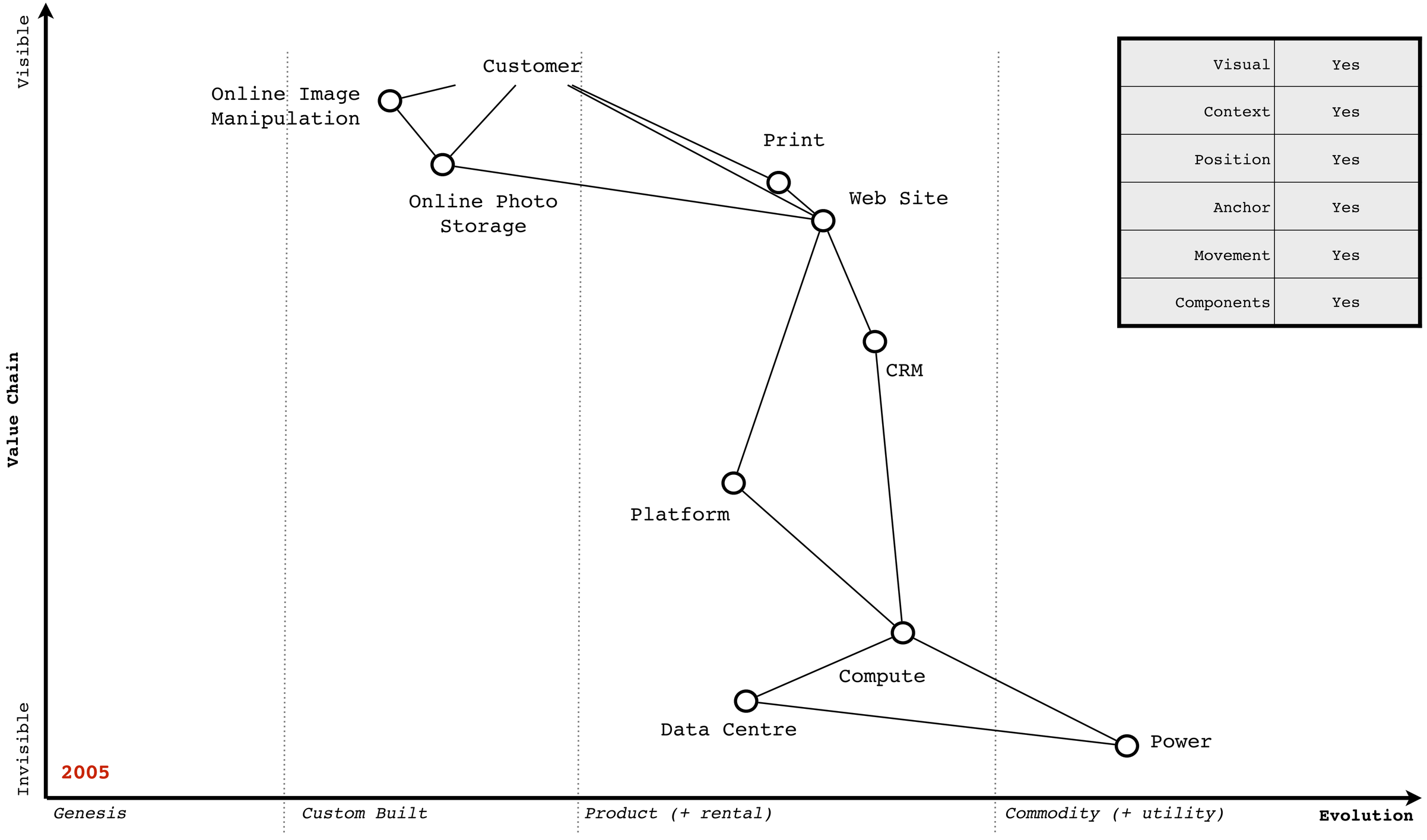

Service
(rental)
Service
(utility)
Ubiquity
Commodity
Product
Custom
Built
Genesis
Demand competition
Supply competition
Certainty




| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | **NO** |
| Components | Yes |

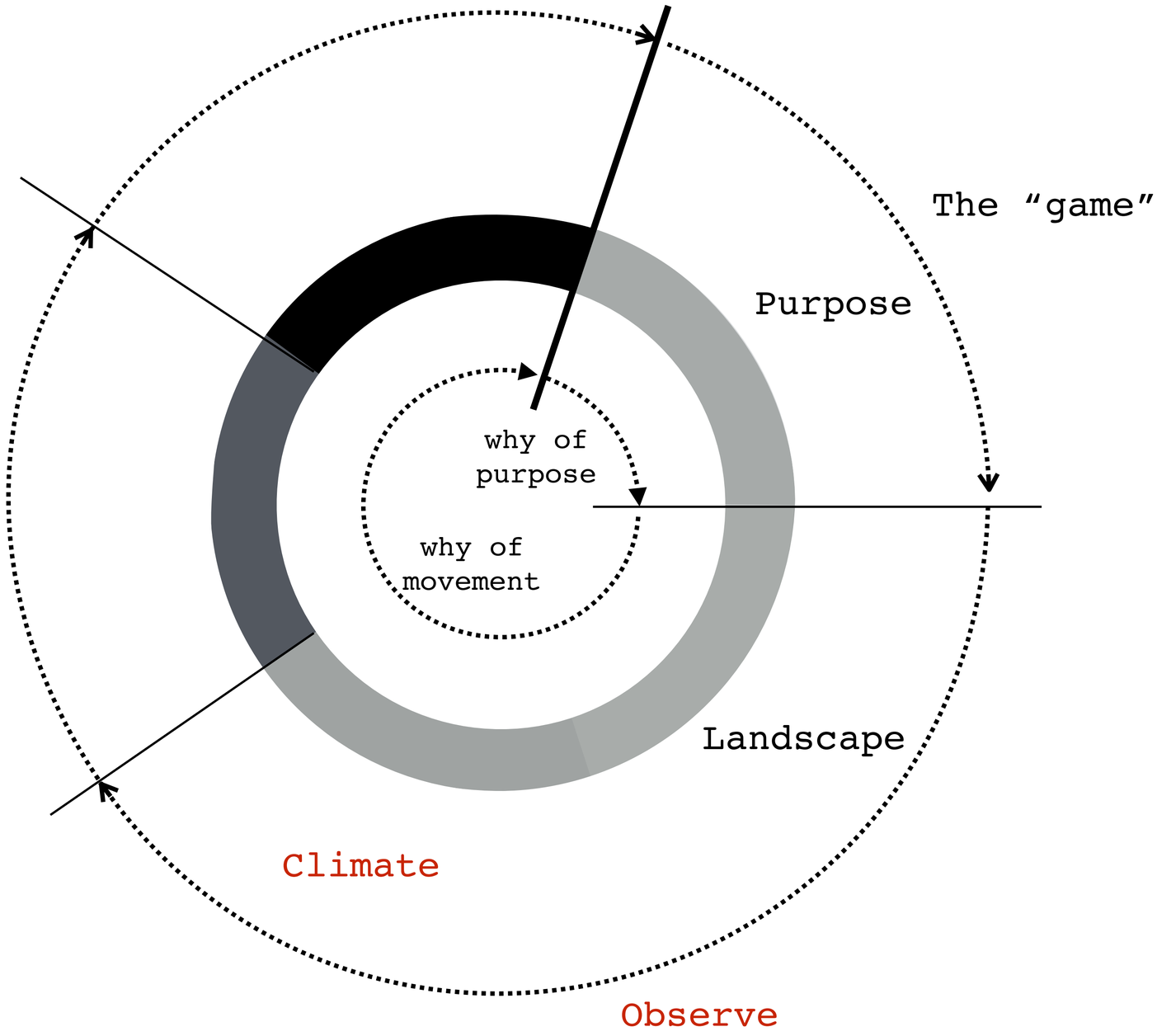



| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | **NO** |
| Components | Yes |



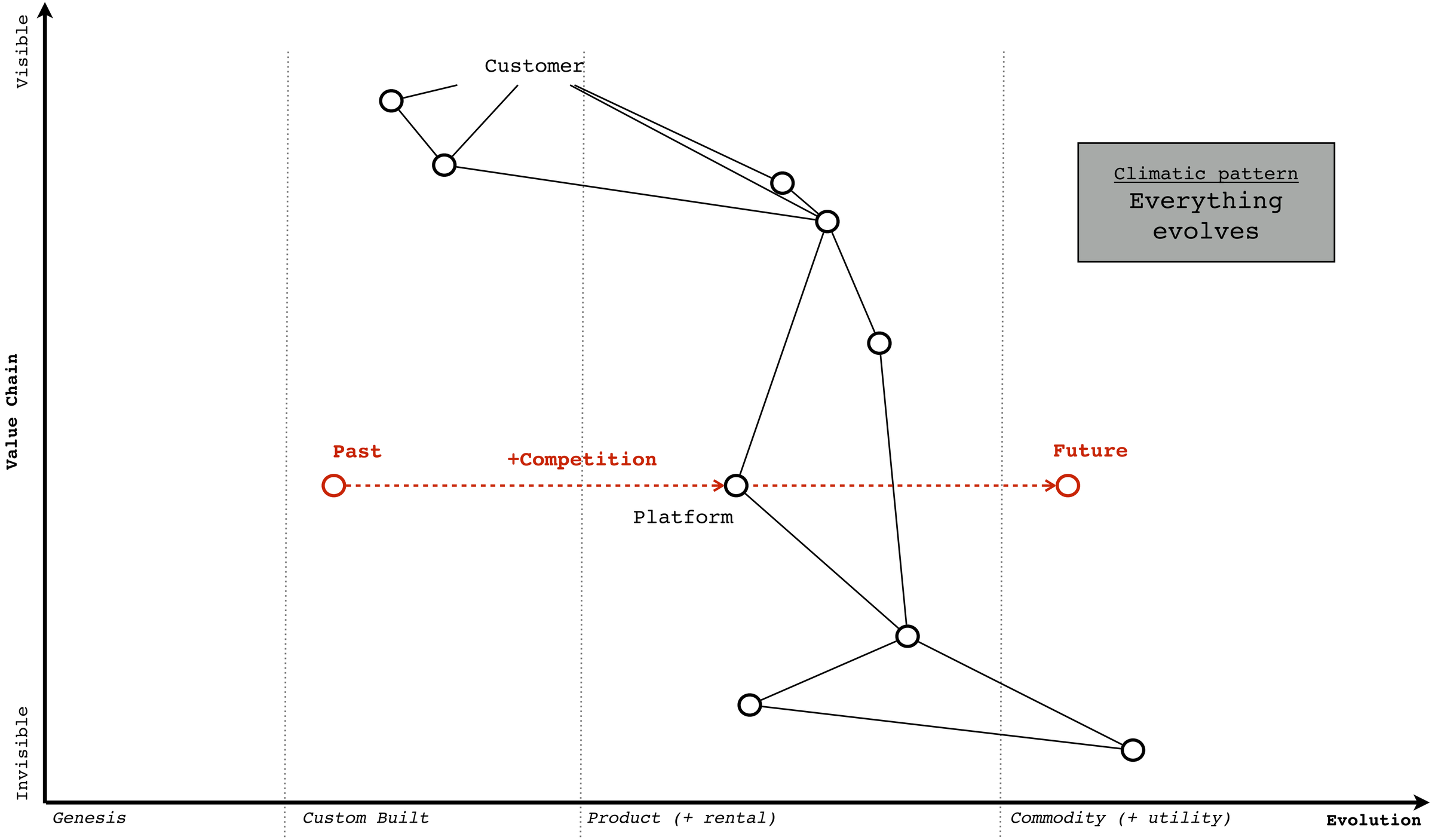

| | |
|---|---|
| Visual | Yes |
| Context | Yes |
| Position | Yes |
| Anchor | Yes |
| Movement | Yes |
| Components | Yes |

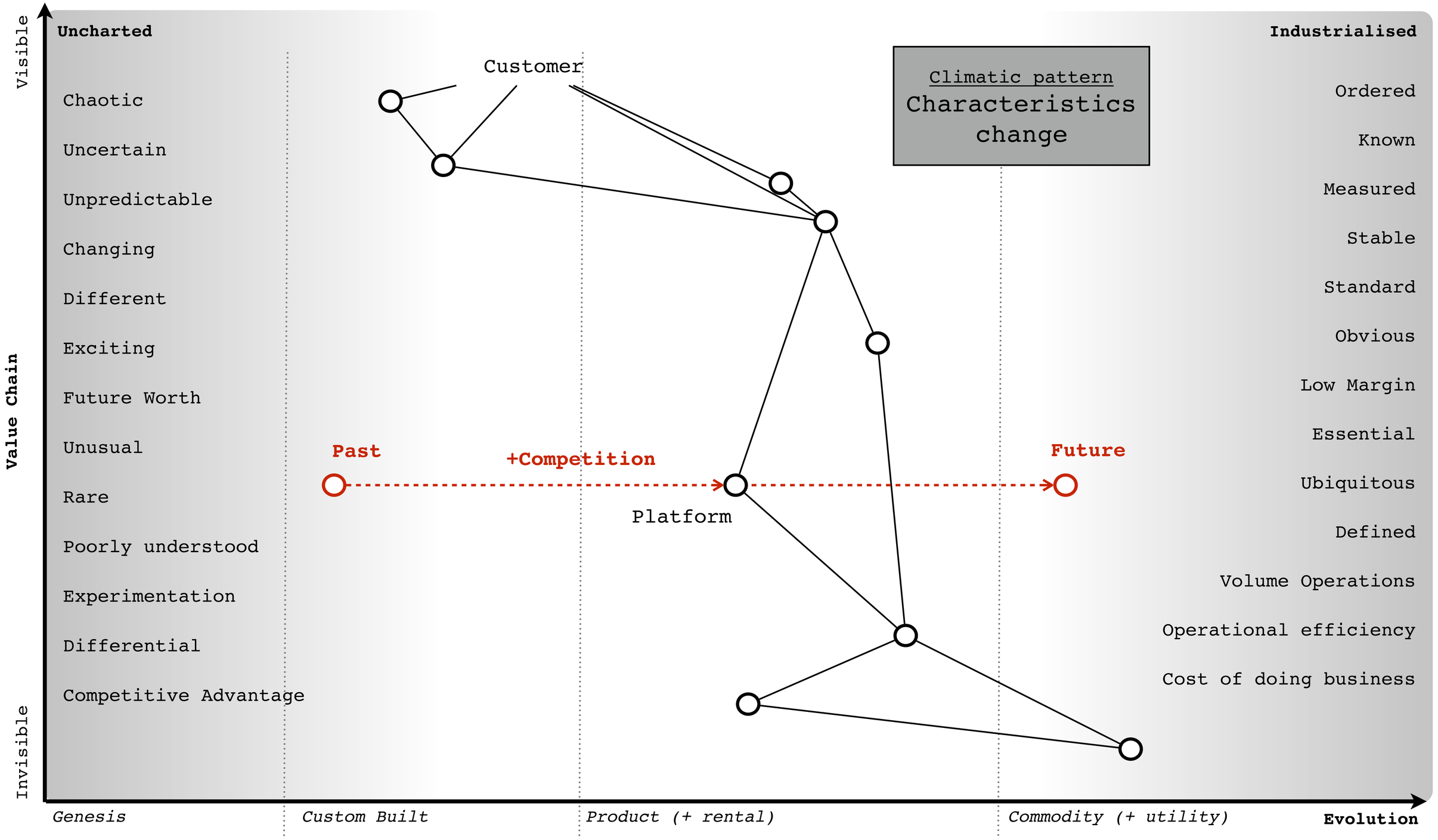
So what?

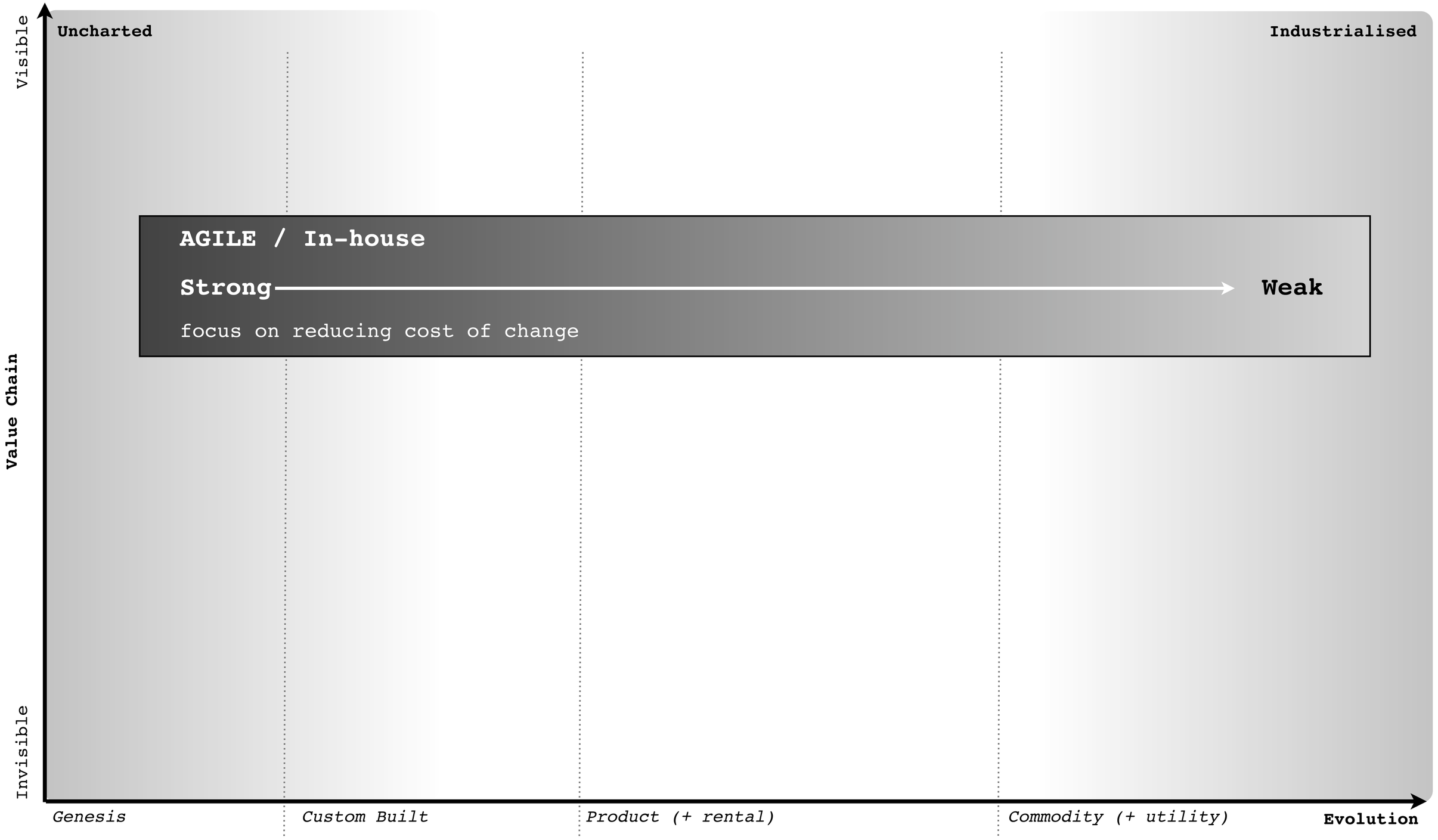

The “game”
Purpose
why of
purpose
why of
movement
Landscape
Climate
Observe

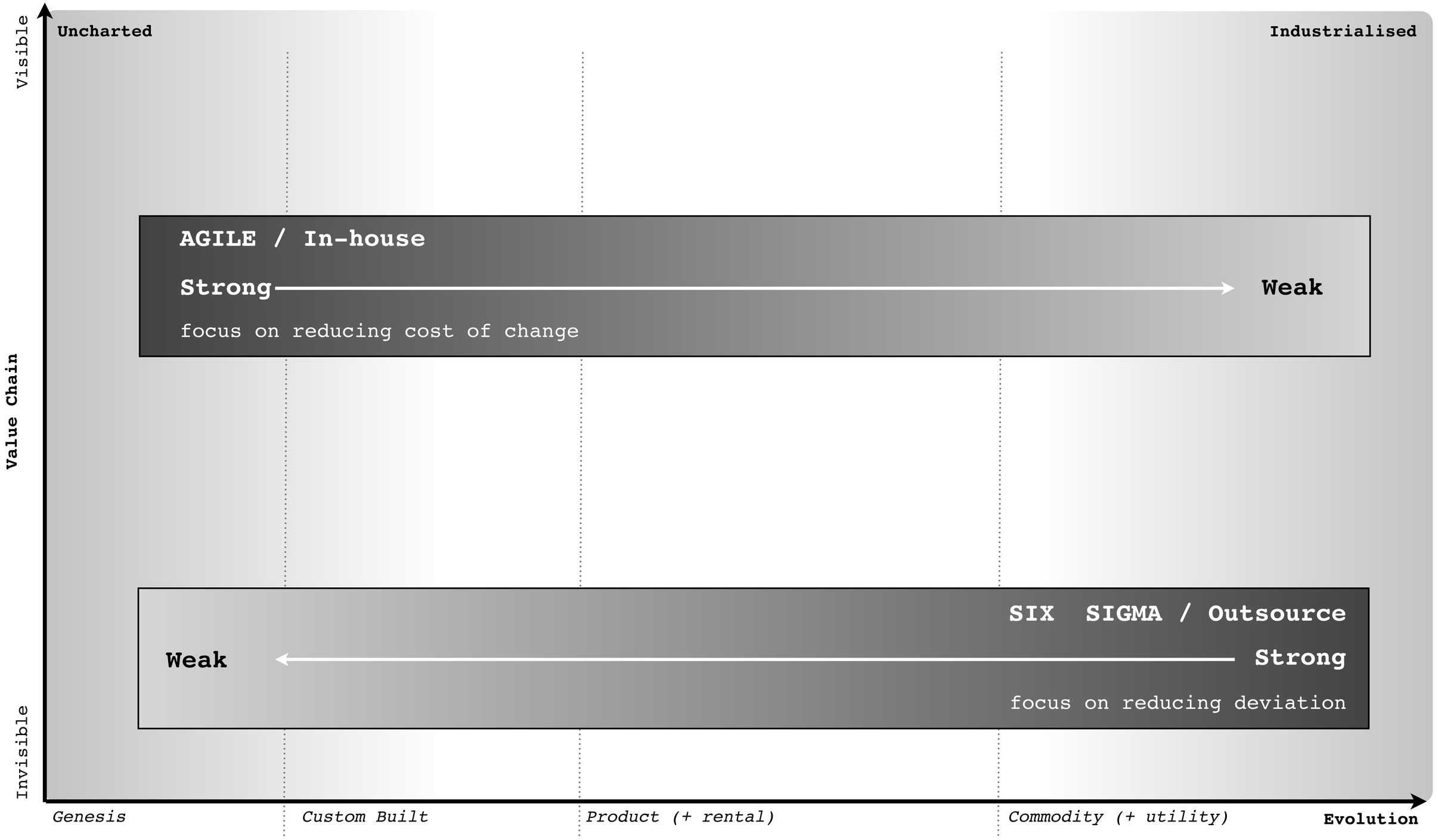
# Climate

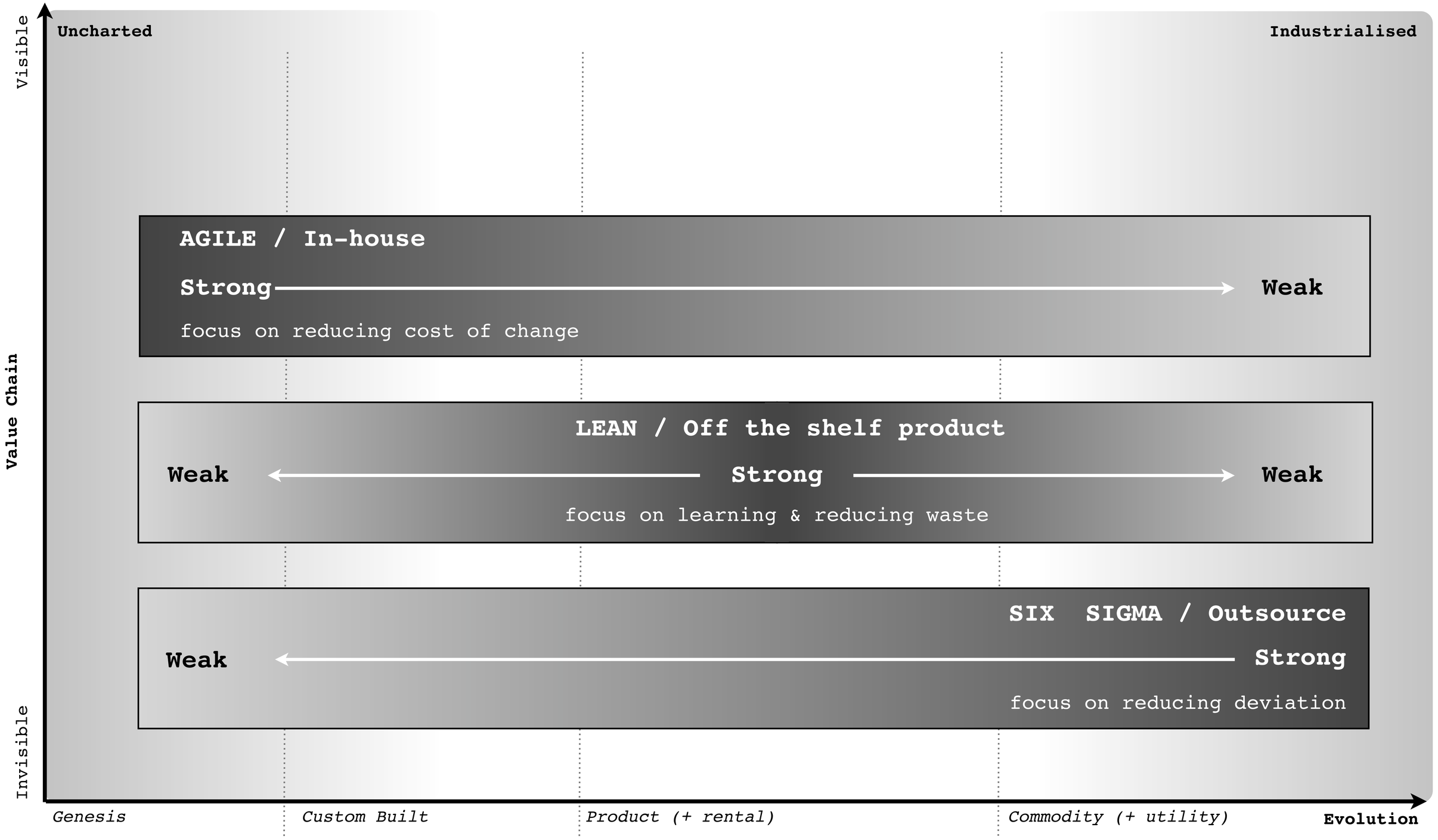
Rules that influence the game

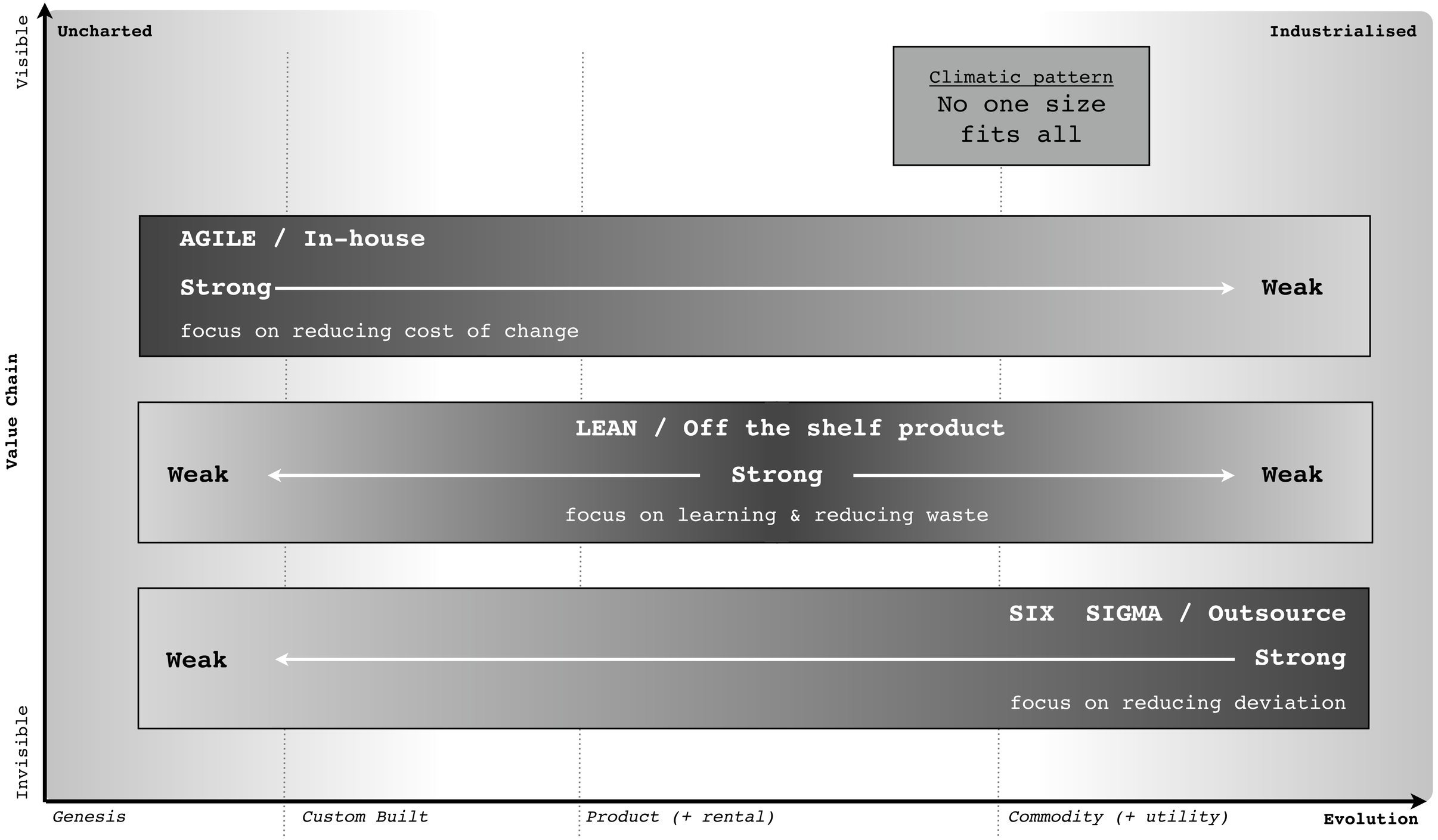

Visible
Value Chain
Invisible
Customer
Climatic pattern
Everything evolves
Past
+Competition
Future
Platform
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

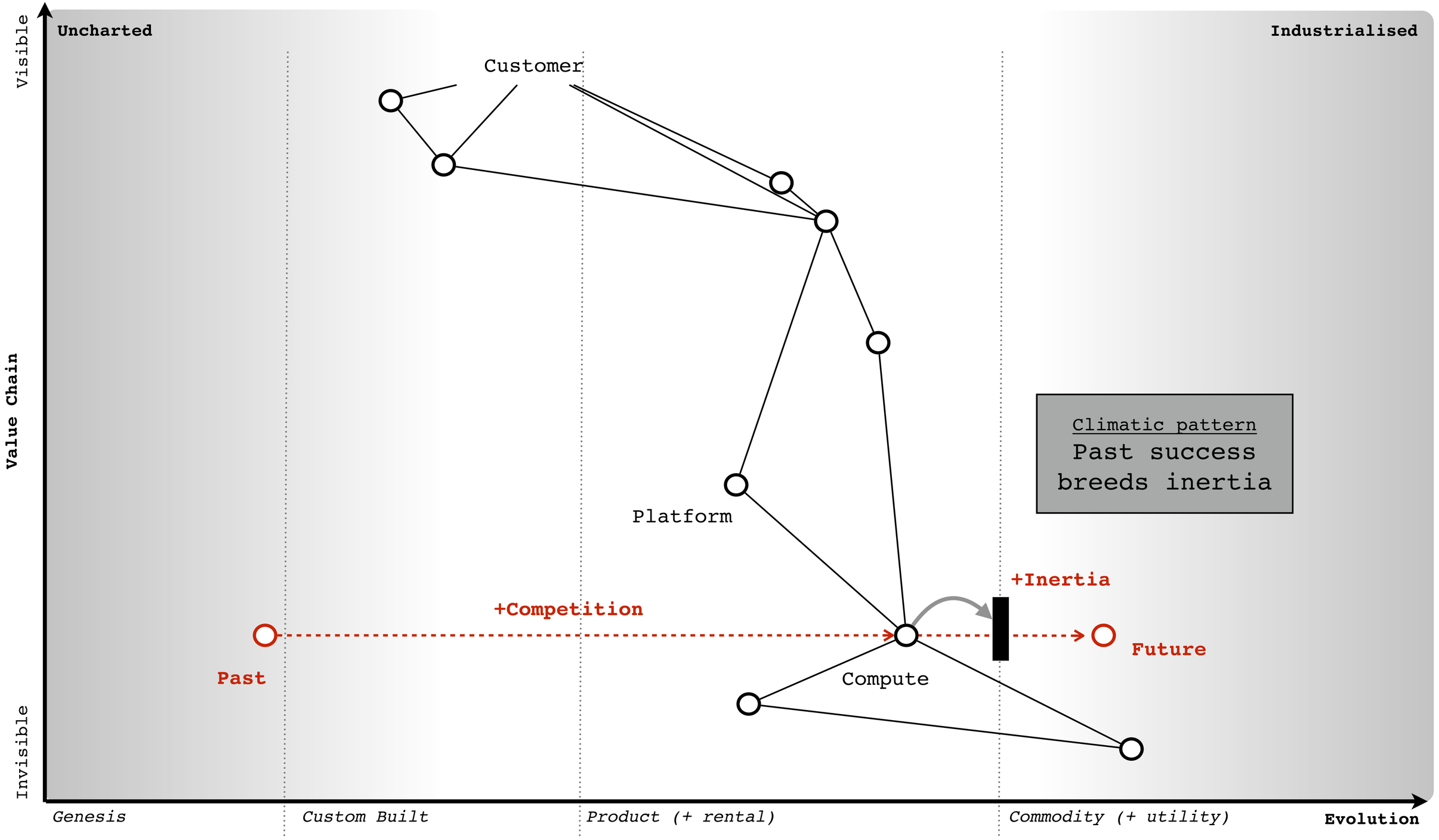

Visible
Invisible
Value Chain
Uncharted
Industrialised
Chaotic
Uncertain
Unpredictable
Changing
Different
Exciting
Future Worth
Unusual
Rare
Poorly understood
Experimentation
Differential
Competitive Advantage
Ordered
Known
Measured
Stable
Standard
Obvious
Low Margin
Essential
Ubiquitous
Defined
Volume Operations
Operational efficiency
Cost of doing business
Customer
Climatic pattern
Characteristics change
Past
+Competition
Future
Platform
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Visible
Uncharted
Industrialised
AGILE / In-house
Strong
Weak
focus on reducing cost of change
Value Chain
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Visible
Uncharted
Industrialised
AGILE / In-house
Strong
Weak
focus on reducing cost of change
SIX SIGMA / Outsource
Weak
Strong
focus on reducing deviation
Value Chain
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

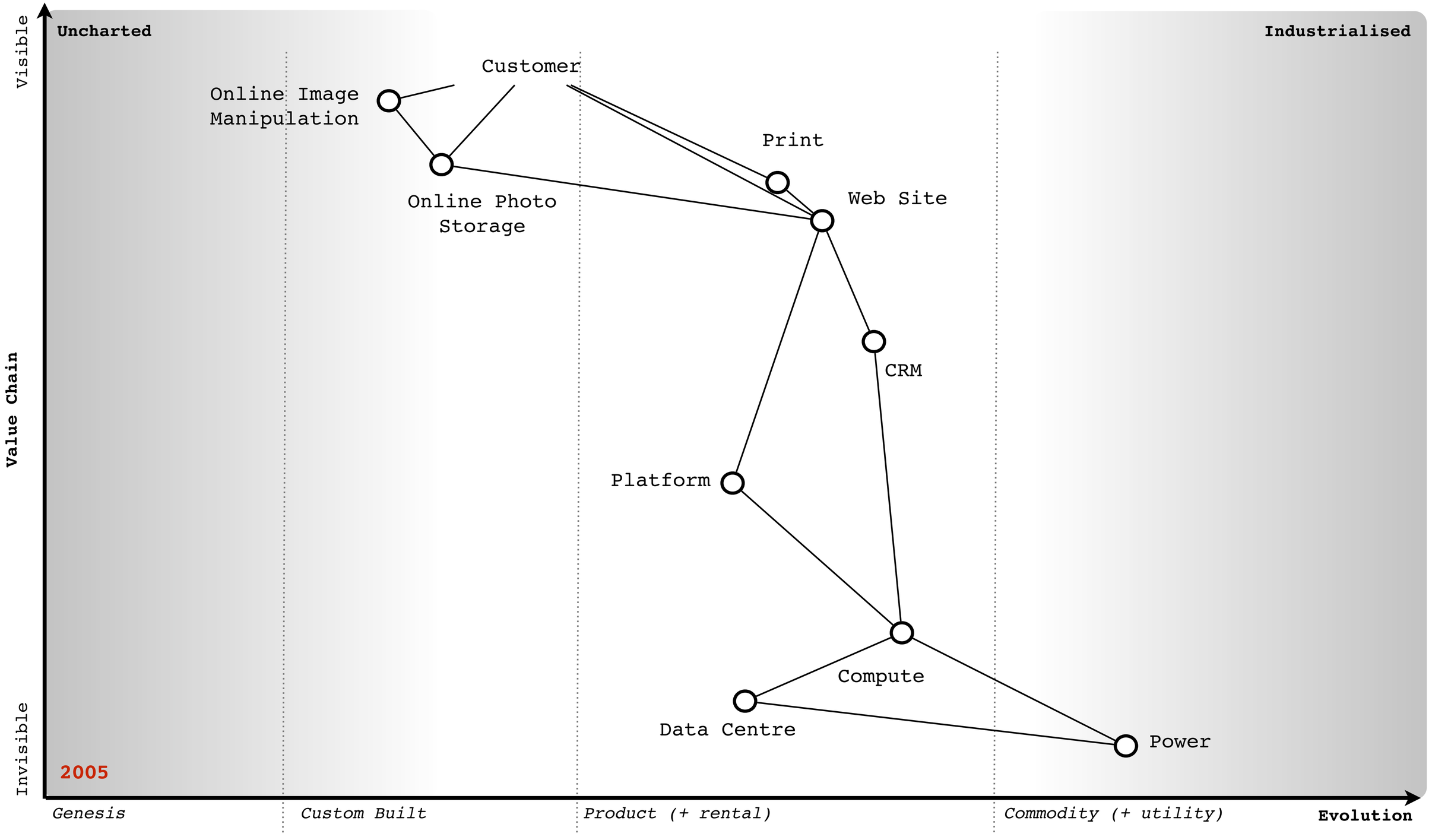

Visible
Uncharted
Industrialised
AGILE / In-house
Strong
Weak
focus on reducing cost of change
LEAN / Off the shelf product
Weak
Strong
Weak
focus on learning & reducing waste
SIX SIGMA / Outsource
Weak
Strong
focus on reducing deviation
Value Chain
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

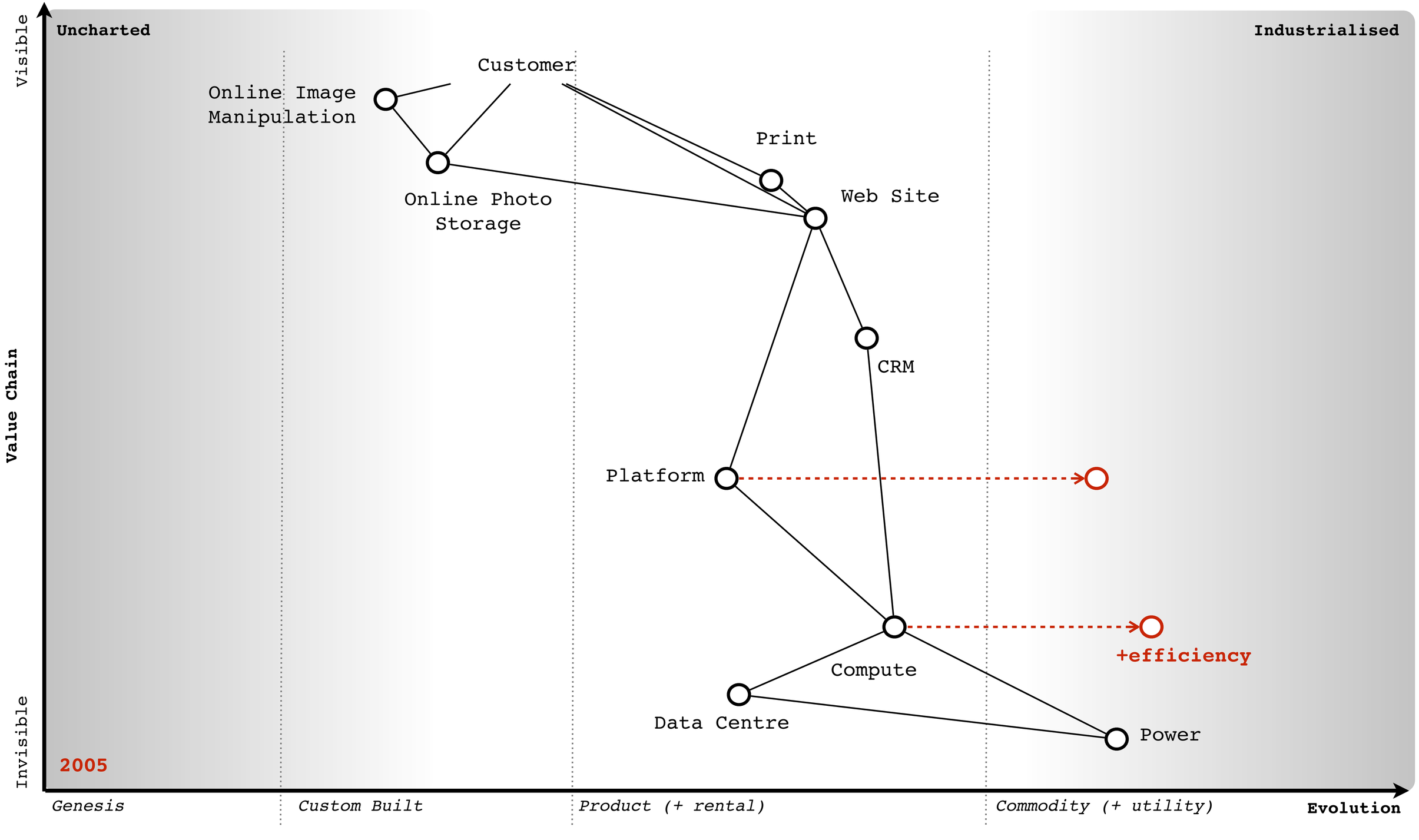

Visible
Uncharted
Industrialised
Climatic pattern
No one size fits all
AGILE / In-house
Strong
Weak
focus on reducing cost of change
LEAN / Off the shelf product
Weak
Strong
Weak
focus on learning & reducing waste
SIX SIGMA / Outsource
Weak
Strong
focus on reducing deviation
Value Chain
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

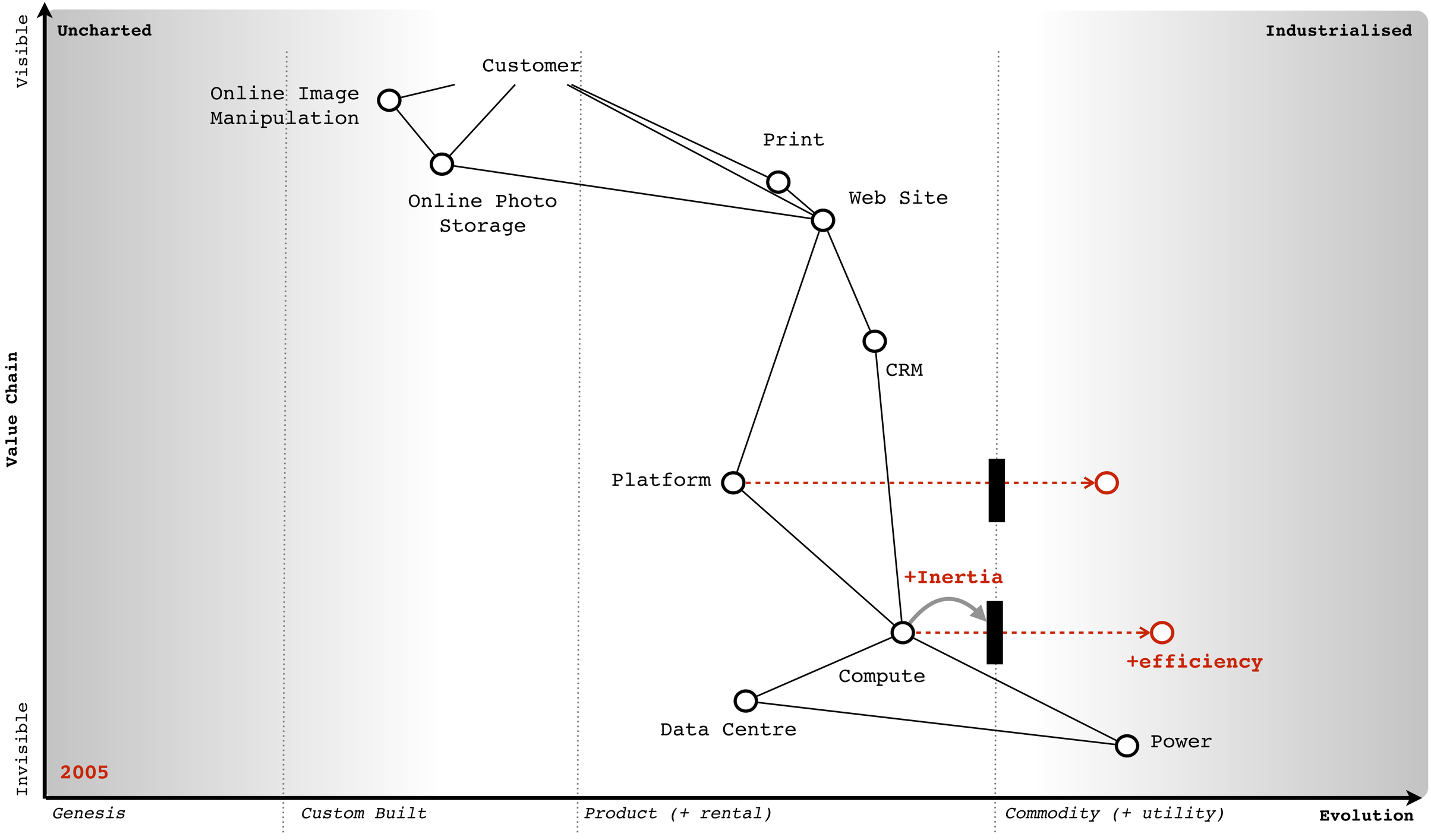

Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Platform
Compute
Climatic pattern
Past success breeds inertia
+Inertia
+Competition
Past
Future
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

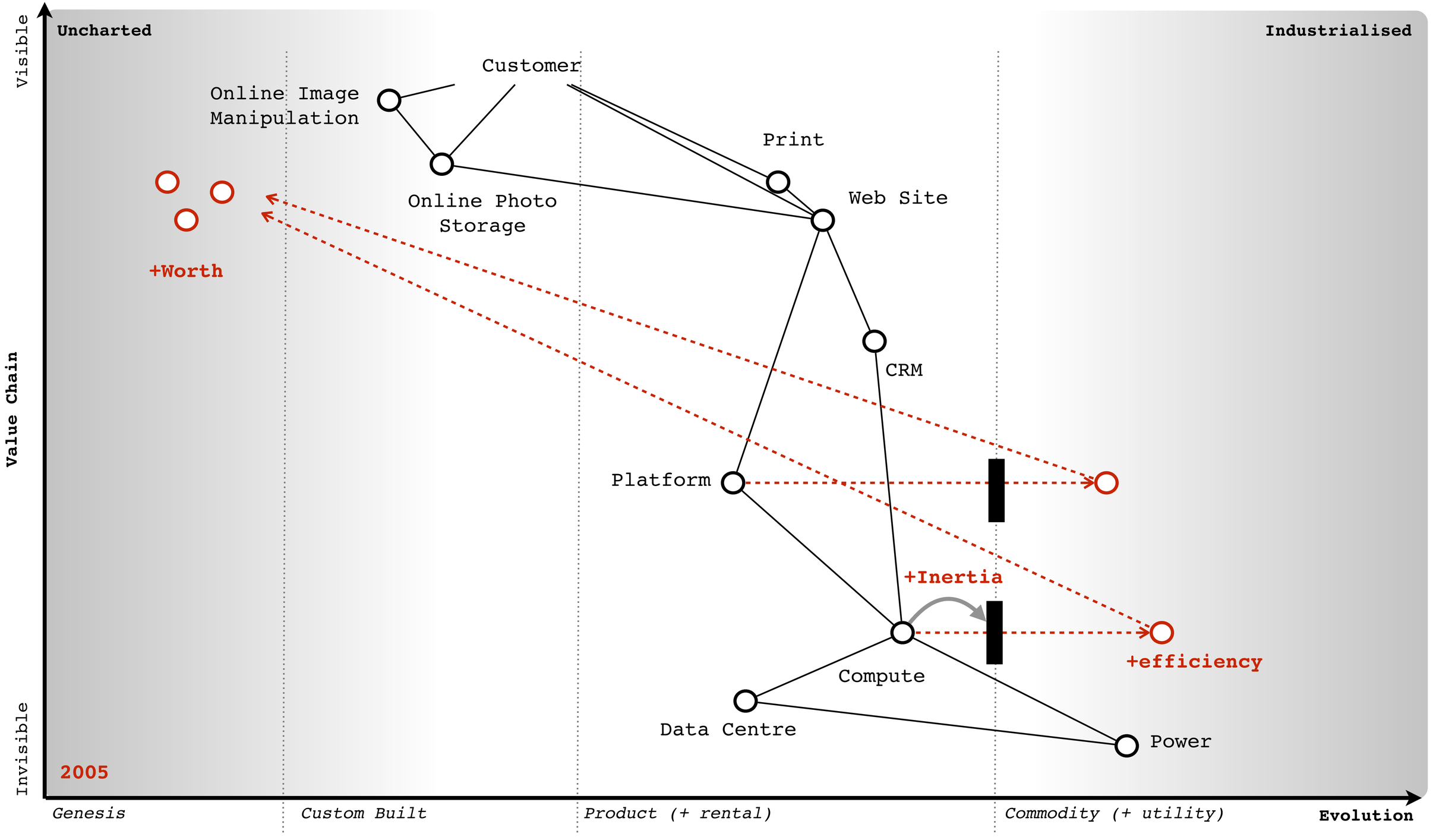
BLOCKBUSTER

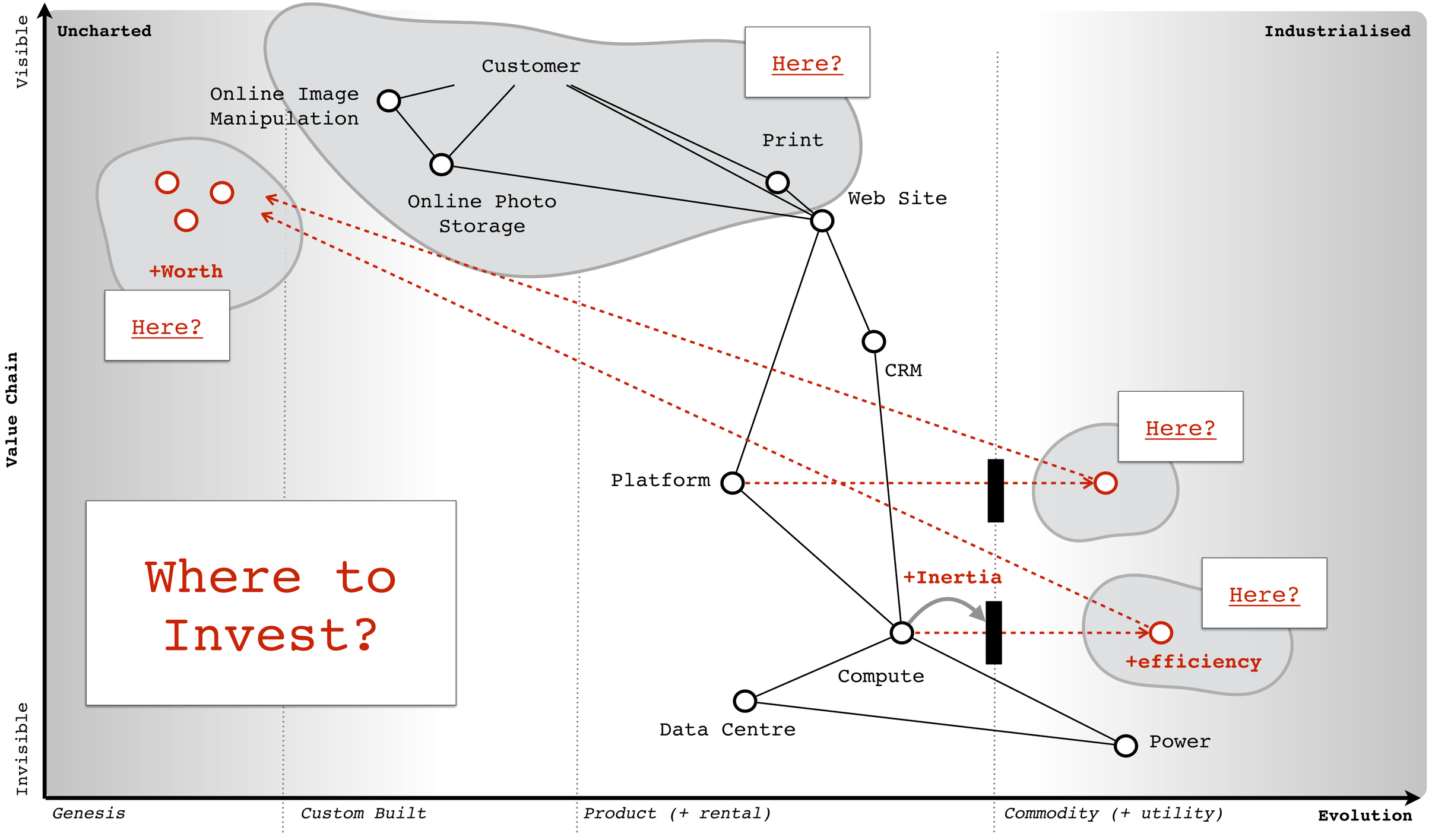
NETFLIX


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
2005
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
+efficiency
2005
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
+Inertia
+efficiency
Compute
Data Centre
Power
2005
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

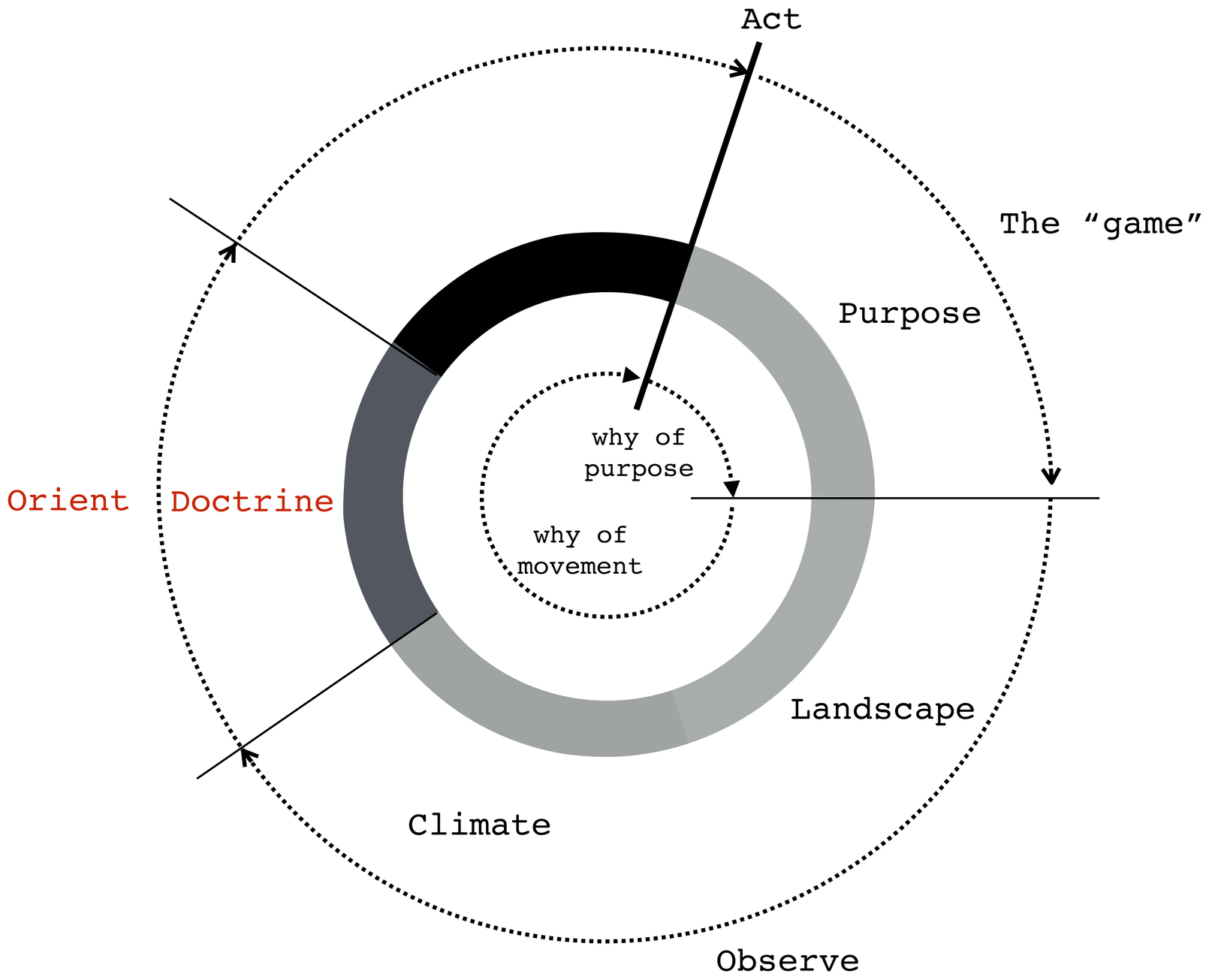

Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
+Worth
Platform
+Inertia
+efficiency
Compute
Data Centre
Power
2005
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Visible
Invisible
Value Chain
Uncharted
Industrialised
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution
Customer
Here?
Online Image Manipulation
Print
Online Photo Storage
Web Site
+Worth
Here?
CRM
Here?
Platform
+Inertia
Here?
+efficiency
Compute
Data Centre
Power
Where to Invest?

Cloud is for
startups …

… it’ll dominate in 10 to 15 years

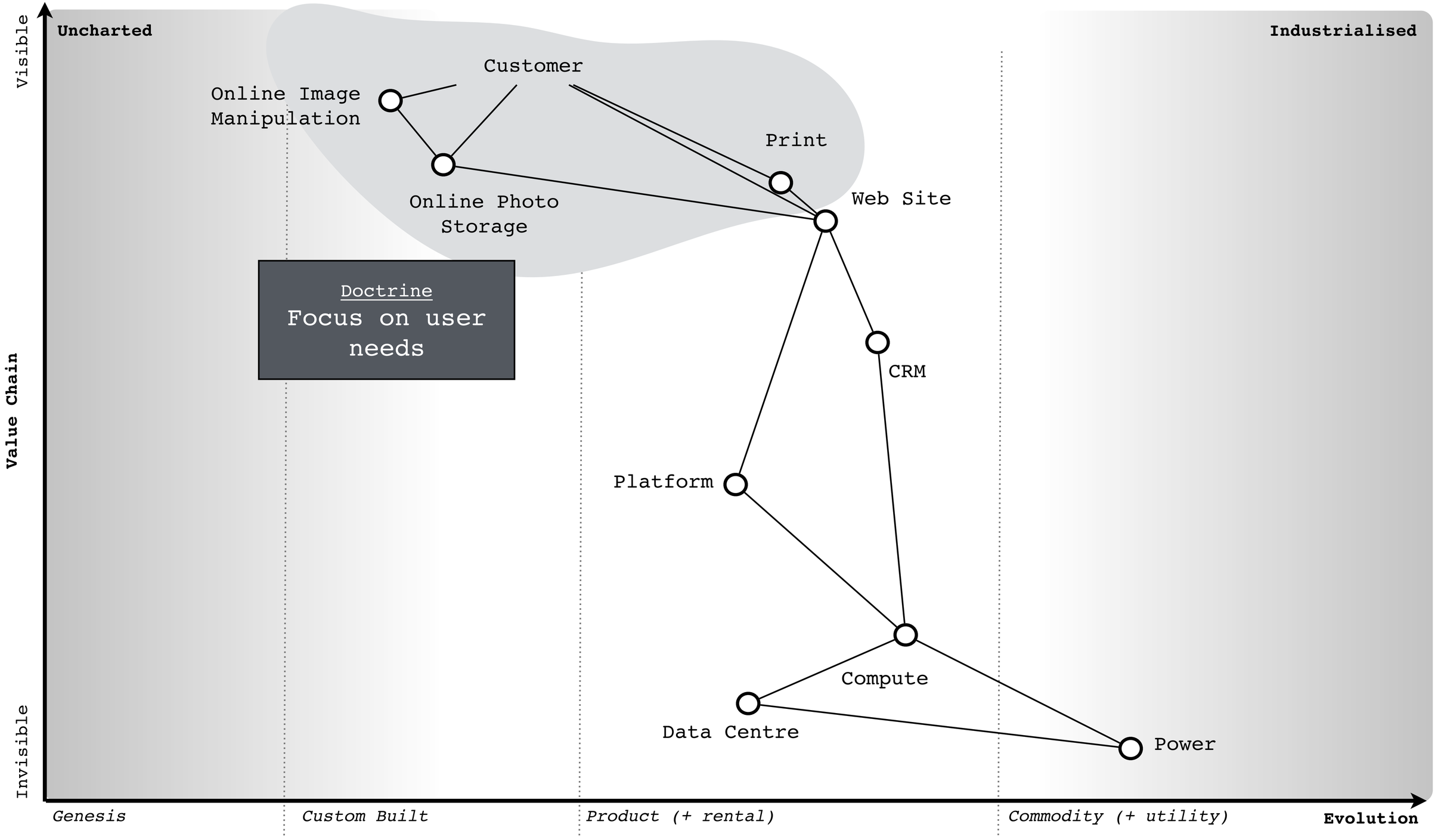
Burn him!
Heretic

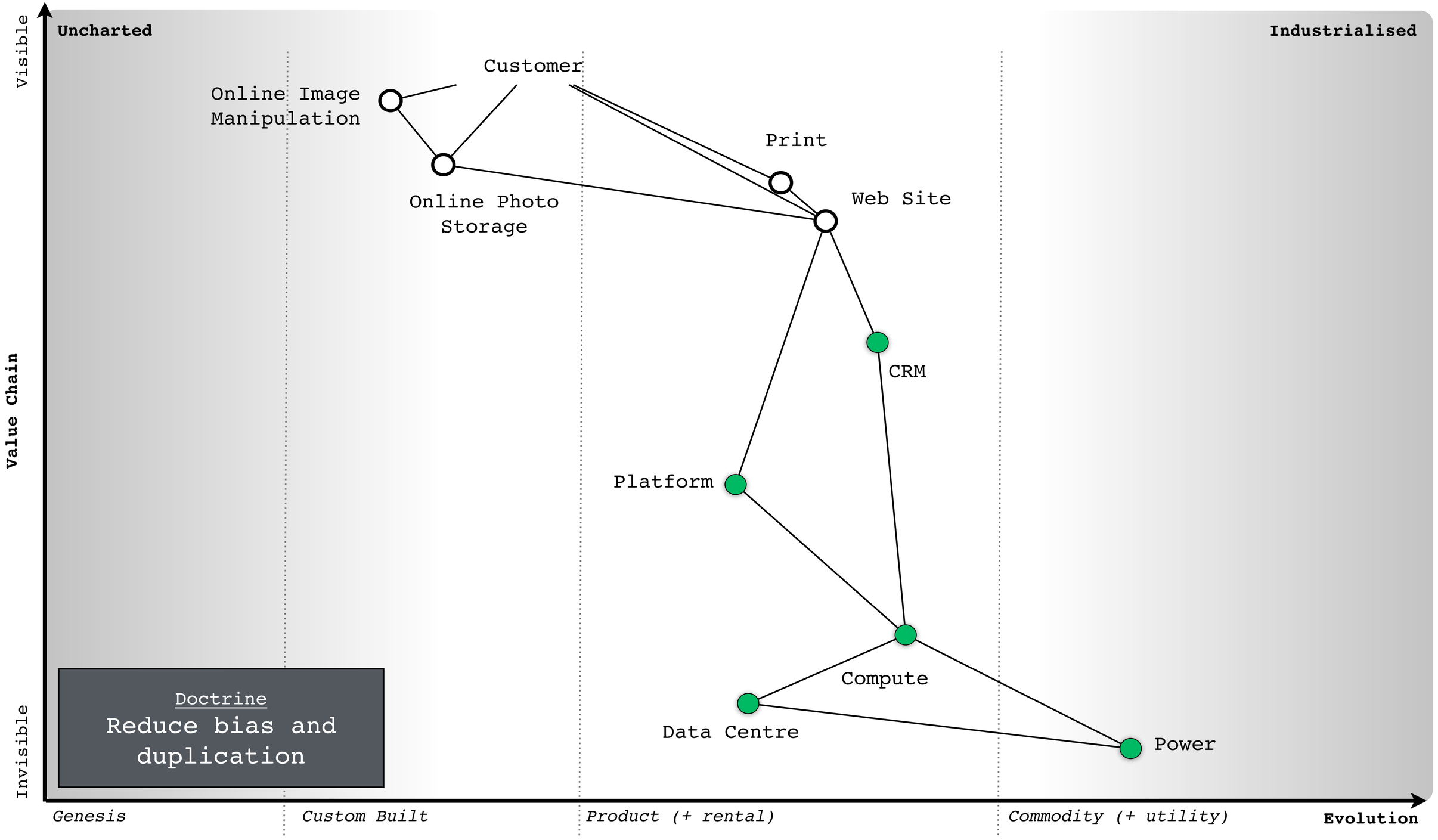

Act
The “game”
Purpose
why of
purpose
why of
movement
Orient
Doctrine
Landscape
Climate
Observe

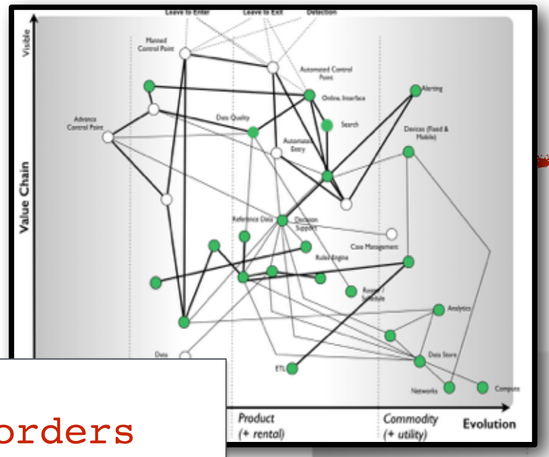
Doctrine

universally applicable principles regardless of context

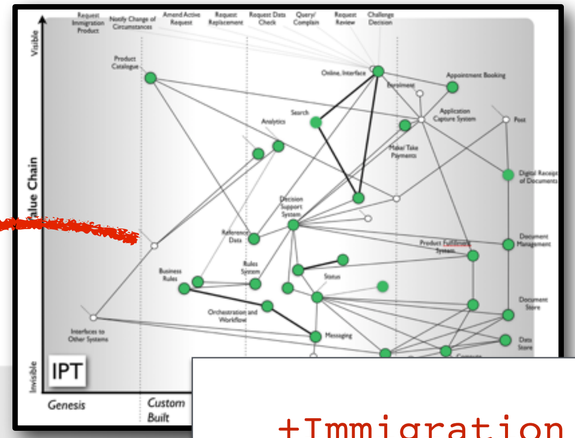
Flanking versus
Firing


Visible
Uncharted
Industrialised
Customer
Online Image Manipulation
Print
Online Photo Storage
Web Site
Doctrine
Focus on user needs
CRM
Platform
Compute
Data Centre
Power
Invisible
Value Chain
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Value Chain
Invisible
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Doctrine
Reduce bias and duplication
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution




+Borders



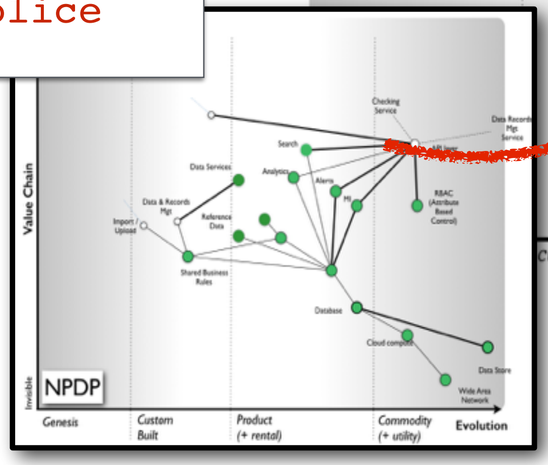

+Immigration

Email (7)
Website (9)
Procurement (4)
Storage (8)
CRM (7)
User Registration (6)
Document Management System (8)
HR (7)
E-Catalogue (7)
E-Commerce Payment (5)
Finance (6)
Platform (10)
Compute (10)
Power (15)
Data Centre (5)

Doctrine
Bias

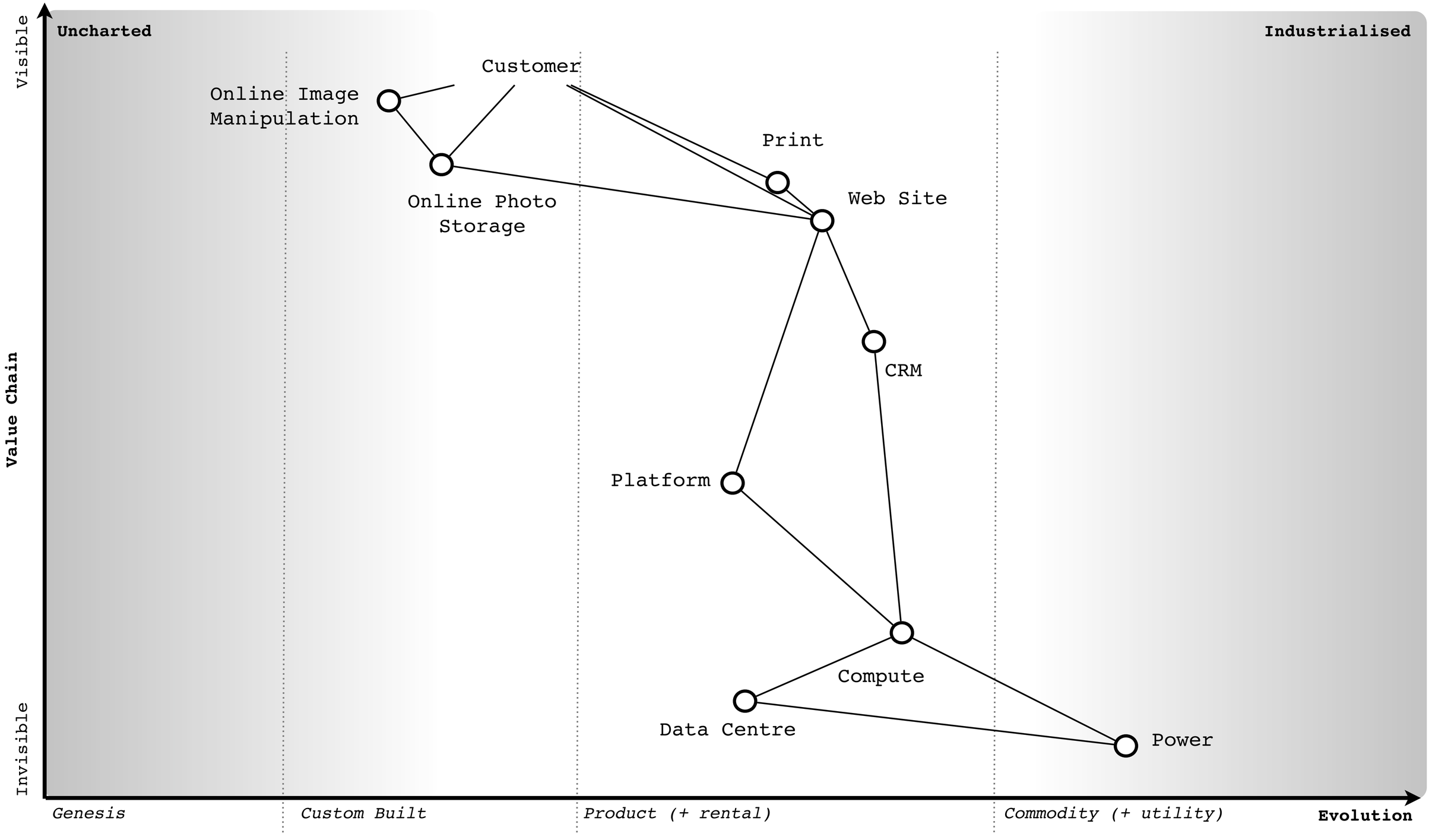
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

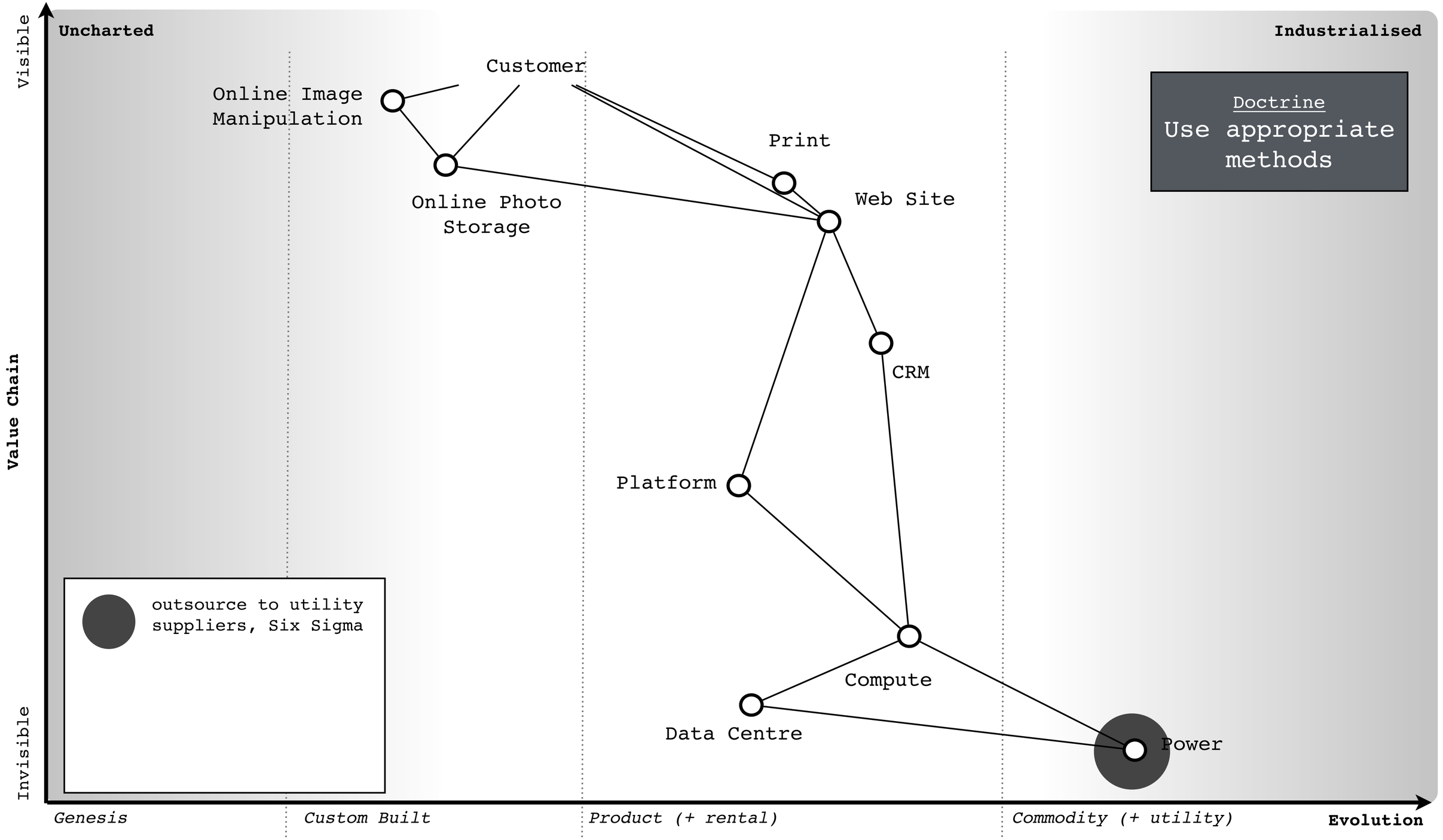
+Police

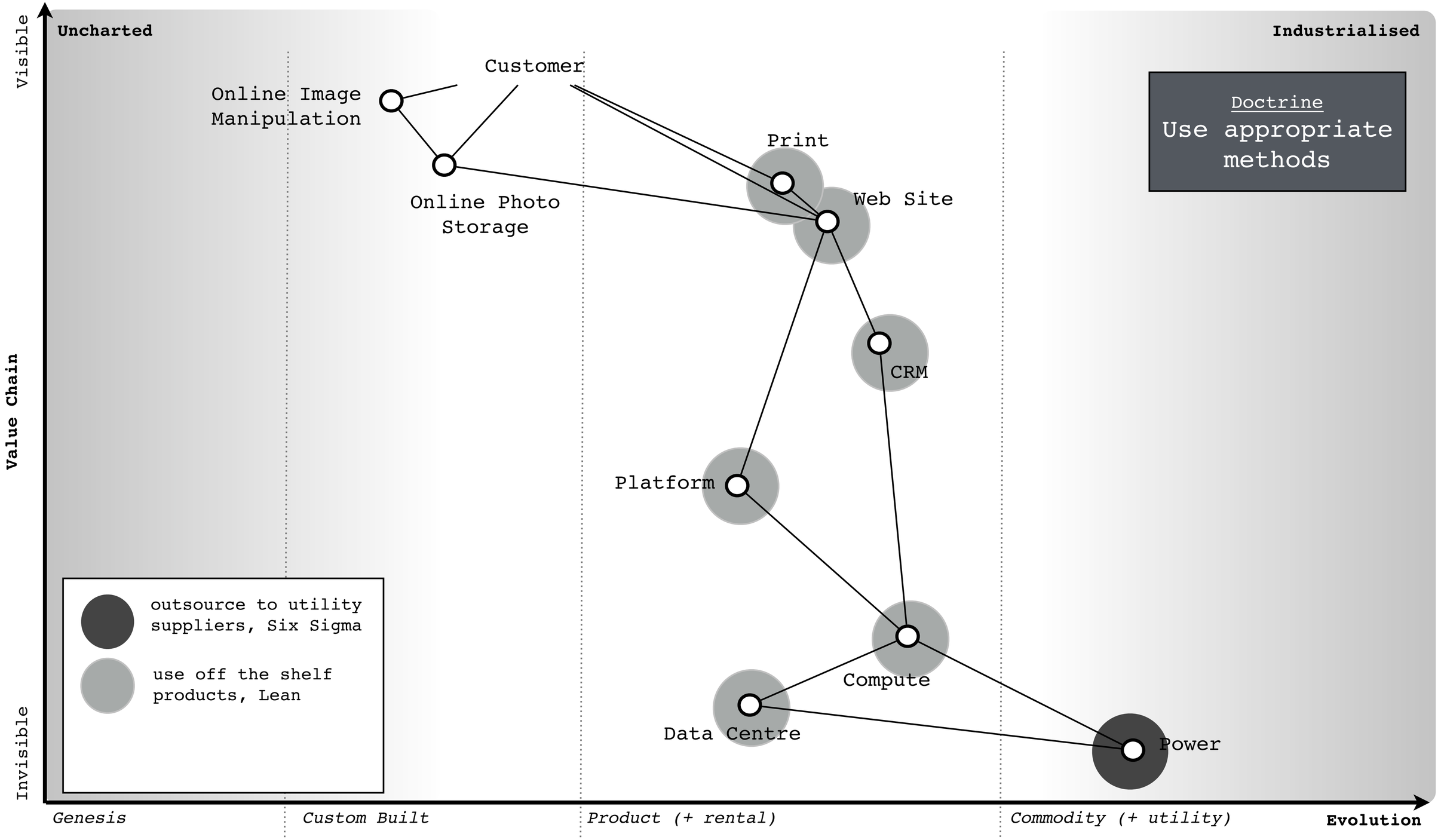


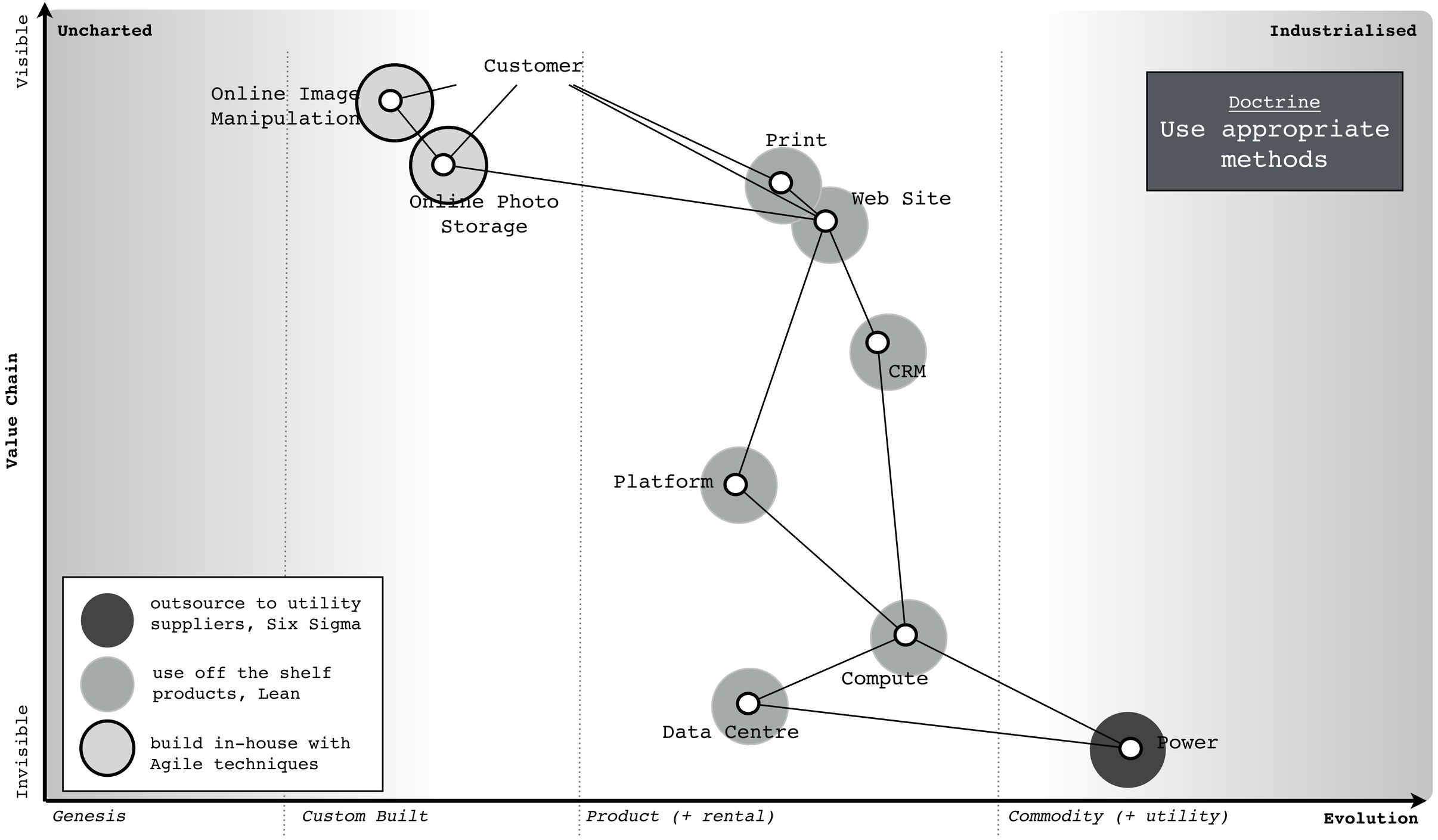
# IT Weapons of Mass Duplication - Leader Board

| **Number of Duplicate Efforts in a single Organisation** | **Technology Space** | **Industry** |
|---|---|---|
| *2,000+ (unconfirmed)* | *Accounting systems* | *Global Defence* |
| **1,000+ (estimated)** | **Risk management** | **Global Finance** |
| 380 | ERP system | Global Energy |
| 300+ | ECM systems | Global Pharma |
| 170 | Cloud projects | Global Technology |
| 118 | Workflow systems | Government |
| 22 | Rules Engines | European Corporate |
| 14 | CRM system | National Bank |
| 6 | General Rule of Thumb | Everywhere |

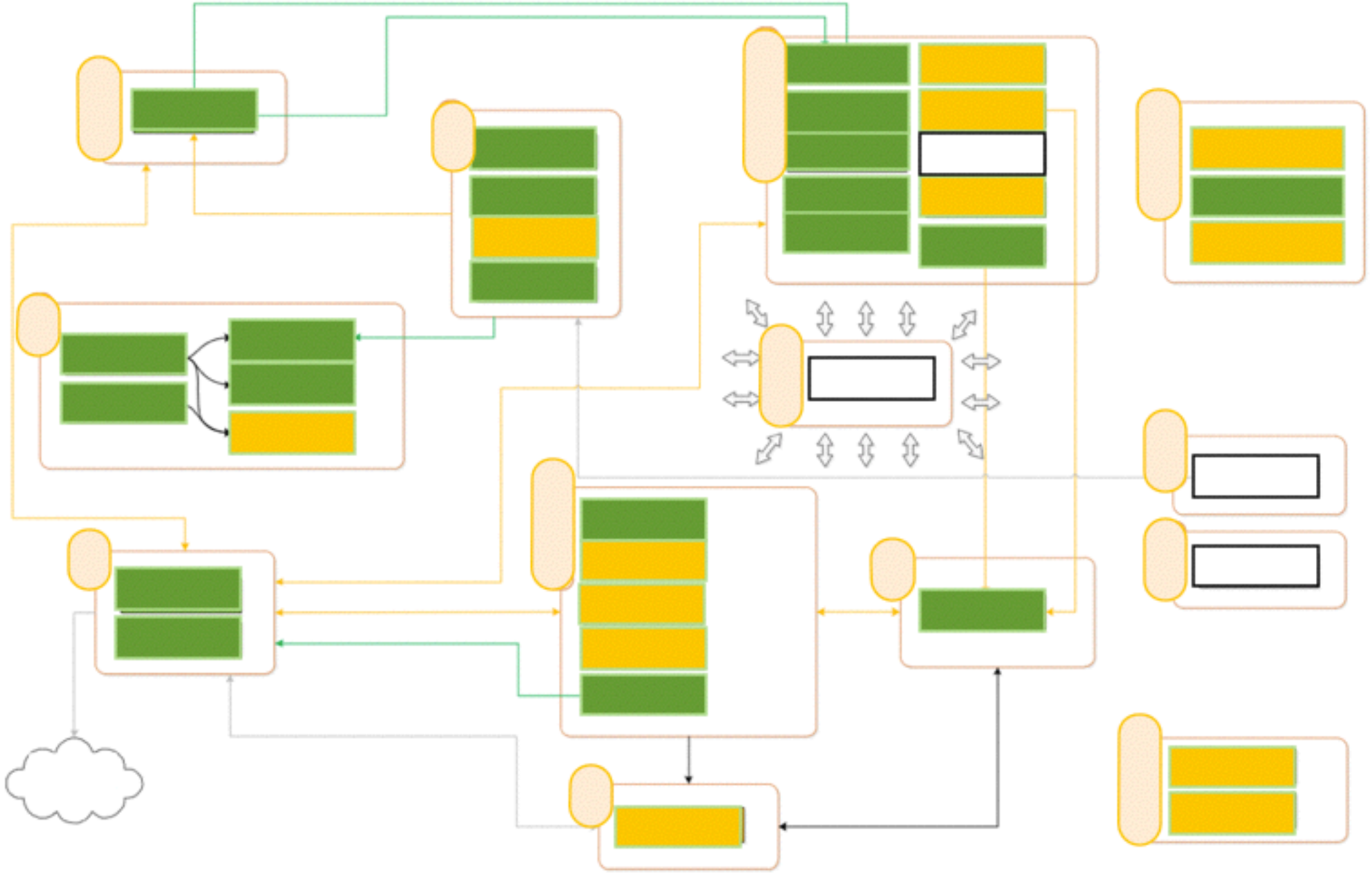

Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

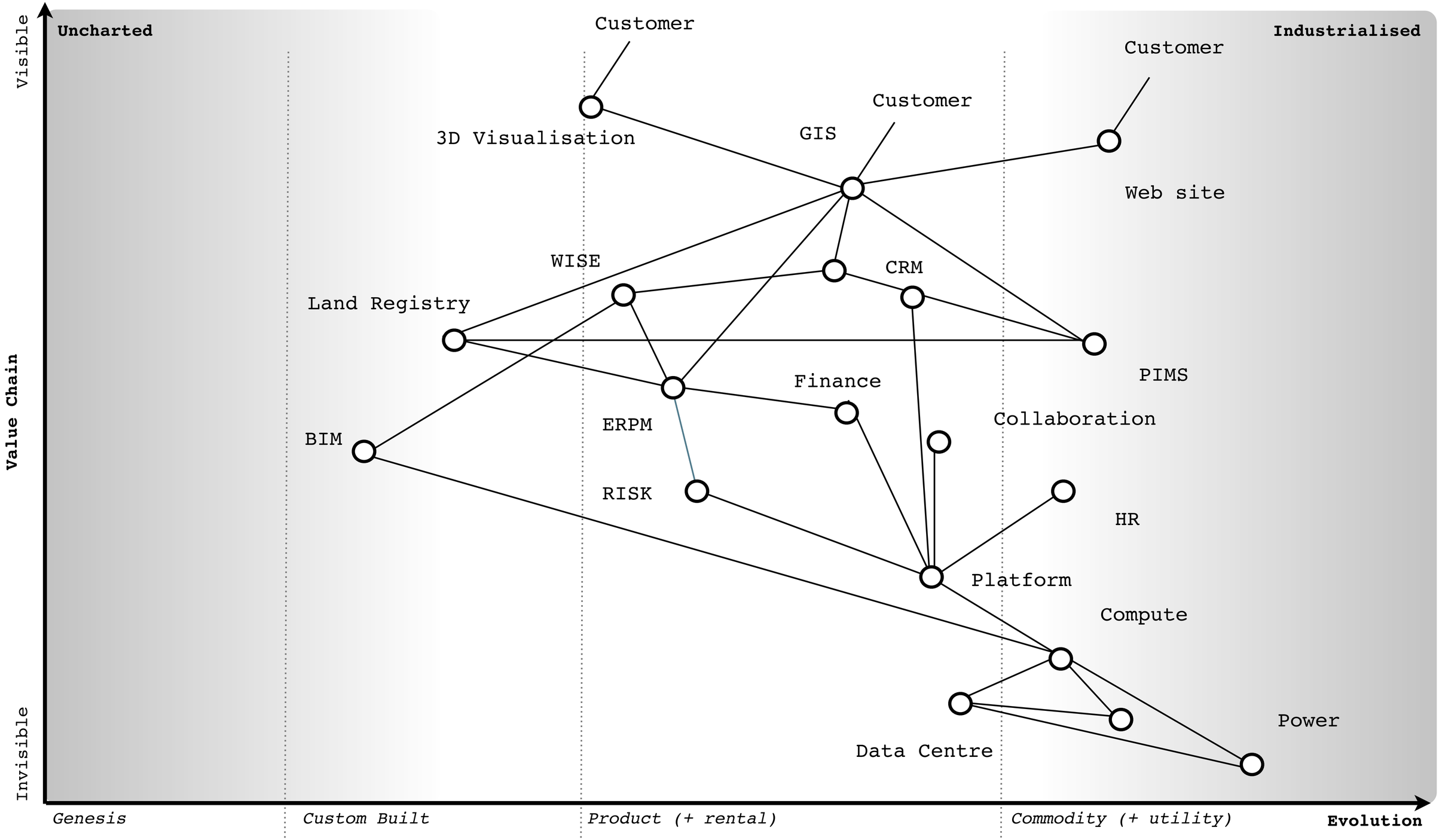

Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Doctrine
Use appropriate methods
outsource to utility suppliers, Six Sigma
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

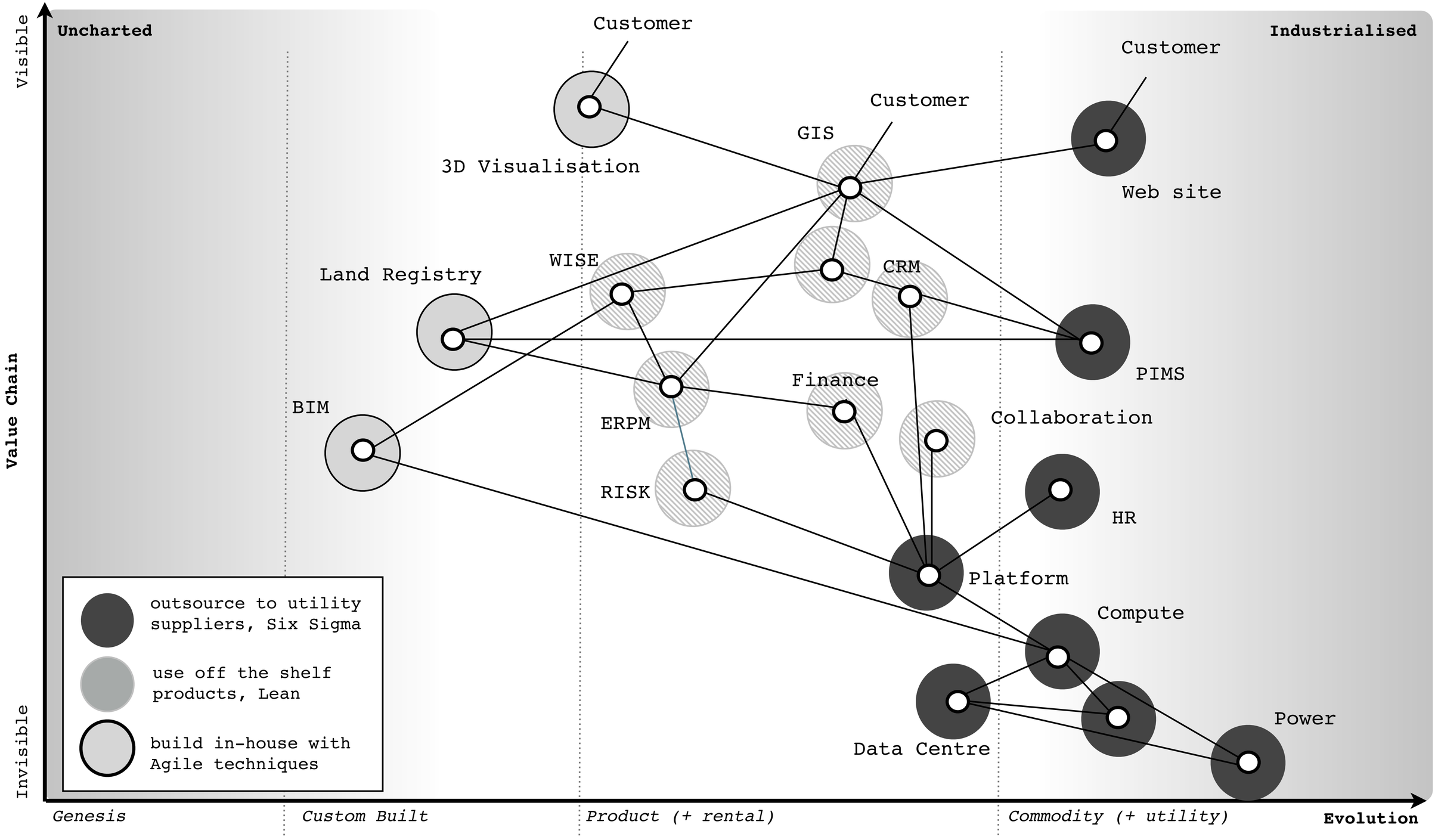

Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Doctrine
Use appropriate methods
outsource to utility suppliers, Six Sigma
use off the shelf products, Lean
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

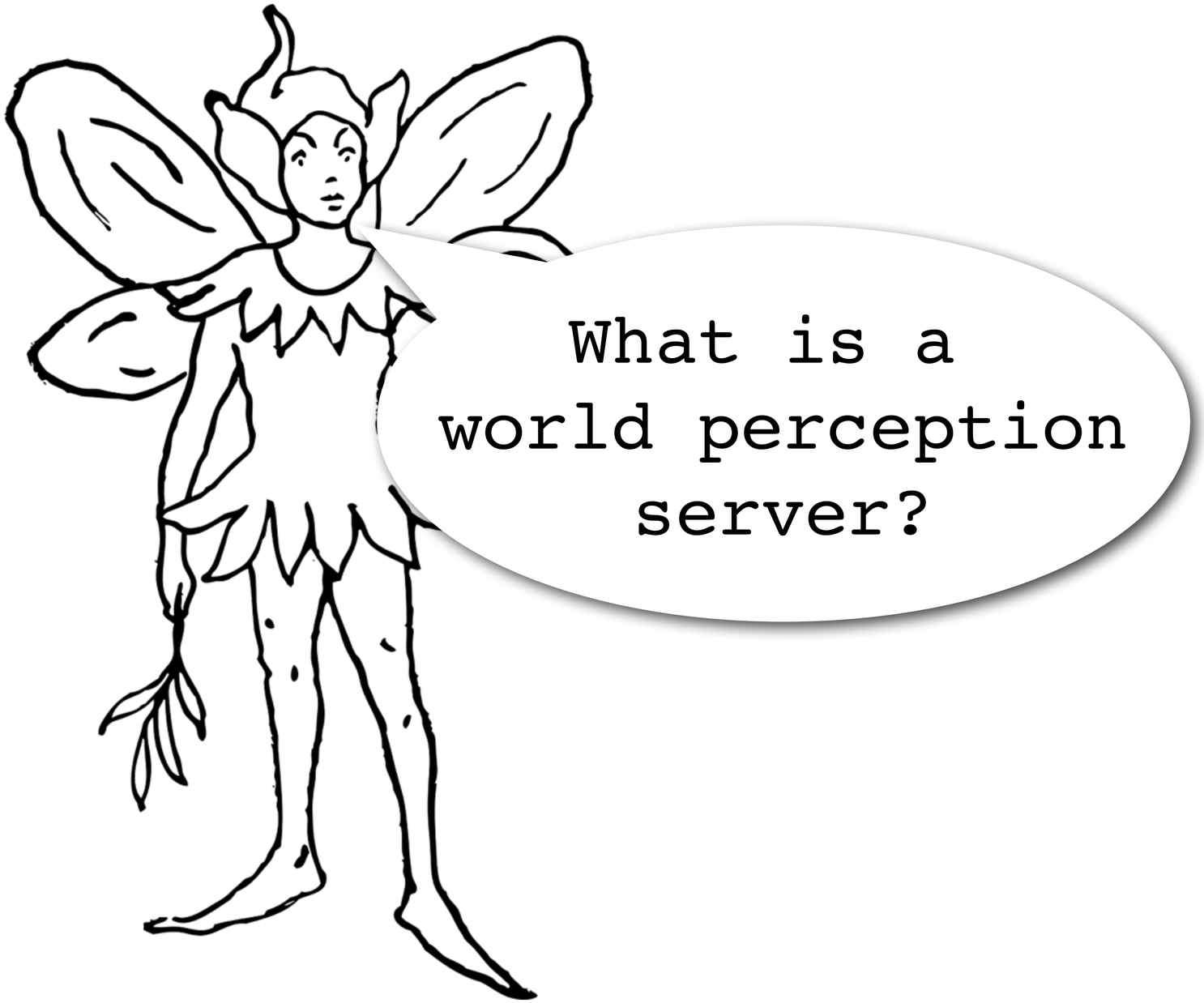

Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Doctrine
Use appropriate methods
outsource to utility suppliers, Six Sigma
use off the shelf products, Lean
build in-house with Agile techniques
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

Sunil060902, CC by SA 3.0
https://commons.wikimedia.org/wiki/File:Unit 395008 at Ebbsfleet International.JPG

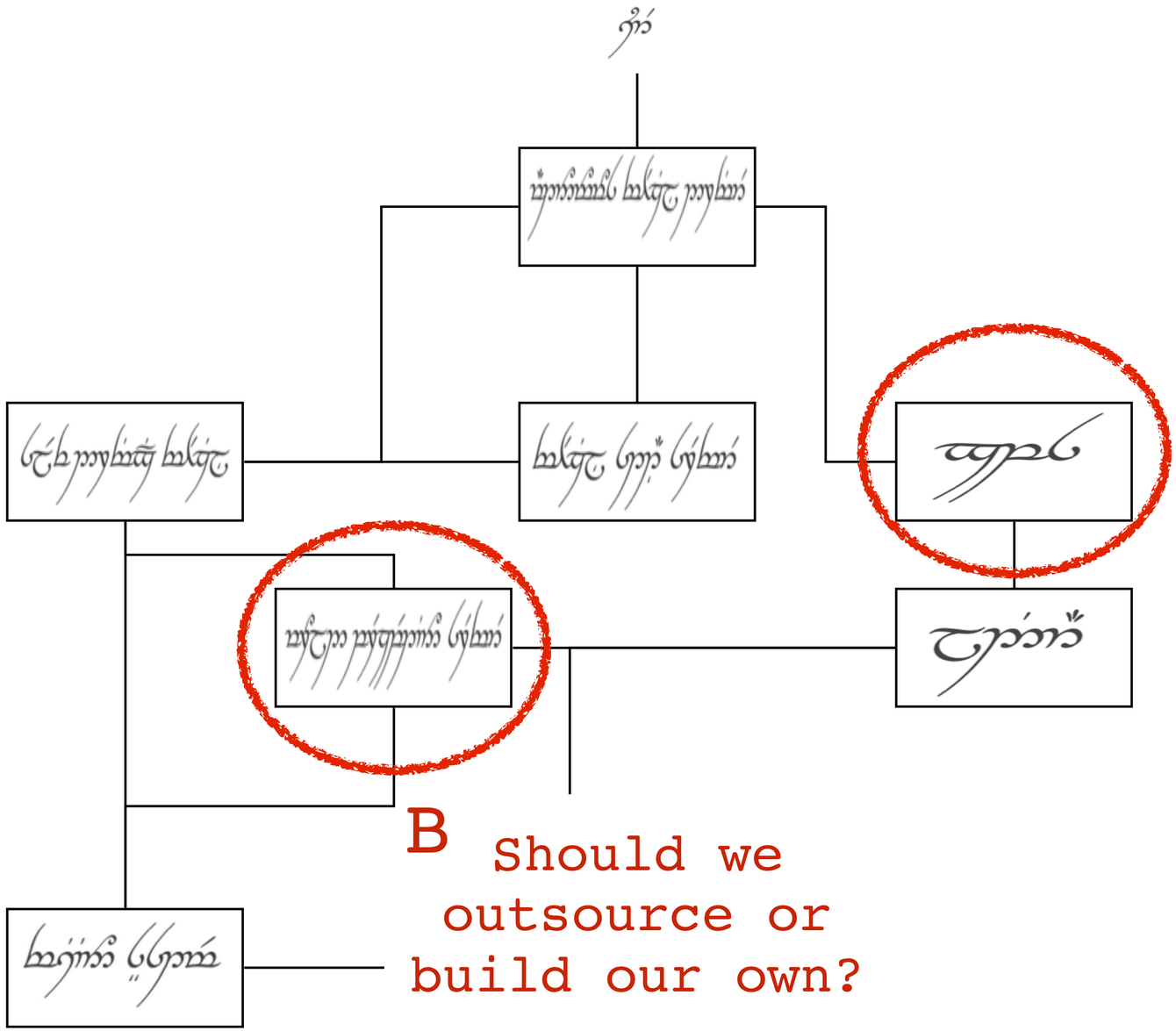



Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Customer
Customer
3D Visualisation
GIS
Web site
WISE
CRM
Land Registry
PIMS
Finance
ERPM
Collaboration
BIM
RISK
HR
Platform
Compute
Power
Data Centre
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
3D Visualisation
Customer
GIS
Customer
Web site
WISE
CRM
Land Registry
PIMS
Finance
BIM
ERPM
Collaboration
RISK
HR
Platform
Compute
Power
Data Centre
outsource to utility suppliers, Six Sigma
use off the shelf products, Lean
build in-house with Agile techniques
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

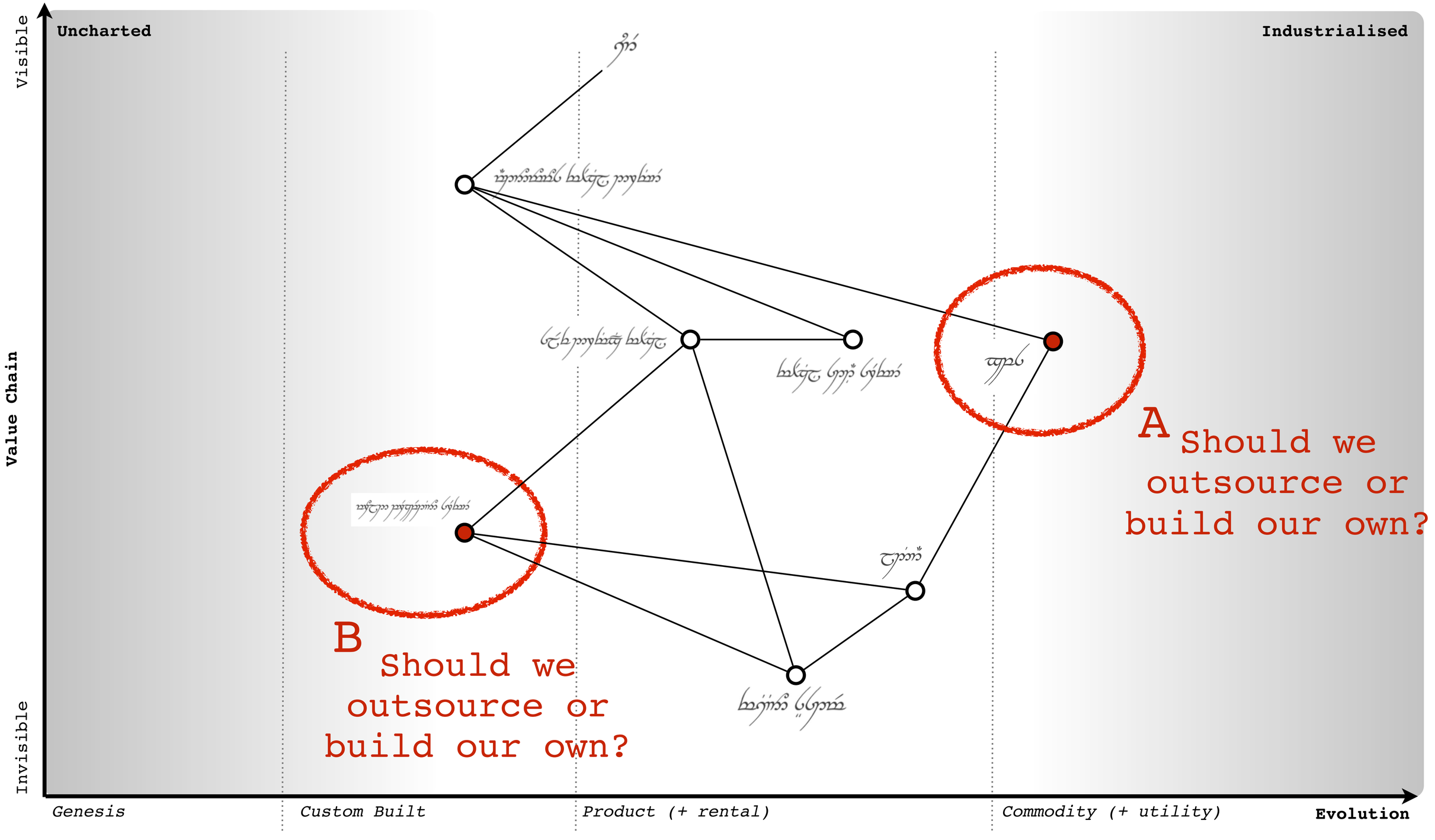

What is a
world perception
server?

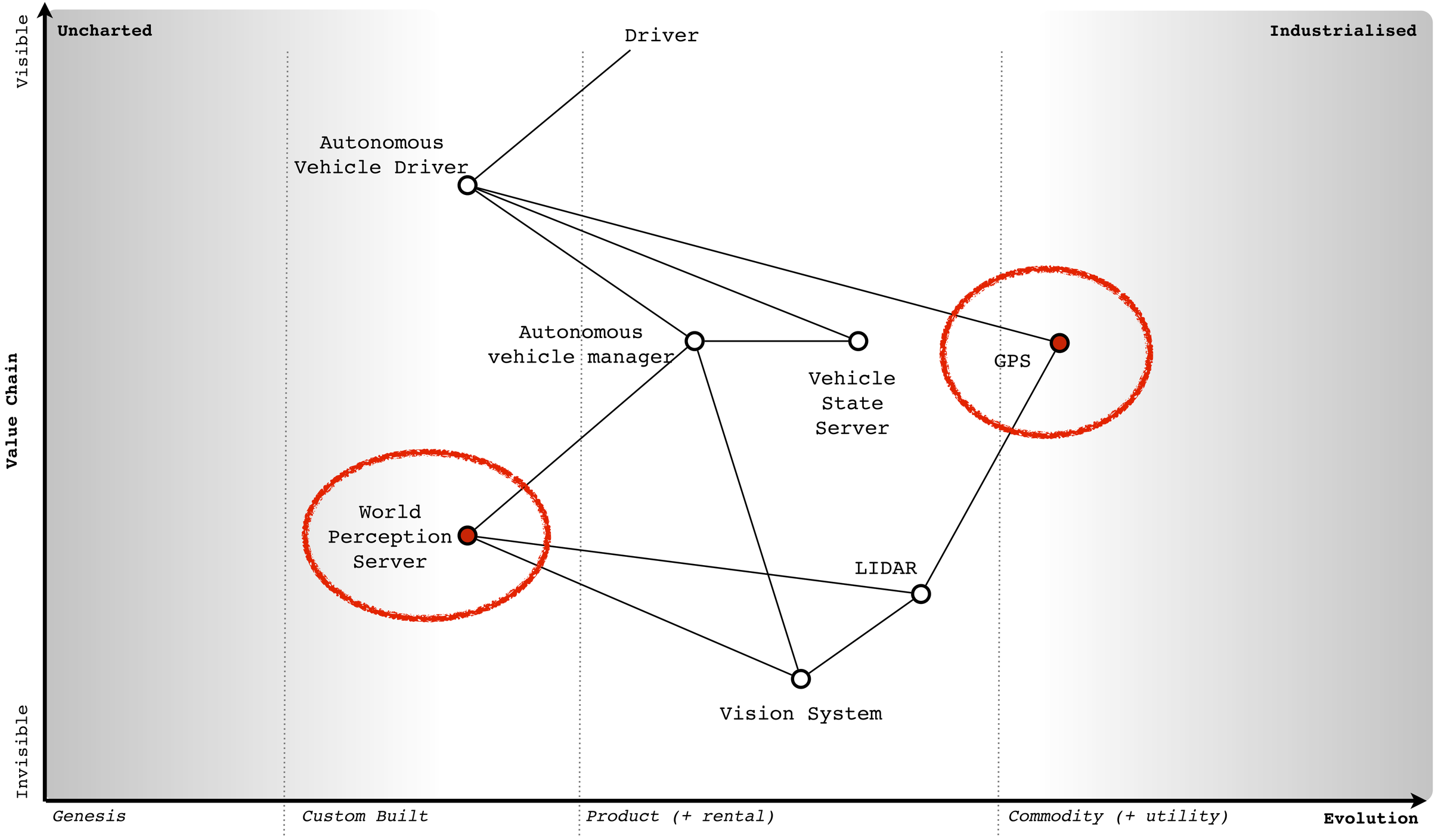
Network topology



A Should we outsource or build our own?

B Should we outsource or build our own?


Uncharted
Industrialised
Visible
Invisible
Value Chain
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution
A Should we outsource or build our own?
B Should we outsource or build our own?


Uncharted
Industrialised
Visible
Invisible
Value Chain
Driver
Autonomous
Vehicle Driver
Autonomous
vehicle manager
Vehicle
State
Server
GPS
World
Perception
Server
LIDAR
Vision System
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

FOTANGO

help | prices | about us | contact us | public gallery

# Top quality prints and a *FREE* online photo service

- **Digital and film**
  Easy upload for digital pictures and film rolls
- **Create online albums** FREE
  Unlimited secure space for your pictures
- **Photo upload software** FREE
  Upload your images from your desktop
- **Share your photos** FREE
  Friends, family, workmates, share the moment
- **Buy prints and gifts**
  Turn your favourite photos into great gifts

username

password

Login

forgotten password?

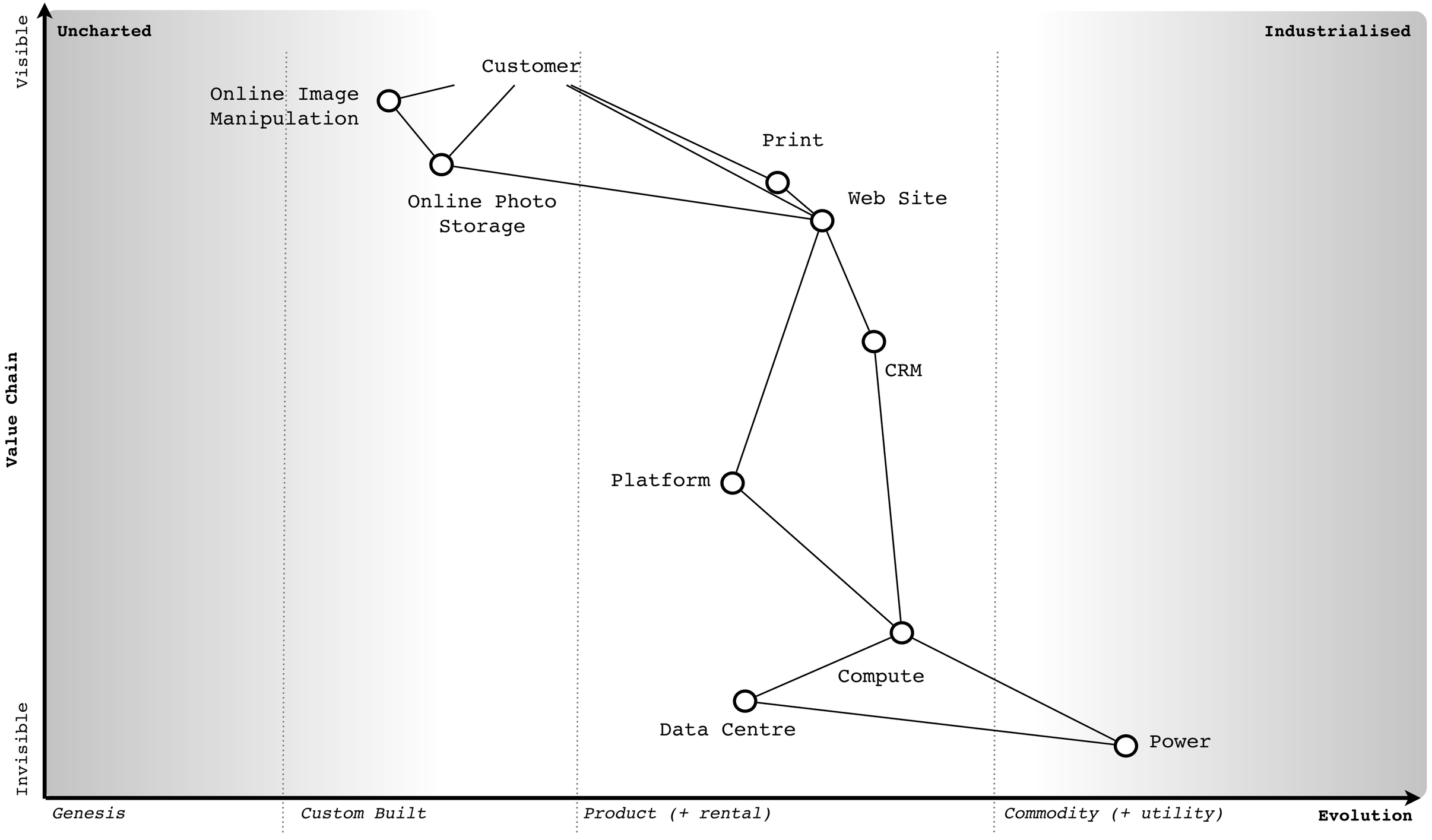
Take the Tour

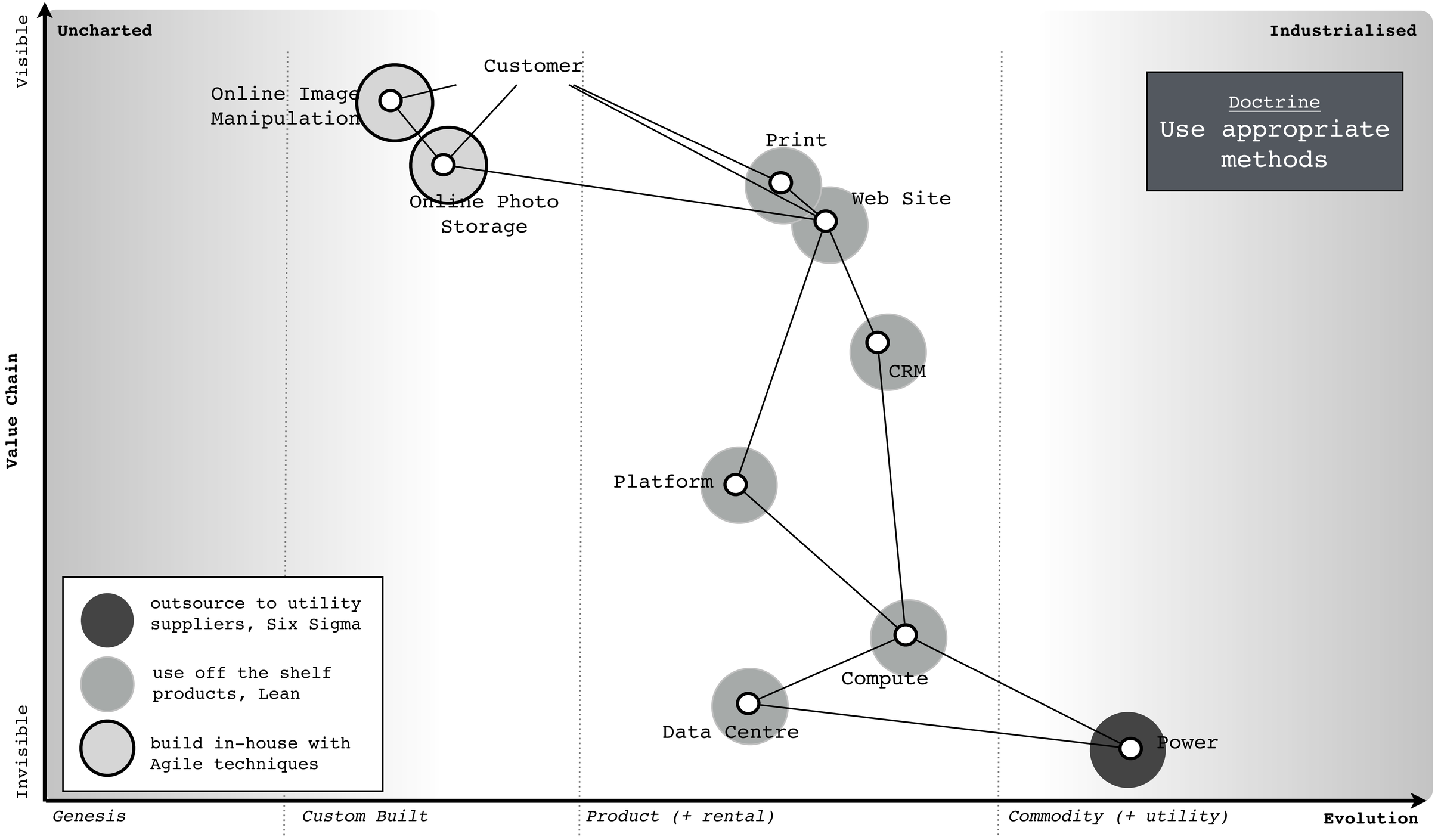
Create an account

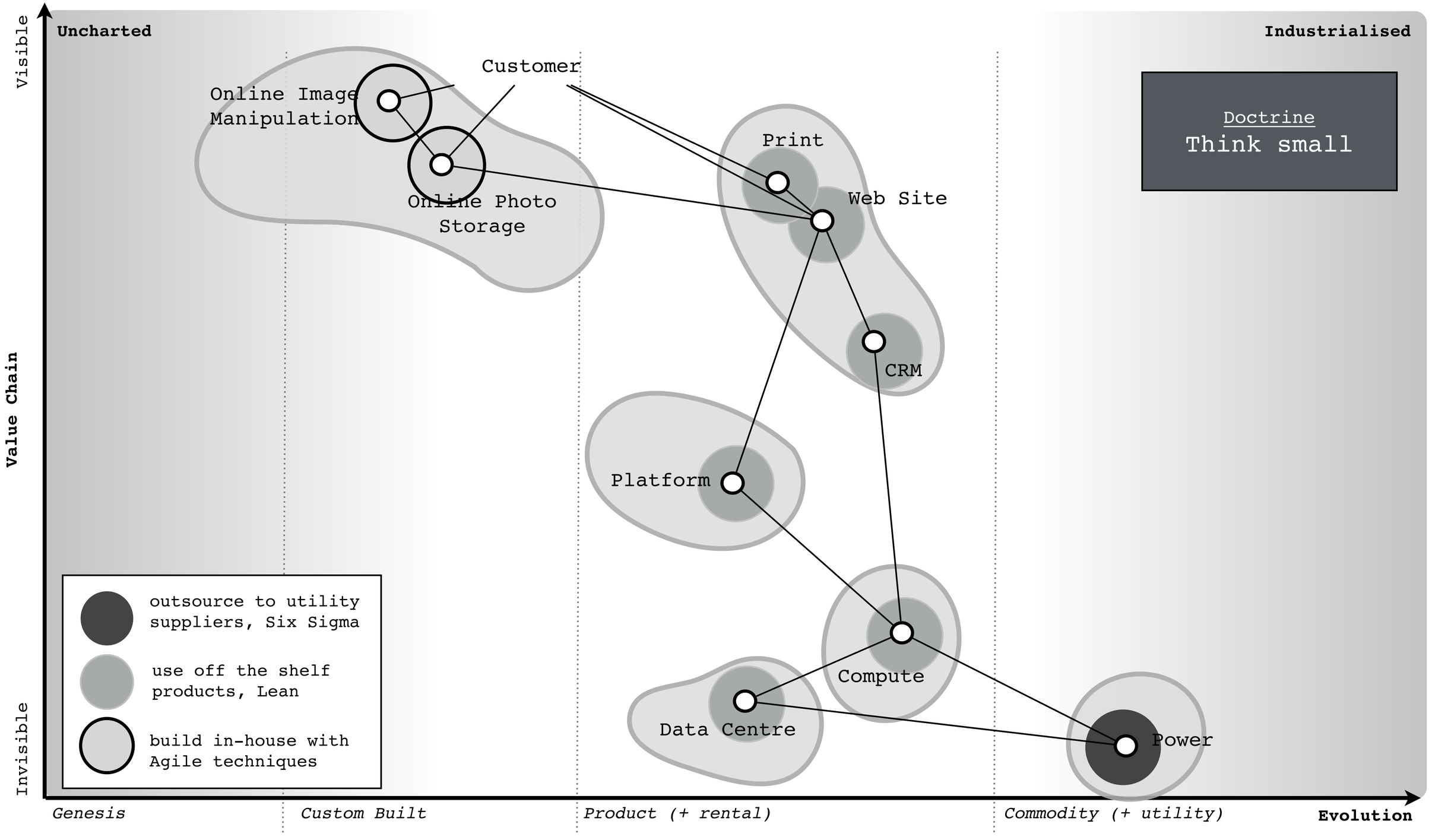
**Gifts Gallery**
Turn your photos into great gifts!

**Promotions**
Share pictures & when friend registers, you both get 3 free 6x4 prints.

Fotango website, 2005, courtesy of CEO.


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Doctrine
Use appropriate methods
outsource to utility suppliers, Six Sigma
use off the shelf products, Lean
build in-house with Agile techniques
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Doctrine
Think small
outsource to utility suppliers, Six Sigma
use off the shelf products, Lean
build in-house with Agile techniques
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

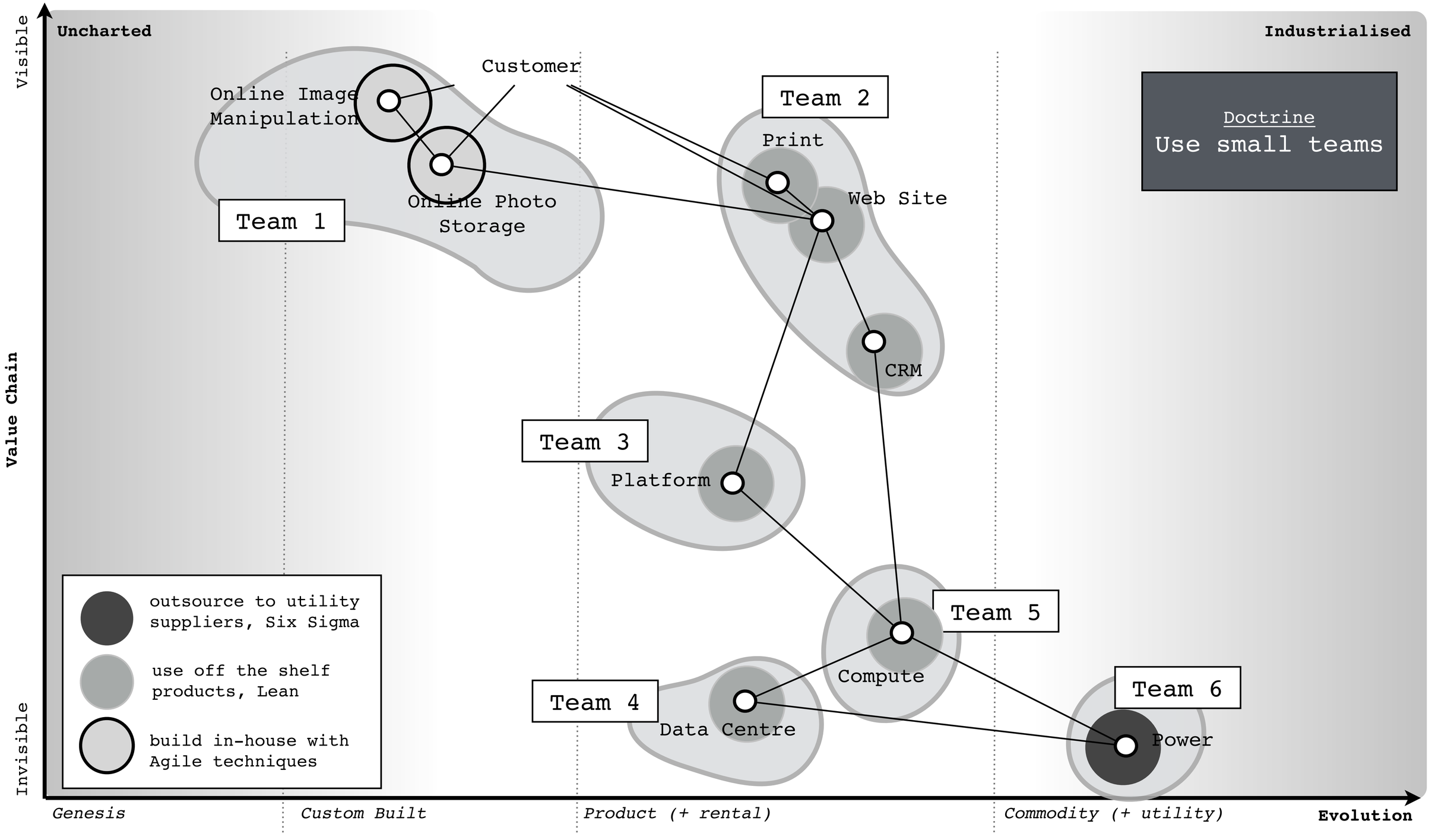
FAST, INEXPENSIVE, SIMPLE, TINY FIST

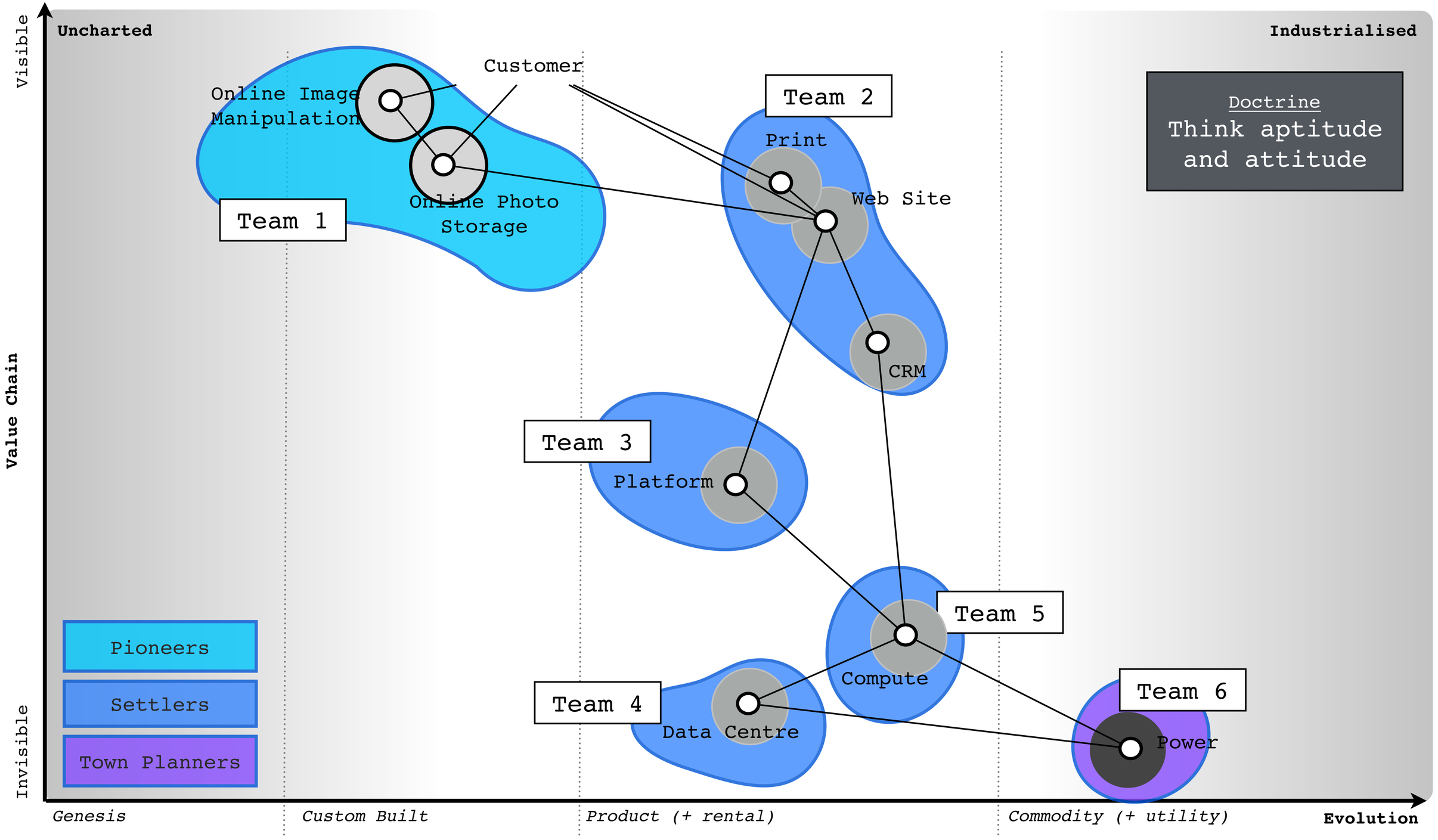
# FIST at 5

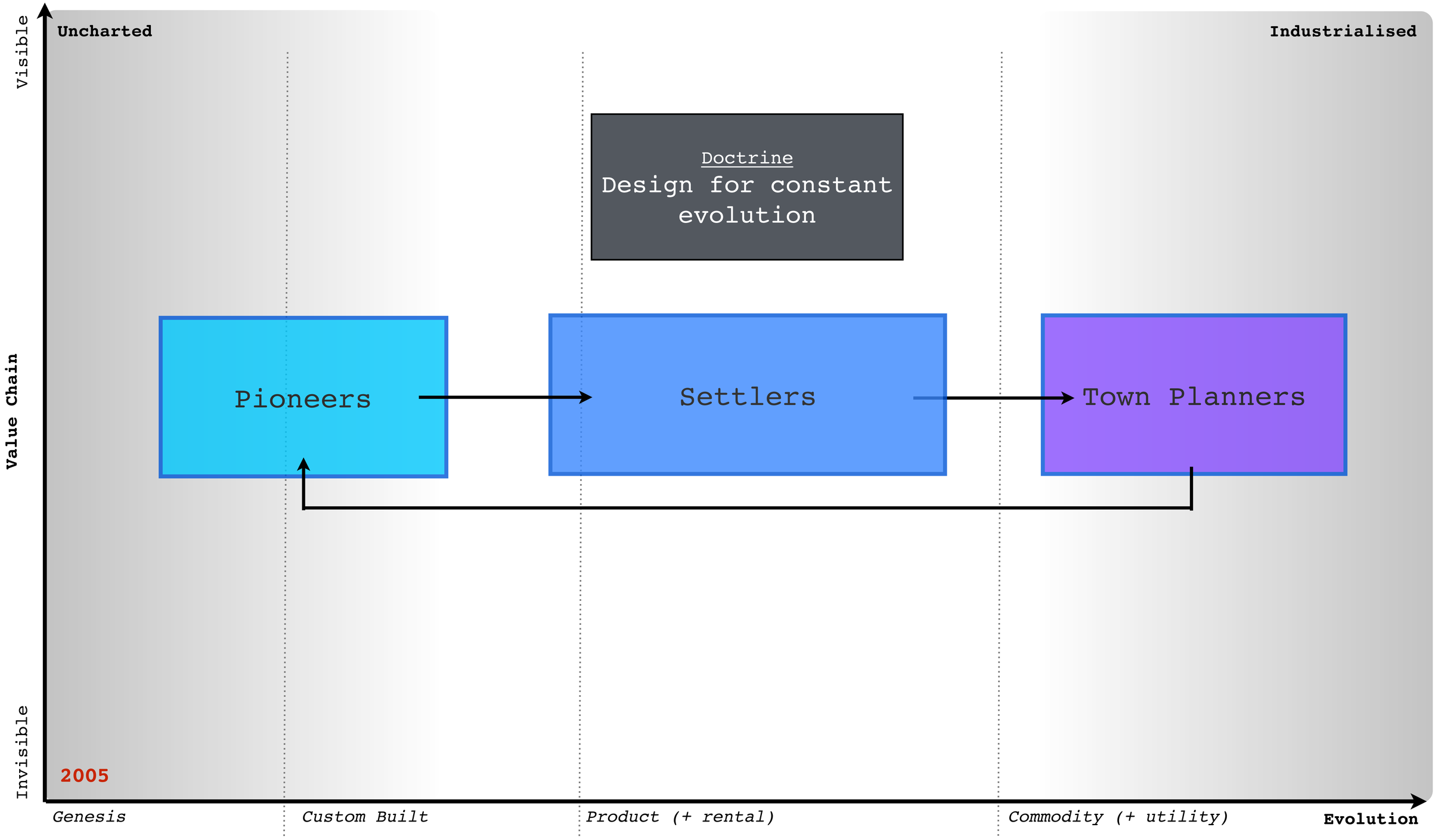
## Looking Back, Looking Ahead

*Lt. Col. Dan Ward, USAF*

Harvest Hawk, idea to combat operations in 18 months

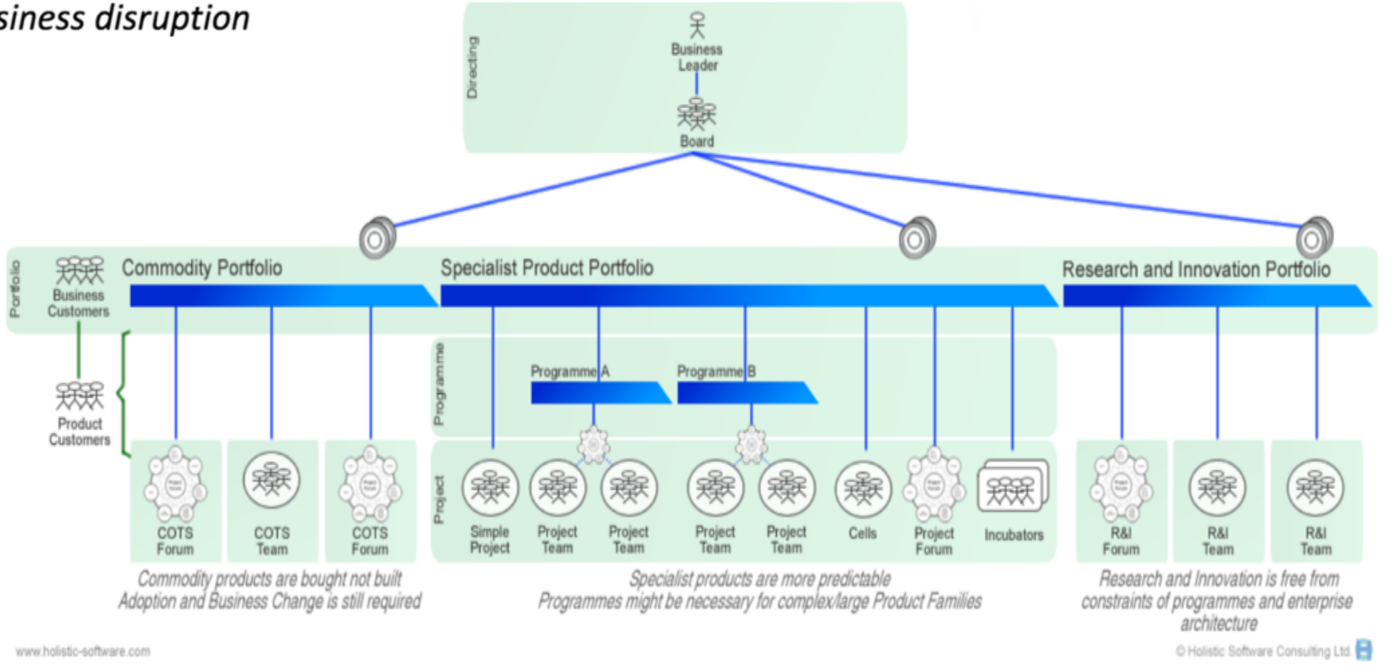

Visible
Uncharted
Industrialised
Customer
Online Image Manipulation
Online Photo Storage
Team 1
Team 2
Print
Web Site
CRM
Team 3
Platform
Team 5
Compute
Team 4
Data Centre
Team 6
Power
Doctrine
Use small teams
outsource to utility suppliers, Six Sigma
use off the shelf products, Lean
build in-house with Agile techniques
Value Chain
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
Evolution
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Customer
Online Image Manipulation
Online Photo Storage
Team 1
Team 2
Print
Web Site
CRM
Team 3
Platform
Team 4
Data Centre
Team 5
Compute
Team 6
Power
Doctrine
Think aptitude and attitude
Pioneers
Settlers
Town Planners

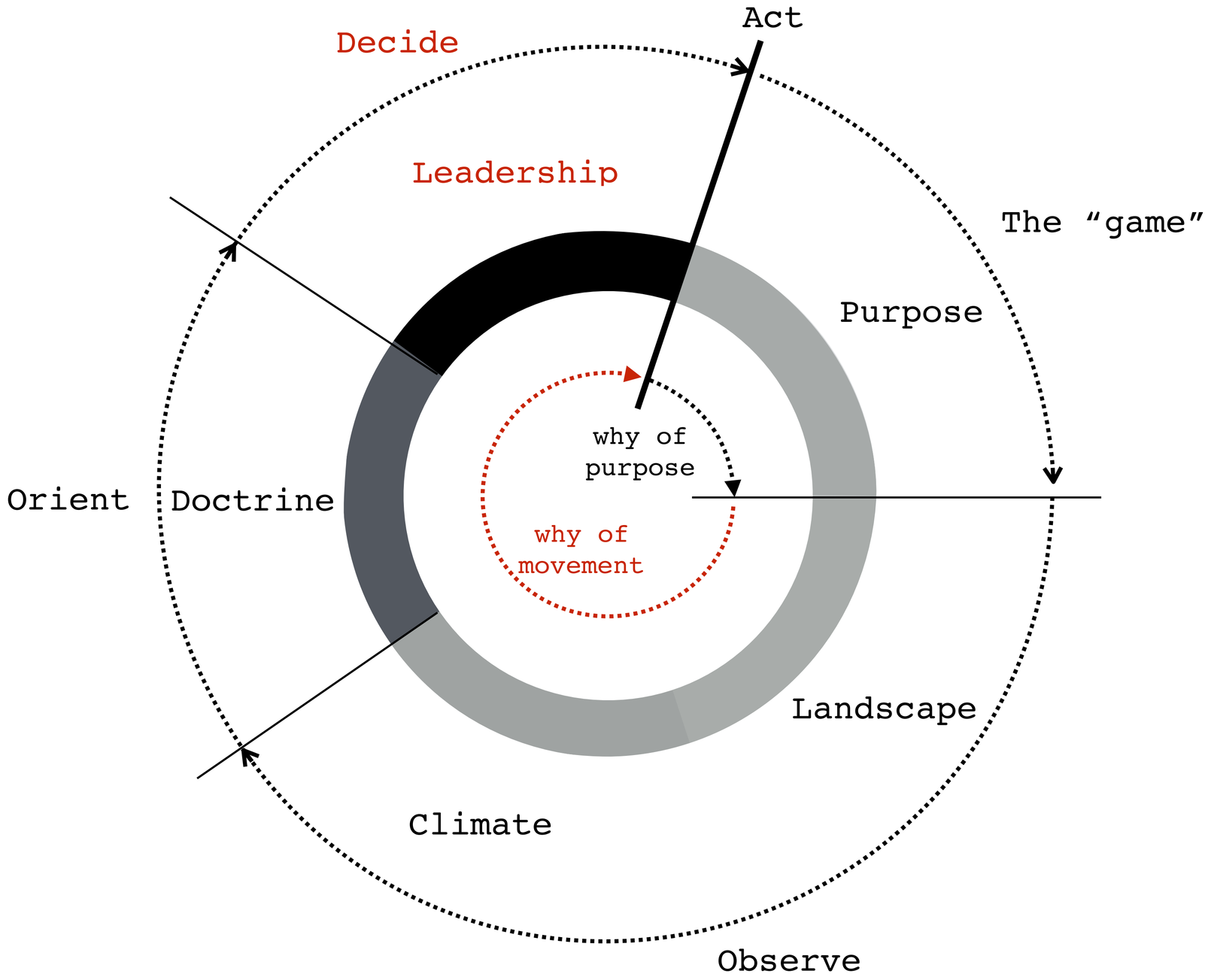

Visible
Uncharted
Industrialised
Doctrine
Design for constant evolution
Pioneers
Settlers
Town Planners
Value Chain
Invisible
2005
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

# GCHQ: BOILING FROGS?

*Technology organisations need to change radically to survive increasing technical and business disruption*



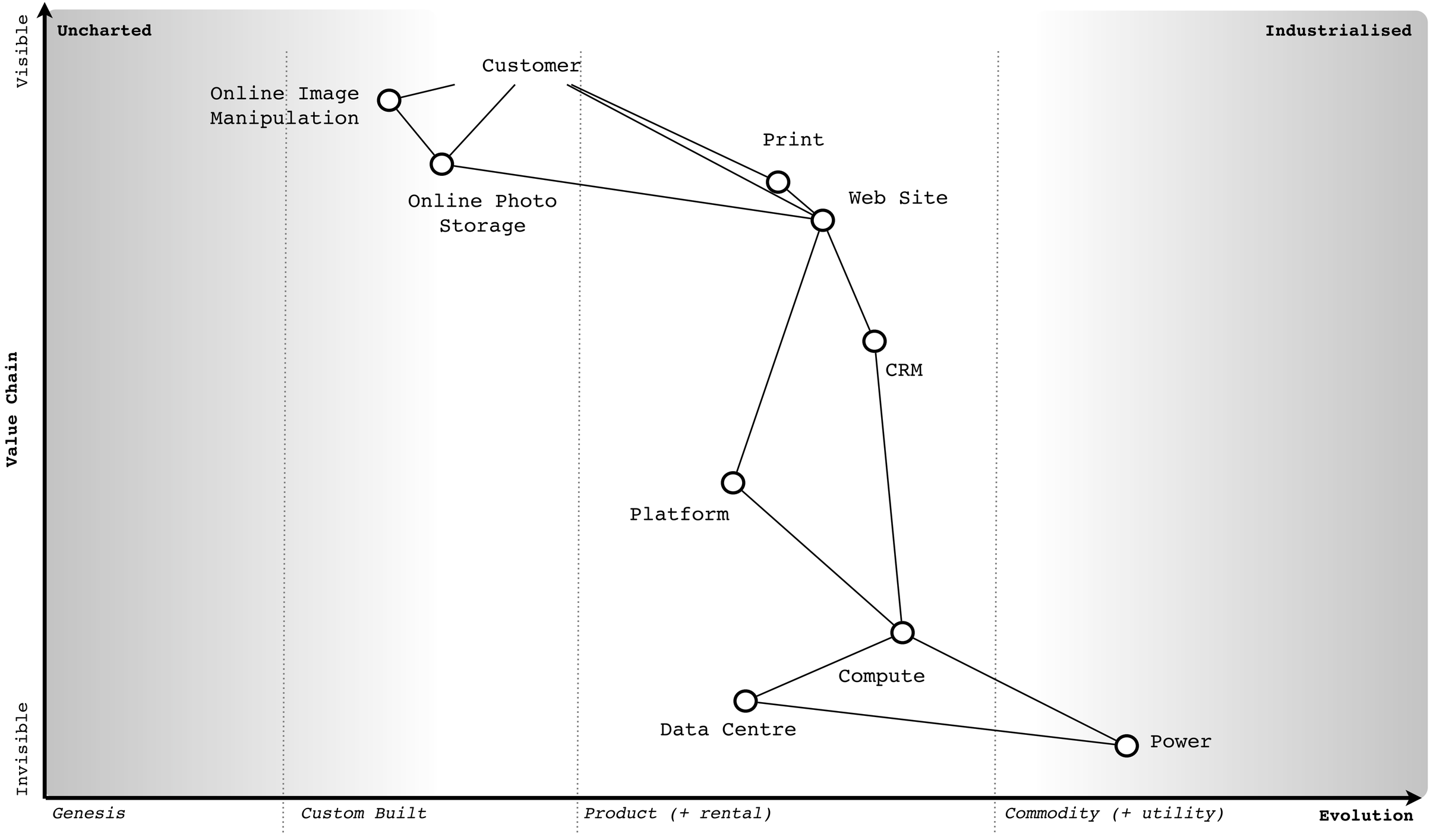

GCHQ, Boiling Frogs, 2016, Crown Copyright, https://github.com/gchq/BoilingFrogs

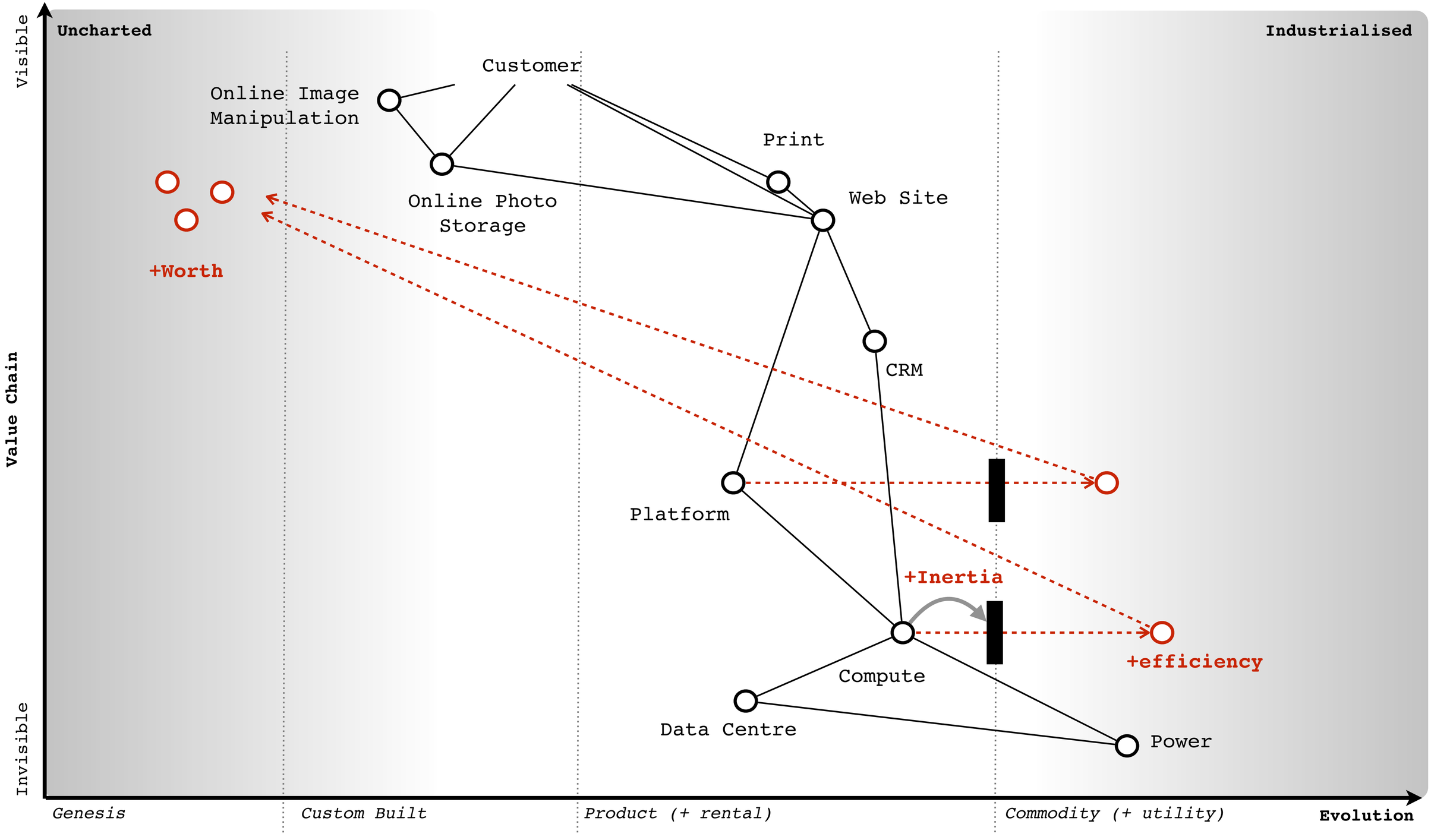

Act
Decide
Leadership
The “game”
Purpose
why of
purpose
why of
movement
Orient
Doctrine
Landscape
Climate
Observe

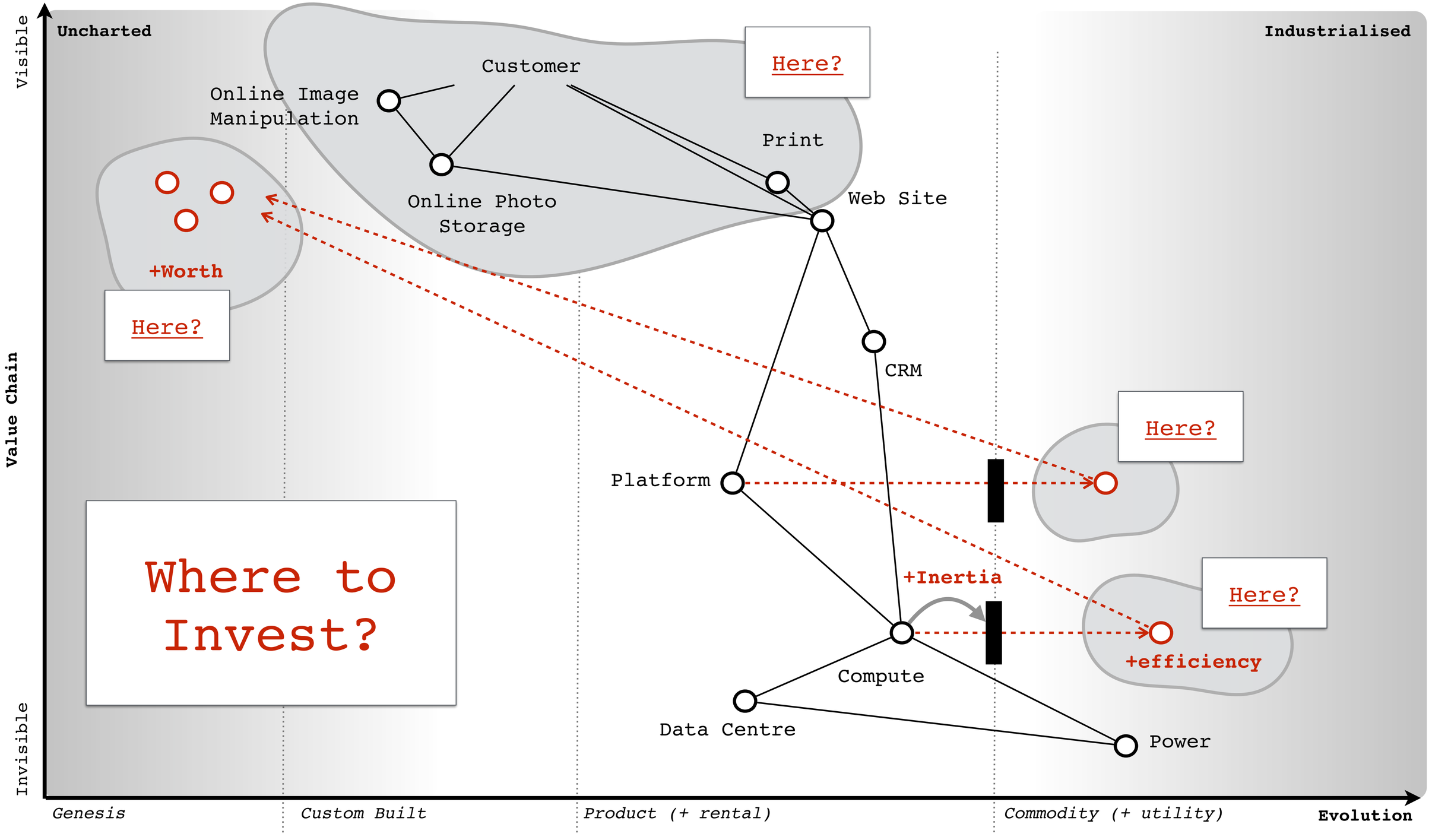
Strategy

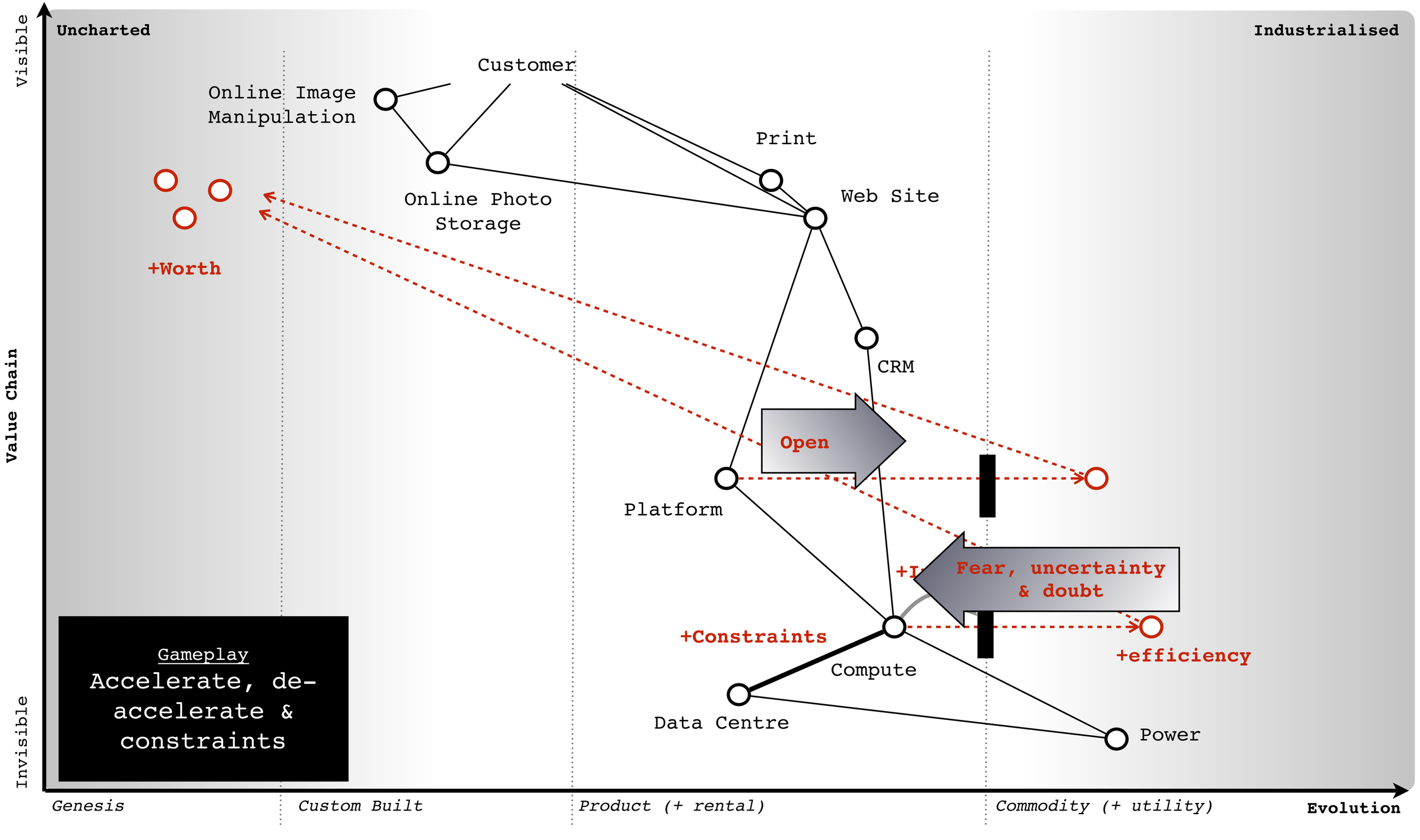
Context specific forms of gameplay

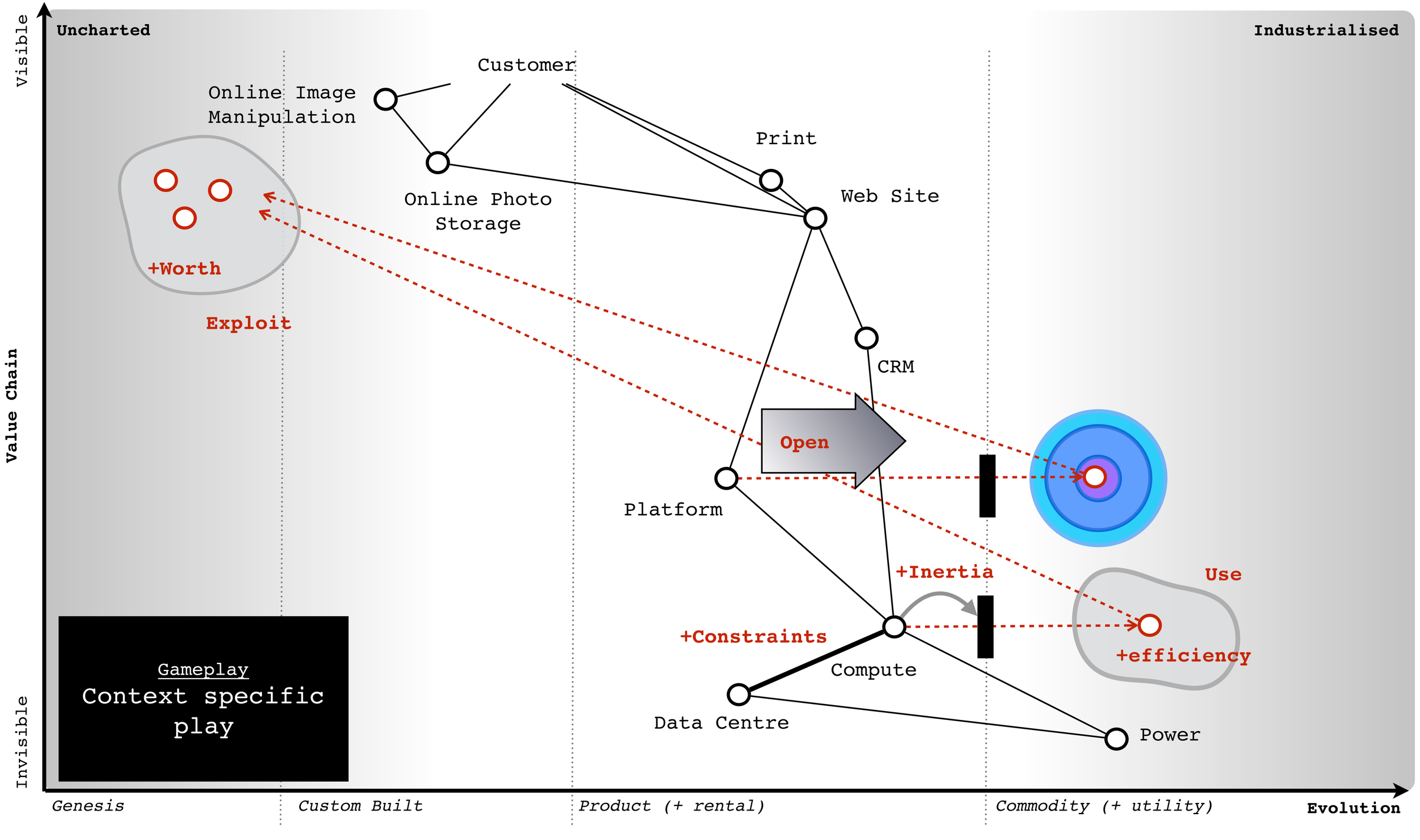
# Flanking versus Firing

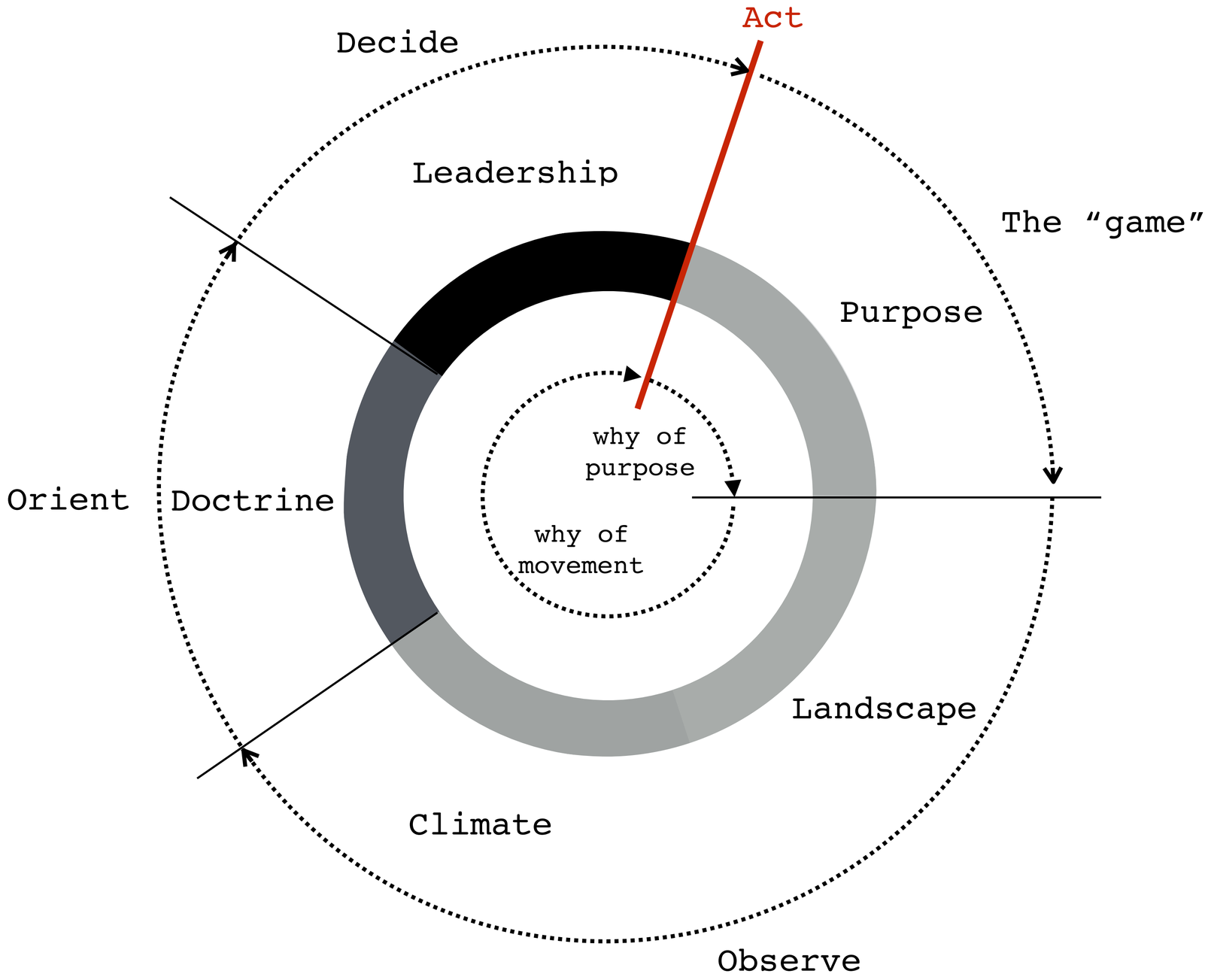

Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
+Worth
Platform
+Inertia
Compute
Data Centre
Power
+efficiency
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

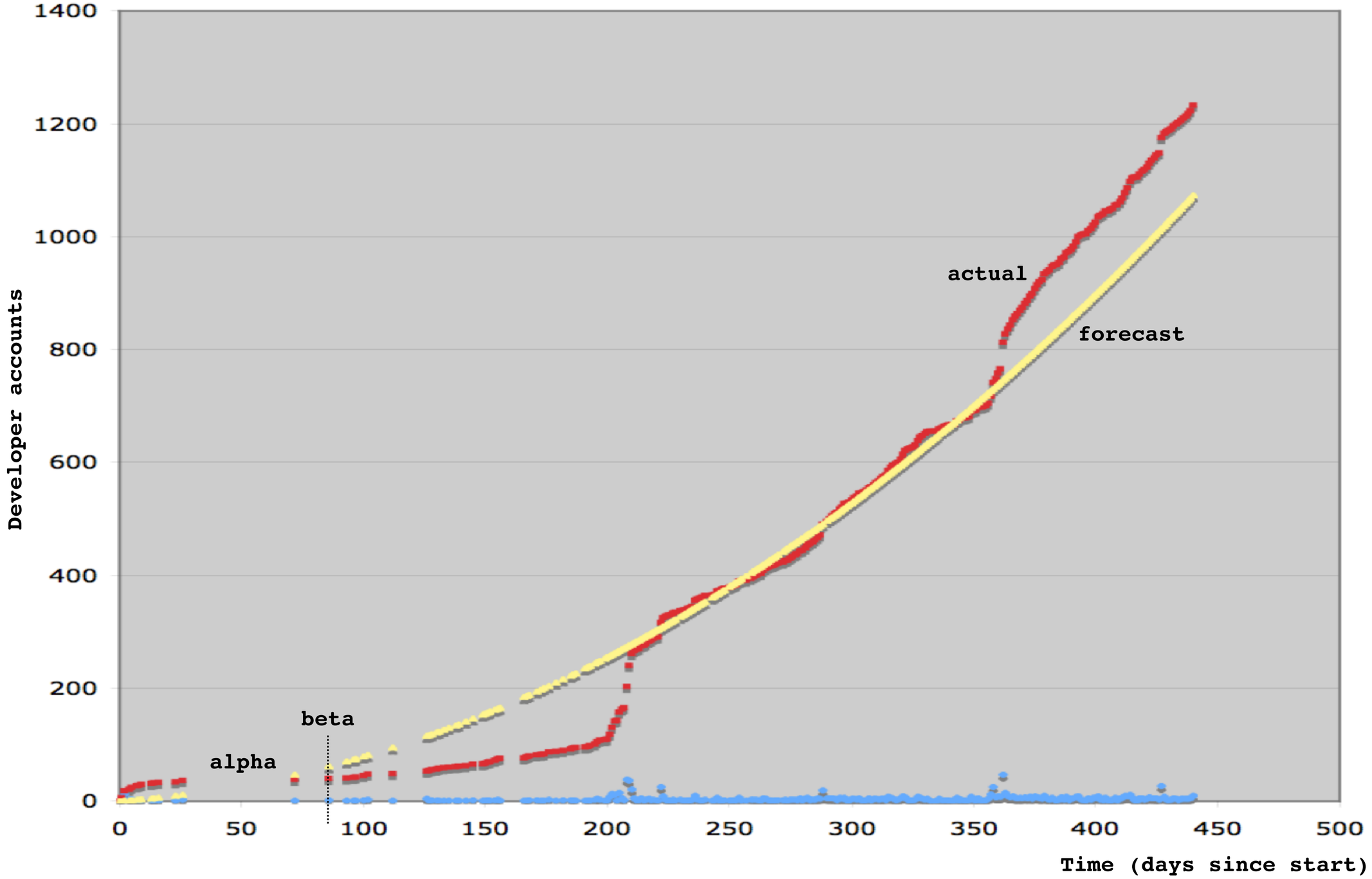

Visible
Invisible
Value Chain
Uncharted
Industrialised
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution
Customer
Here?
Online Image Manipulation
Print
Online Photo Storage
Web Site
+Worth
Here?
CRM
Here?
Platform
+Inertia
Here?
+efficiency
Compute
Data Centre
Power
Where to Invest?


Visible
Invisible
Value Chain
Uncharted
Industrialised
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
+Worth
Open
Platform
Fear, uncertainty & doubt
+Constraints
+efficiency
Compute
Data Centre
Power
Gameplay
Accelerate, de-accelerate & constraints
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
+Worth
Exploit
Open
Platform
+Inertia
Use
+Constraints
+efficiency
Compute
Data Centre
Power
Gameplay
Context specific play
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

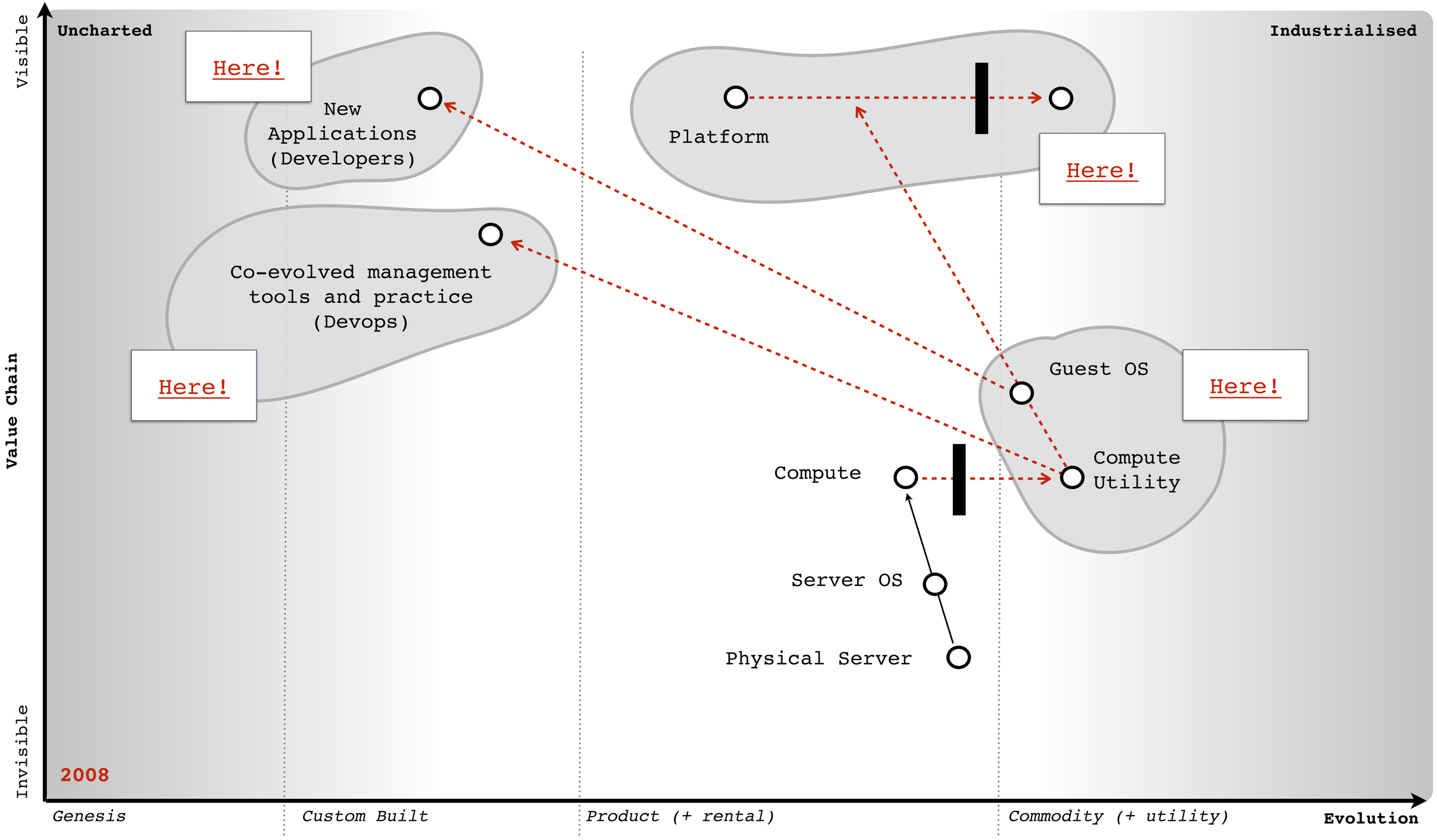

Act
Decide
Leadership
The “game”
Purpose
why of
purpose
why of
movement
Orient
Doctrine
Landscape
Climate
Observe

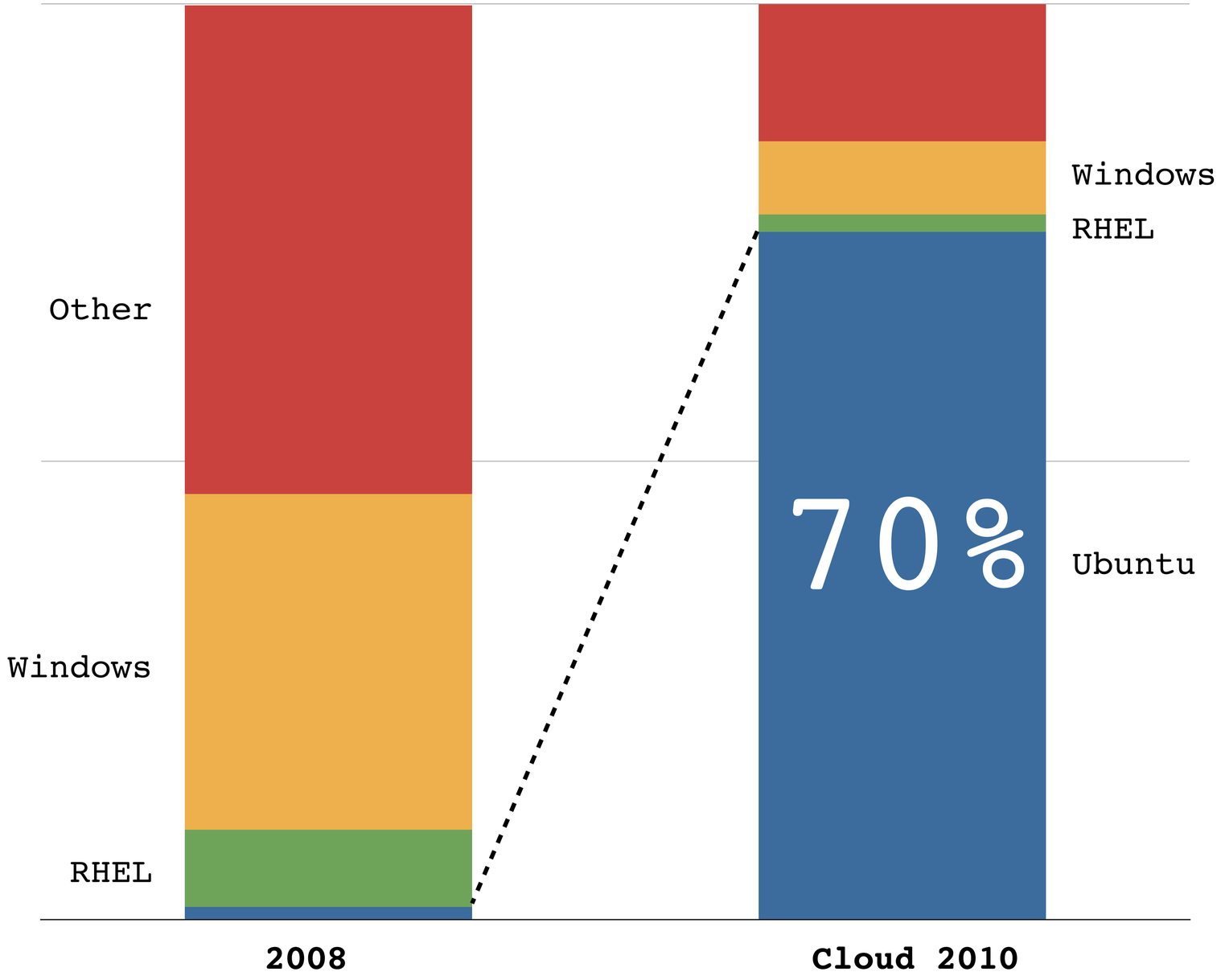
Anita Hart, April 2007, CC BY-NC-ND 2.0
https://www.flickr.com/photos/anitakhart/472099476


1400
1200
1000
800
600
400
200
0
Developer accounts
actual
forecast
beta
alpha
0
50
100
150
200
250
300
350
400
450
500
Time (days since start)

It’s not
the future
Not core

Ubuntu Logo,
https://www.ubuntu.com/legal/terms-and-policies/intellectual-property-policy


Visible
Invisible
Value Chain
Uncharted
Industrialised
Here!
New
Applications
(Developers)
Platform
Here!
Co-evolved management
tools and practice
(Devops)
Here!
Guest OS
Here!
Compute
Compute
Utility
Server OS
Physical Server
2008
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Other
Windows
RHEL
70%
Windows
RHEL
Ubuntu
2008
Cloud 2010

pba

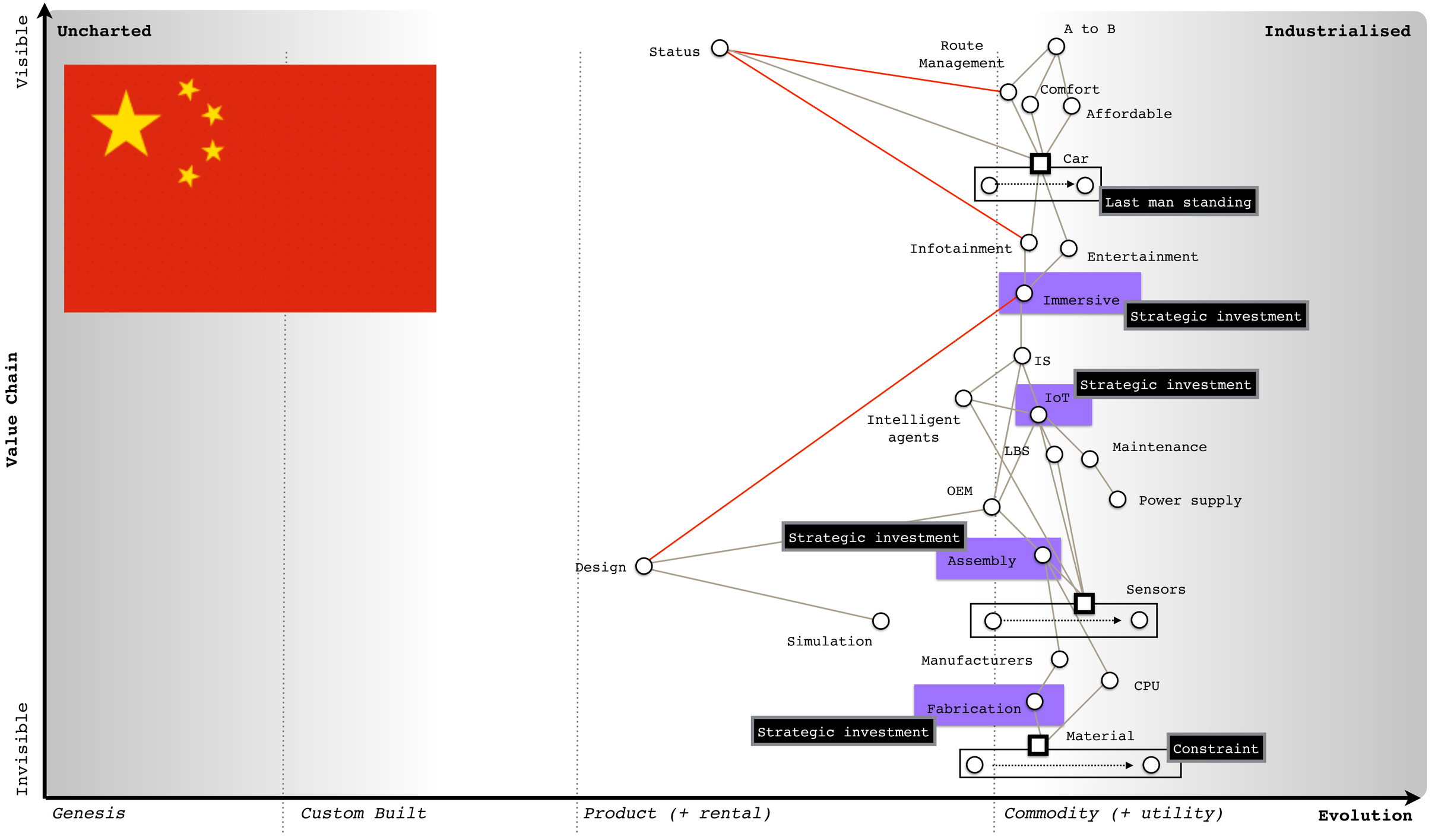
the network for the post-bureaucratic age

# “Better for Less”

## *How to make Government IT deliver savings.*


Liam Maxwell

*with contributions from*
Jerry Fishenden
William Heath
Jonathan Sowler
Peter Rowlins
Mark Thompson
Simon Wardley.


Uncharted
Industrialised
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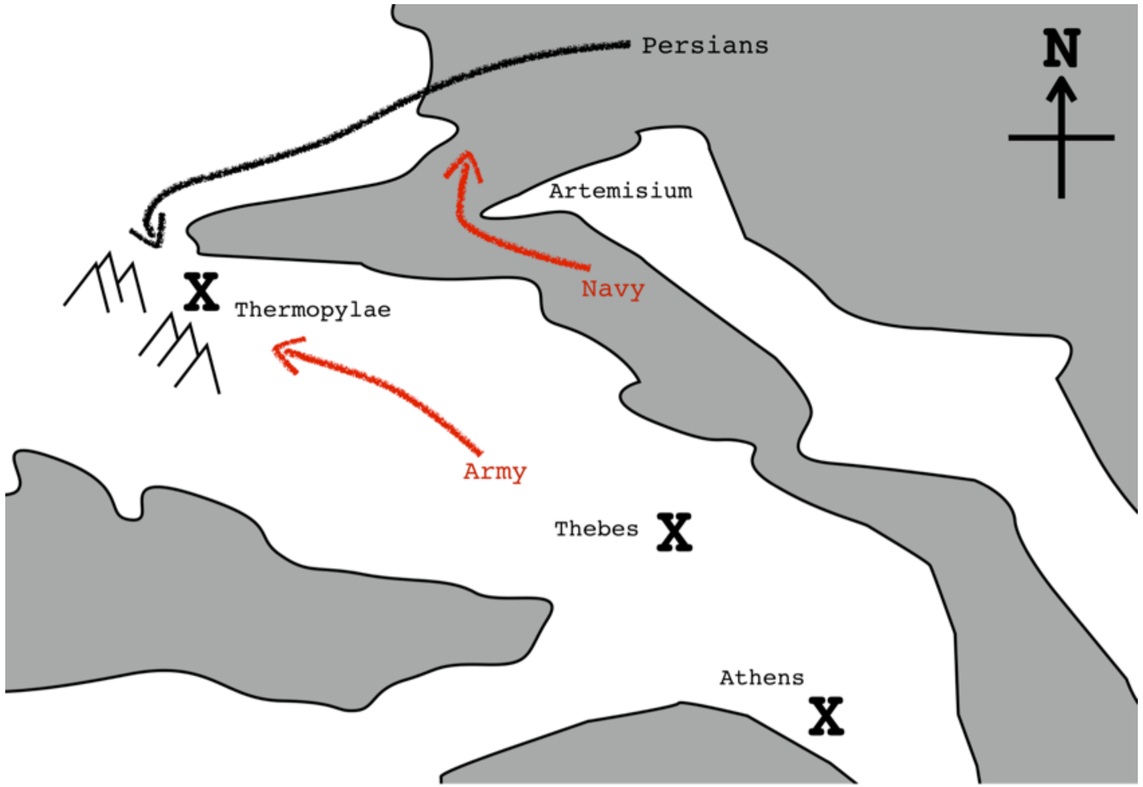
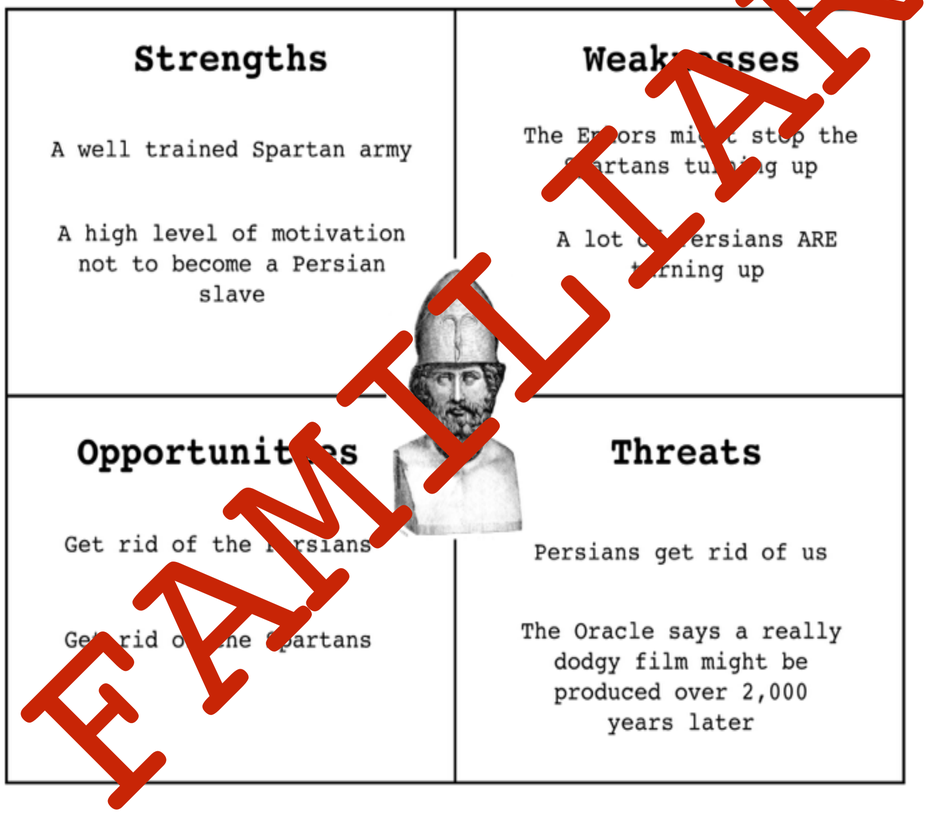
Value Chain
Status
A to B
Route
Management
Comfort
Affordable
Car
Last man standing
Infotainment
Entertainment
Immersive
Strategic investment
IS
Strategic investment
IoT
Intelligent
agents
LBS
Maintenance
Power supply
OEM
Strategic investment
Assembly
Design
Sensors
Simulation
Manufacturers
CPU
Fabrication
Strategic investment
Material
Constraint
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

This is complex!

# What would you use to communicate and determine strategy in battle?

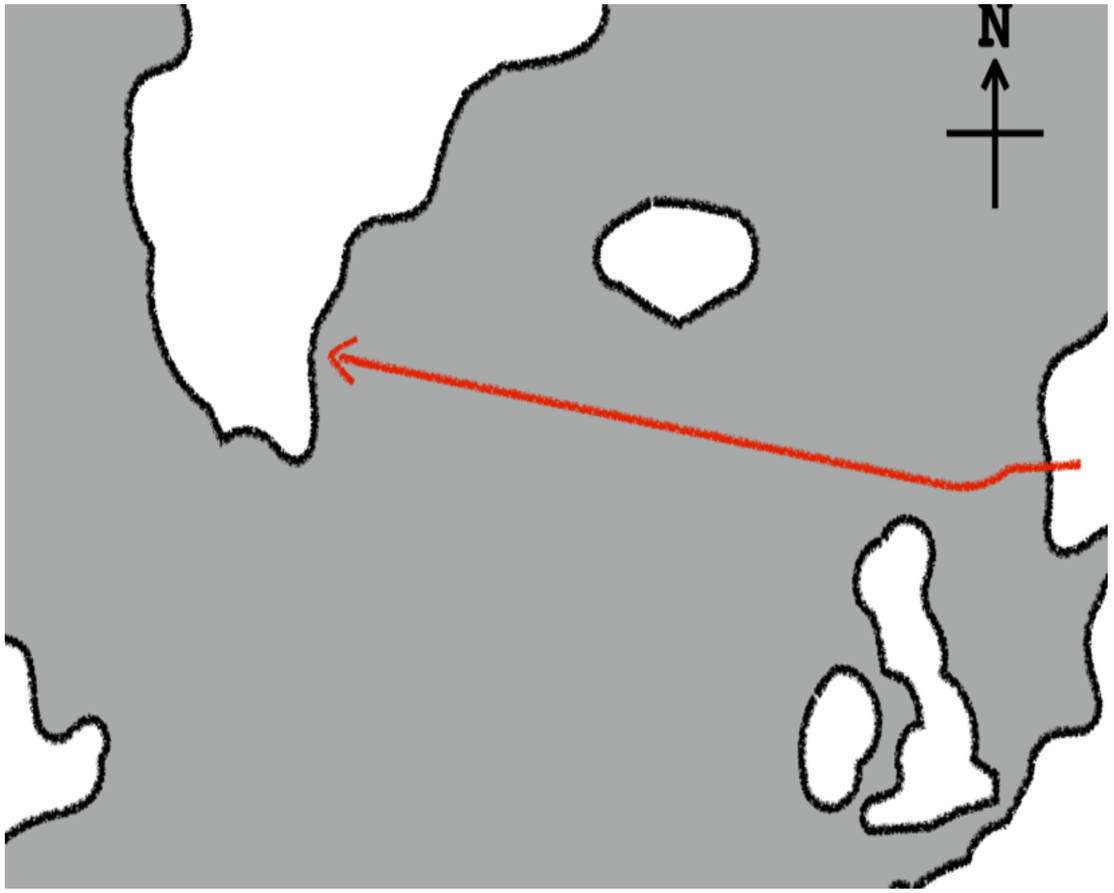



position and movement




magic framework

# What would you use to navigate?



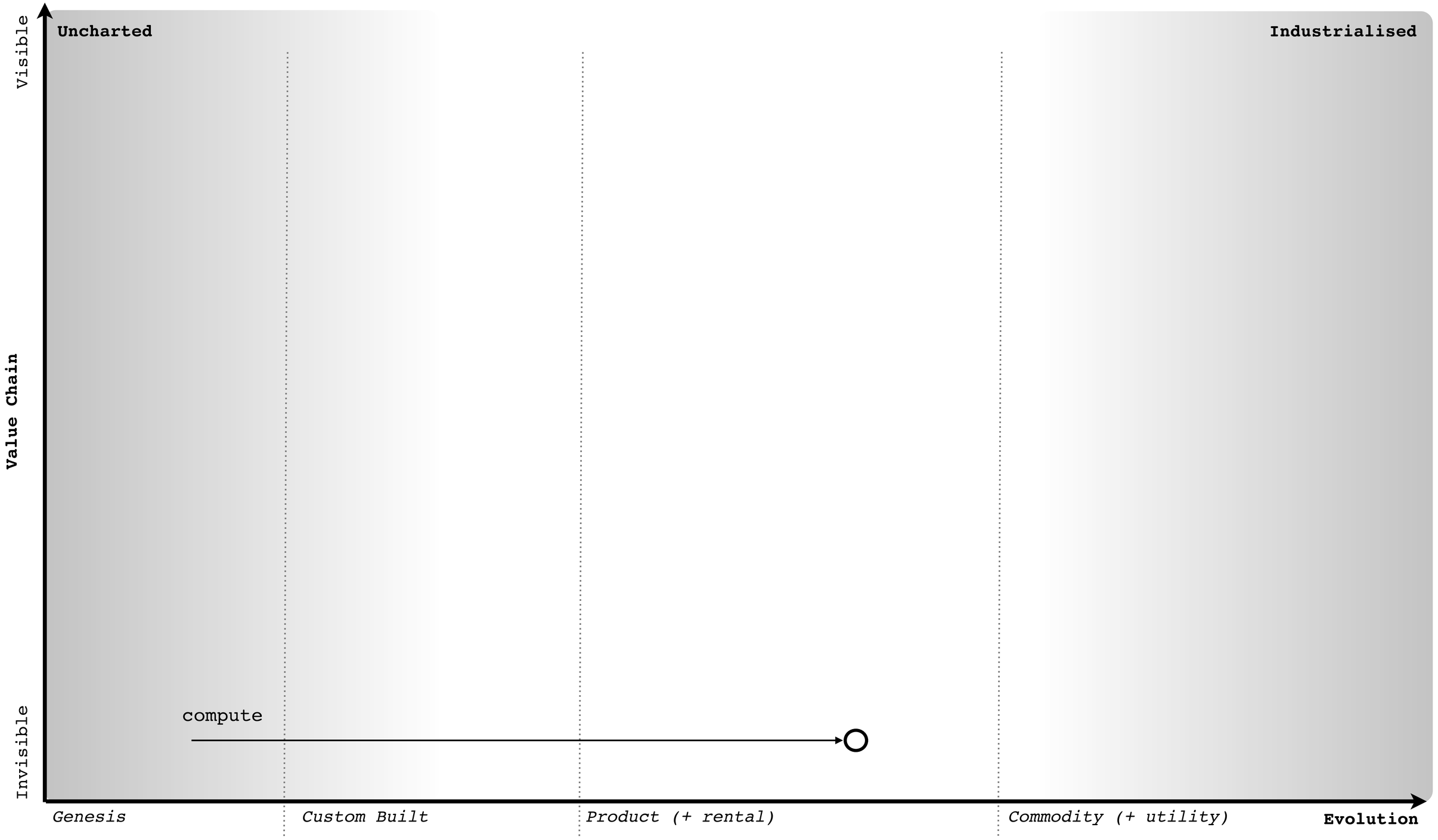

visual map

west towards Hvarf, and
you will have sailed
north of Hjaltland, so
that you just glimpse it
in clear weather, but
south of the islands, so
that the sea is right in
between the distant
mountains and thus also
south of Iceland.

FAMILIAR

verbal story

Serverless!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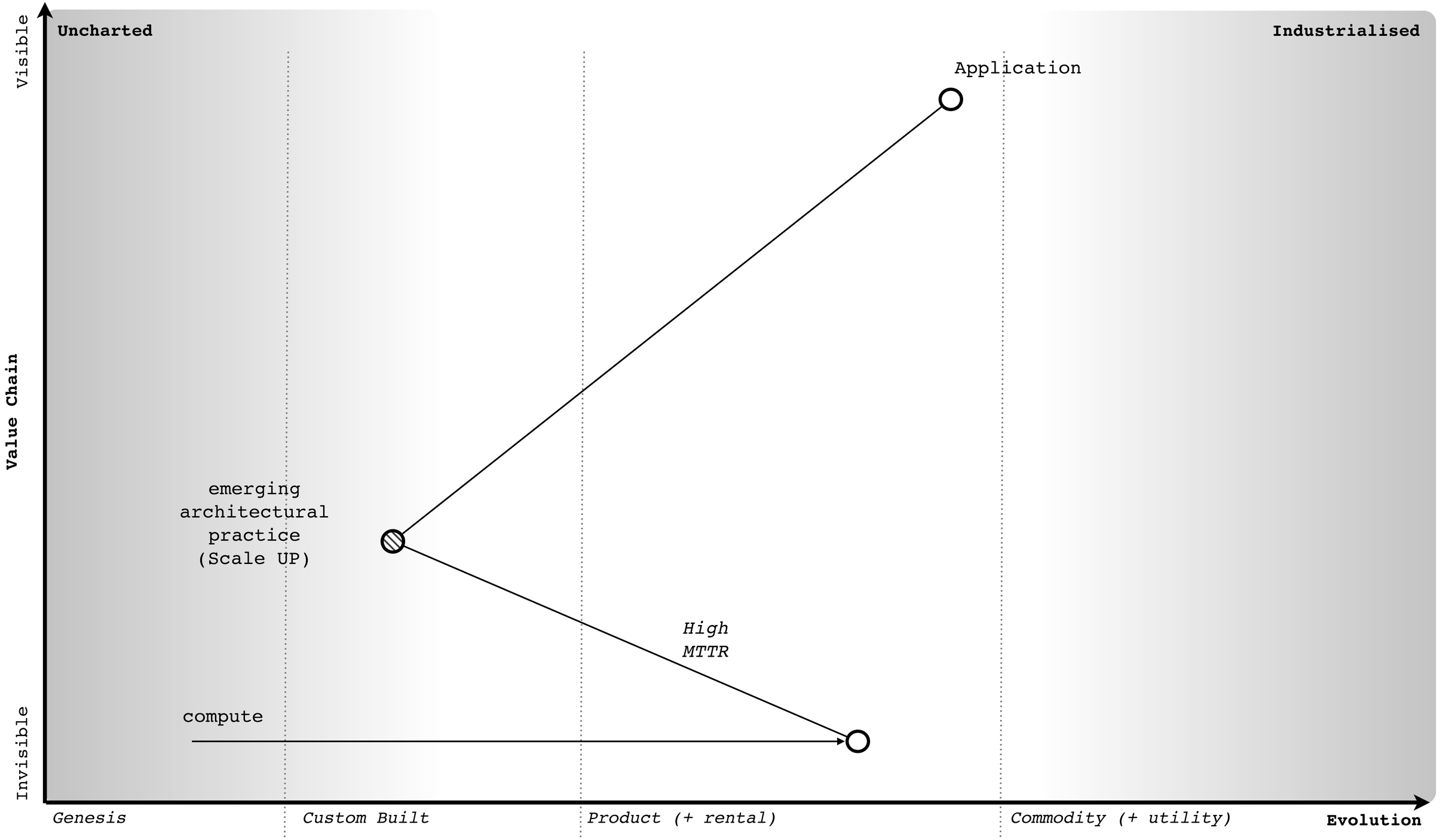
Product (+ rental)
Commodity (+ utility)
Evolution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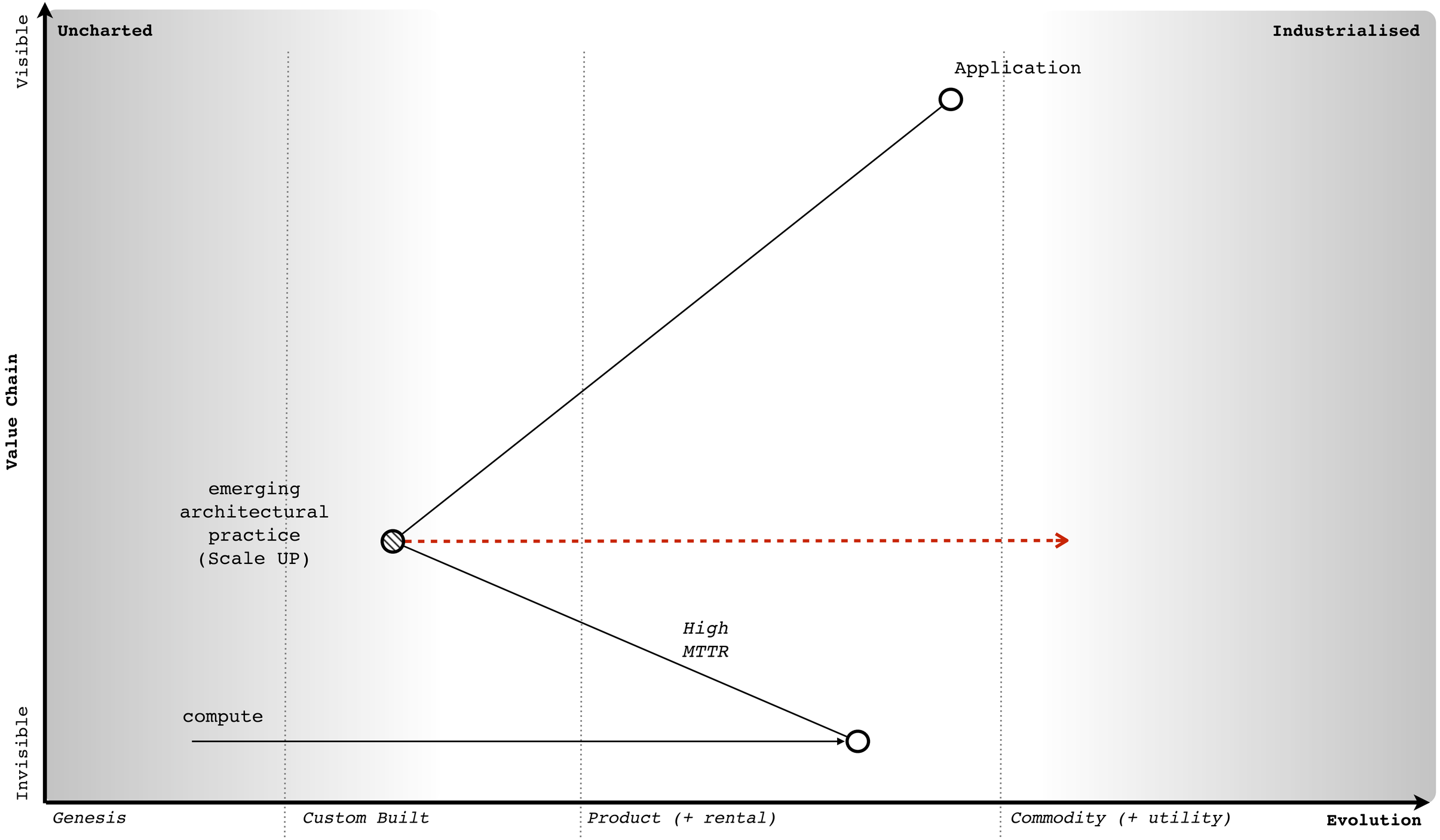
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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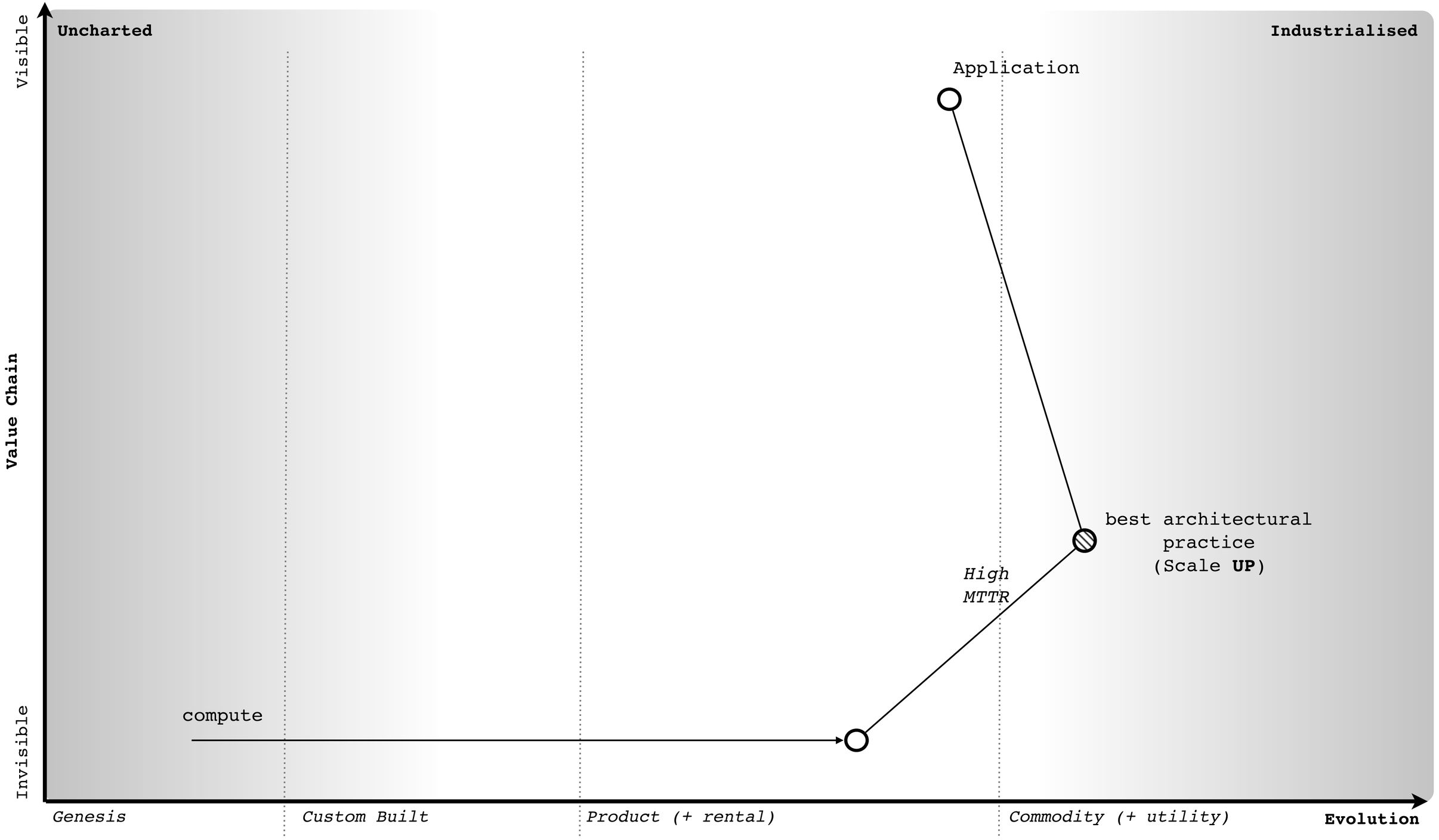
Evolution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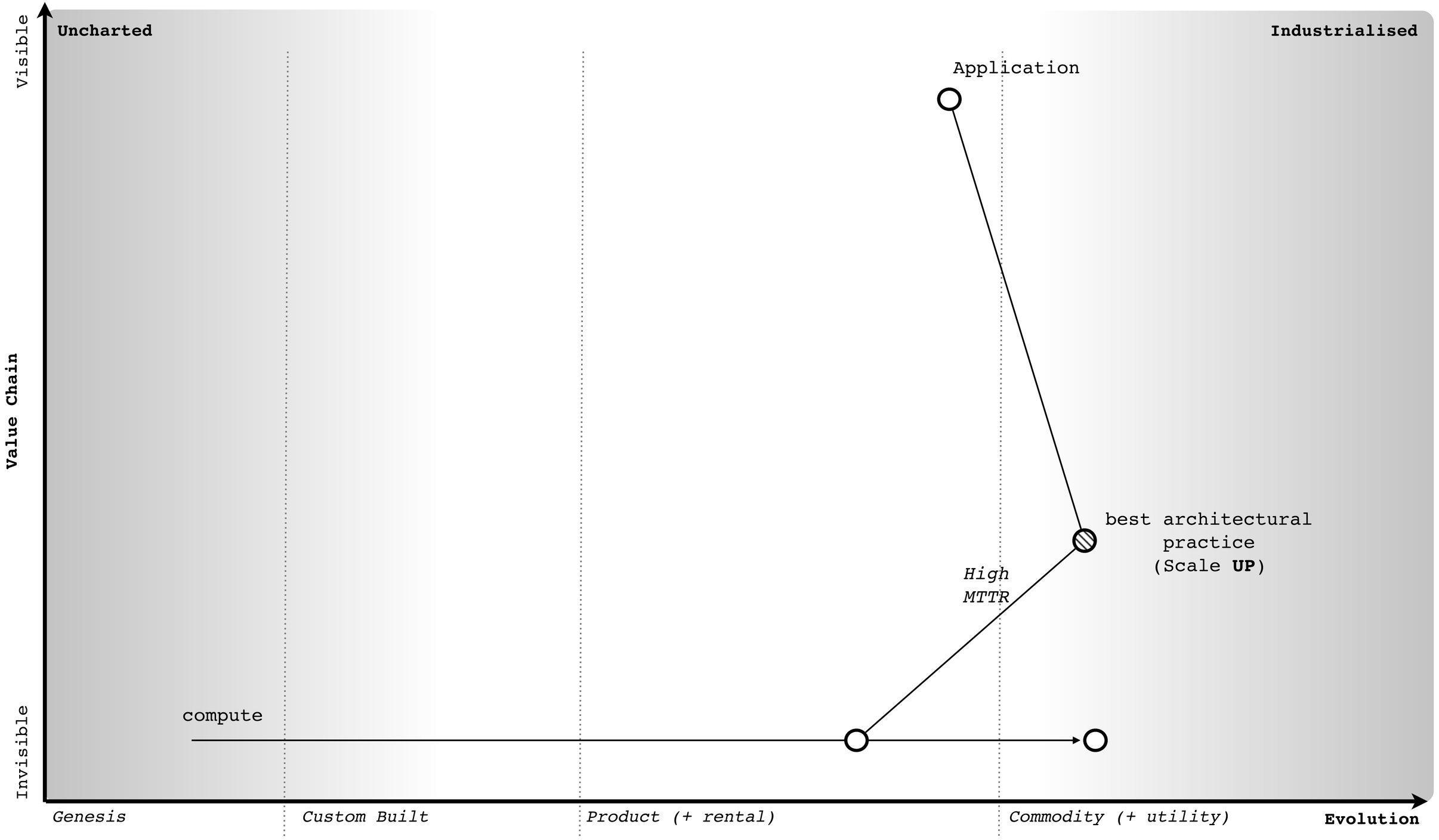
Commodity (+ utility)
Evolution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High
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compute
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

Make my
legacy
“cloudy”

# Amazon Cloud Outage Aftermath: Questions, Concerns Linger

## By Andrew R Hickey, CRN

May 11, 2011 1:33 PM ET

Amazon's cloud outage shook the cloud computing industry to its core last month, and at Interop Las Vegas 2011 a panel of cloud experts examined the fallout and the lasting impact of Amazon (NSDQ:AMZN)'s cloud outage.

Amazon's cloud services went down for several hours, and in some cases days, on April 21 after an issue with its Elastic Block Store (EBS) service got stuck in a "re-mirroring storm" in its North Virginia data center. The hiccup knocked several Amazon cloud users offline,

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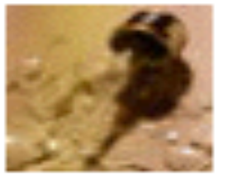


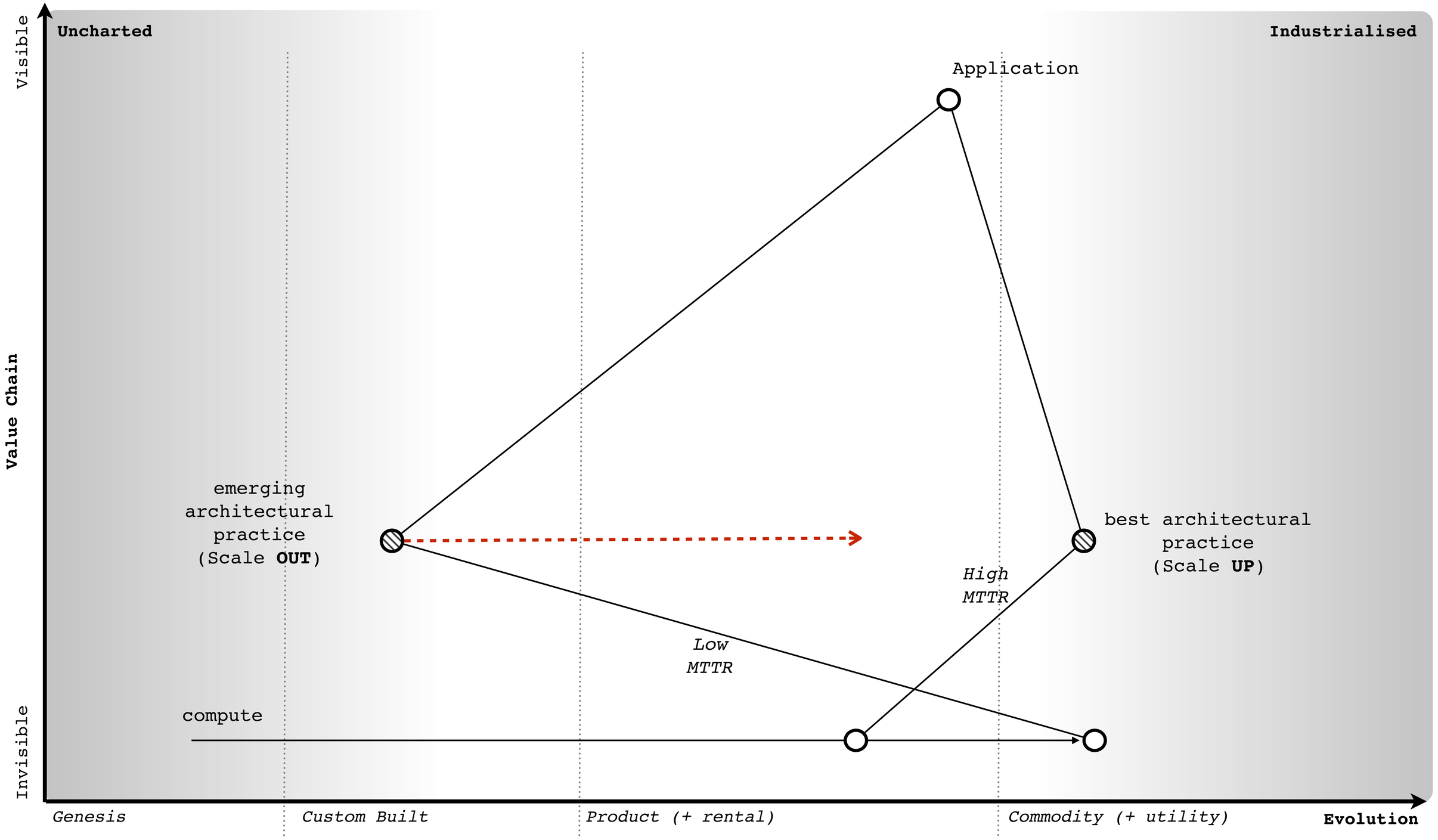
Amazon's Not A
Outages In The
Amazon's cloud outag
last. Here we look at
within the last year.

Amazon Cloud
Learned

The end of cloud is nigh ...

Shouldn't our architecture evolve as well?

Burn him!
Heretic


Uncharted
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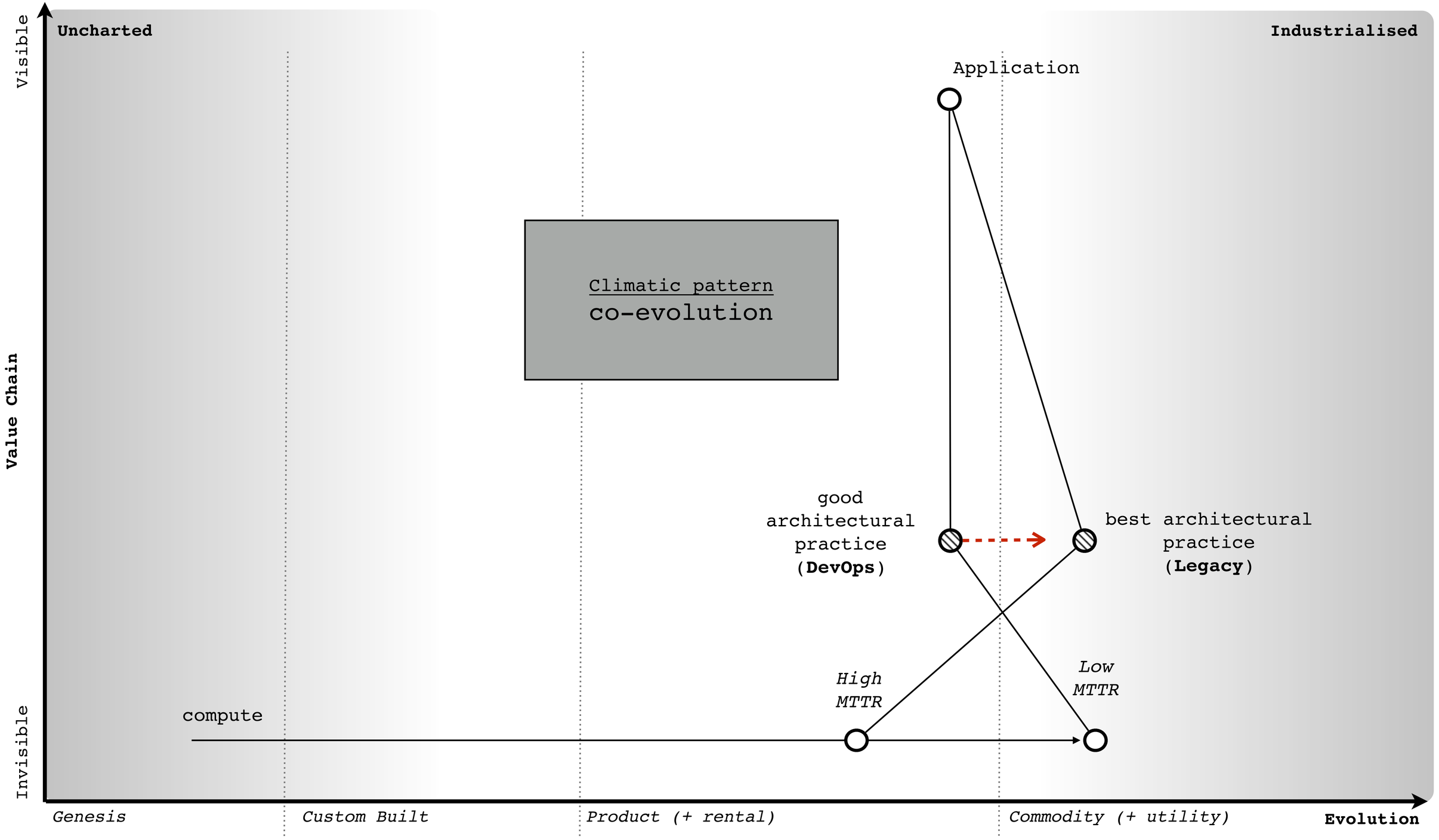
*Genesis*
*Custom Built*
*Product (+ rental)*
*Commodity (+ utility)*
**Evolution**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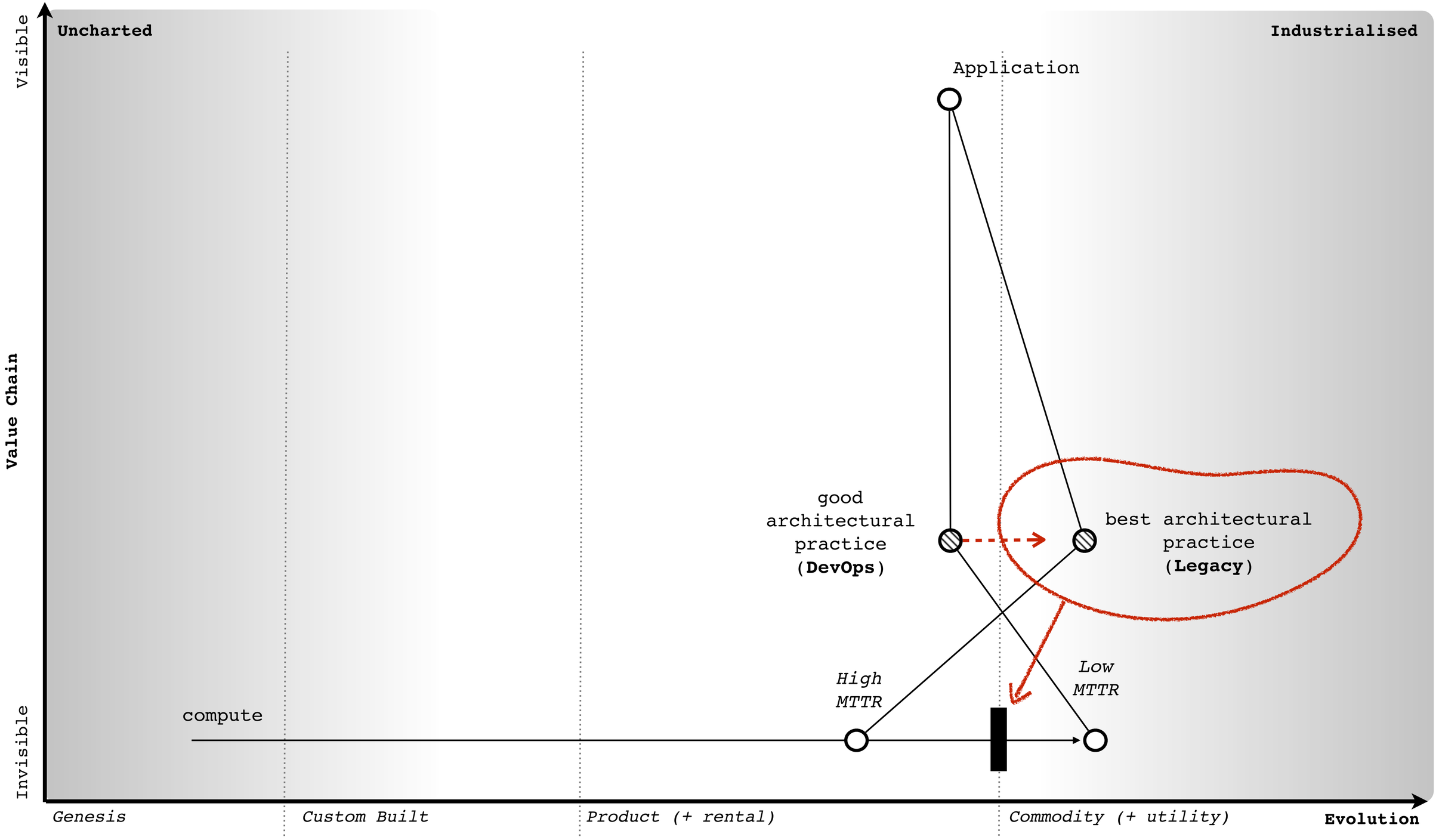
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Genesis
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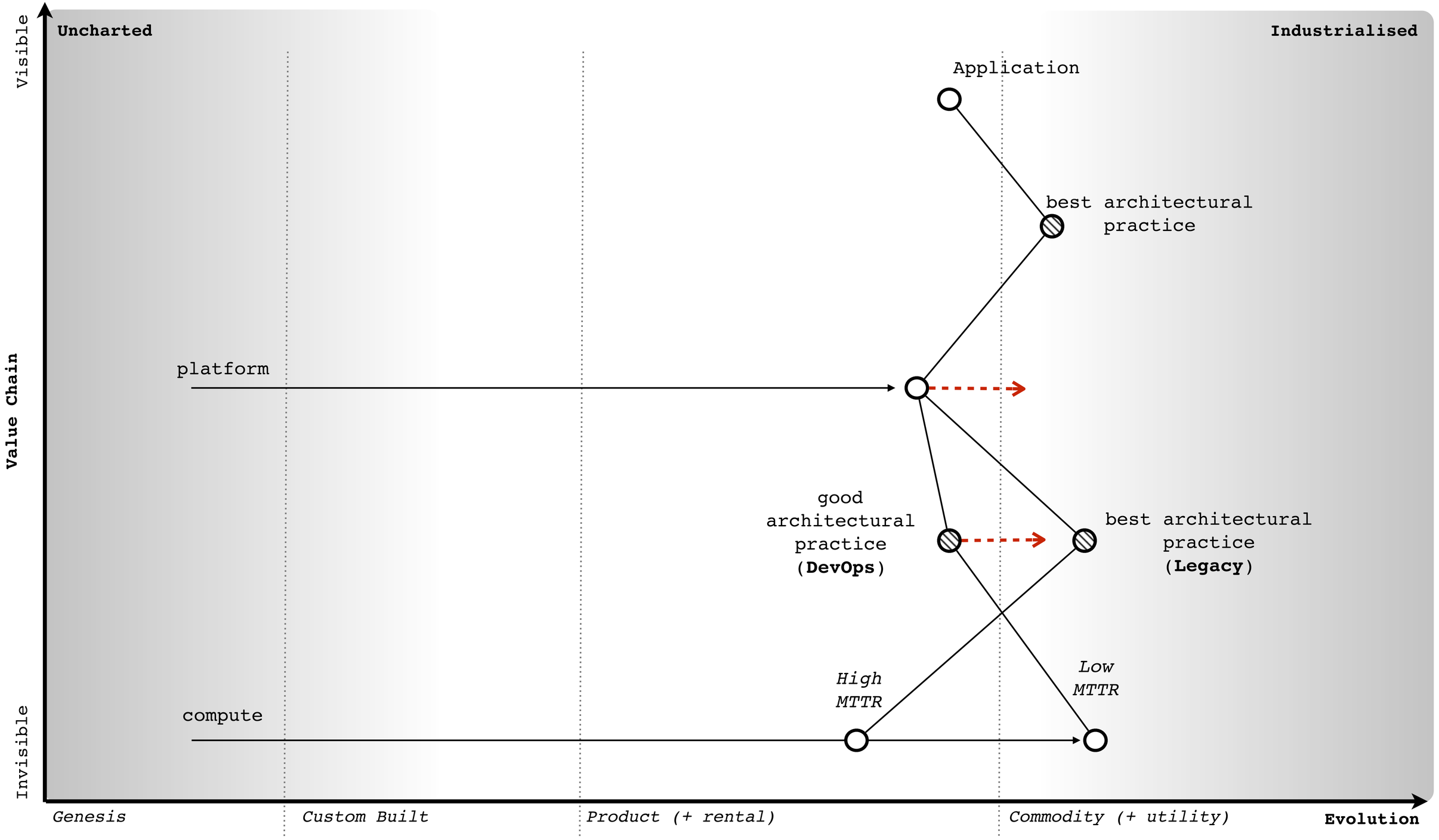
Product (+ rental)
Commodity (+ utility)
Evolution

it’s all about user needs, measurement, iterative cycles, automation, collaboration, speed, feedback loops, …

So was ITIL

Burn him!
Heretic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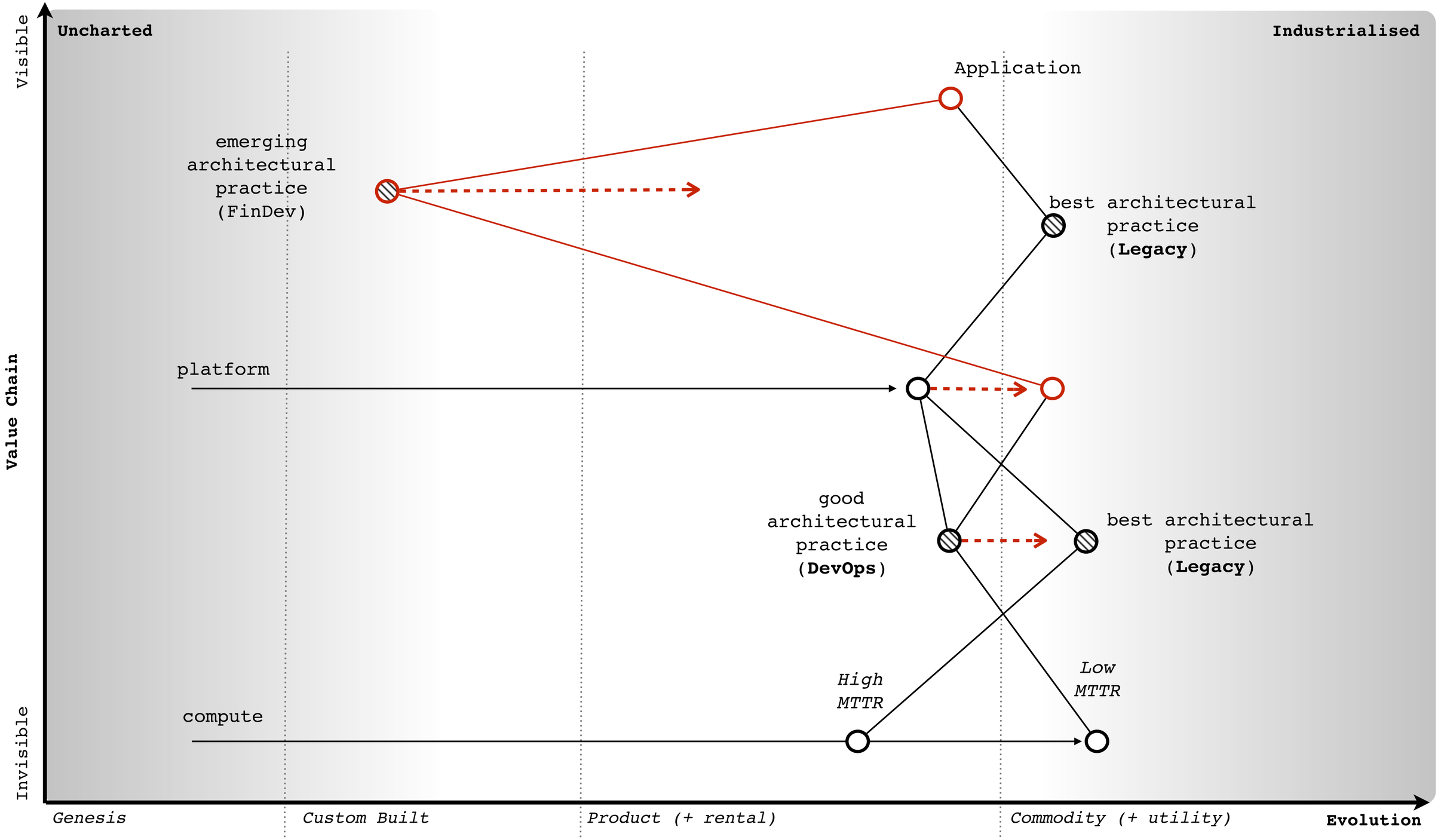
Commodity (+ utility)
Evolution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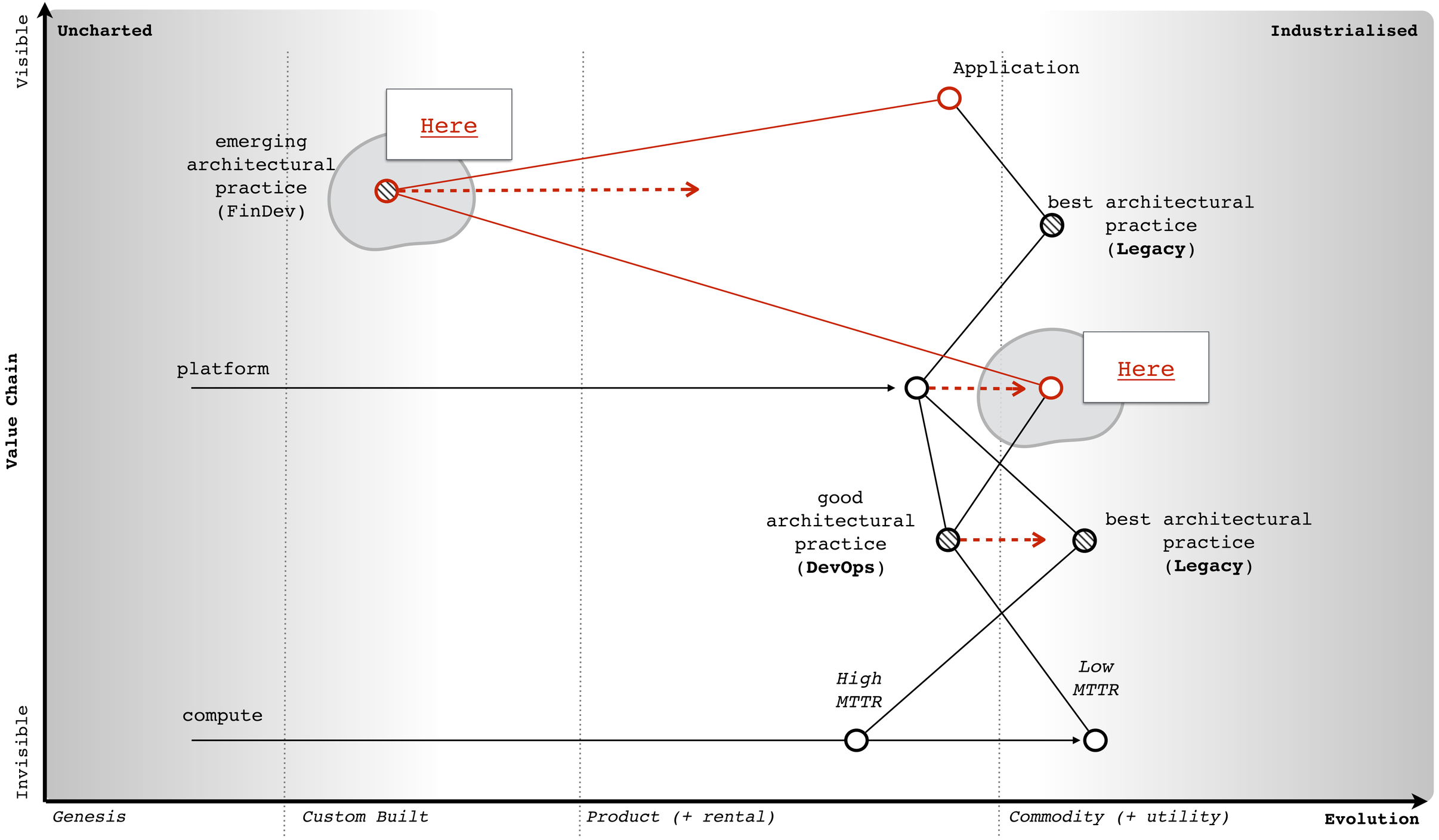
Evolution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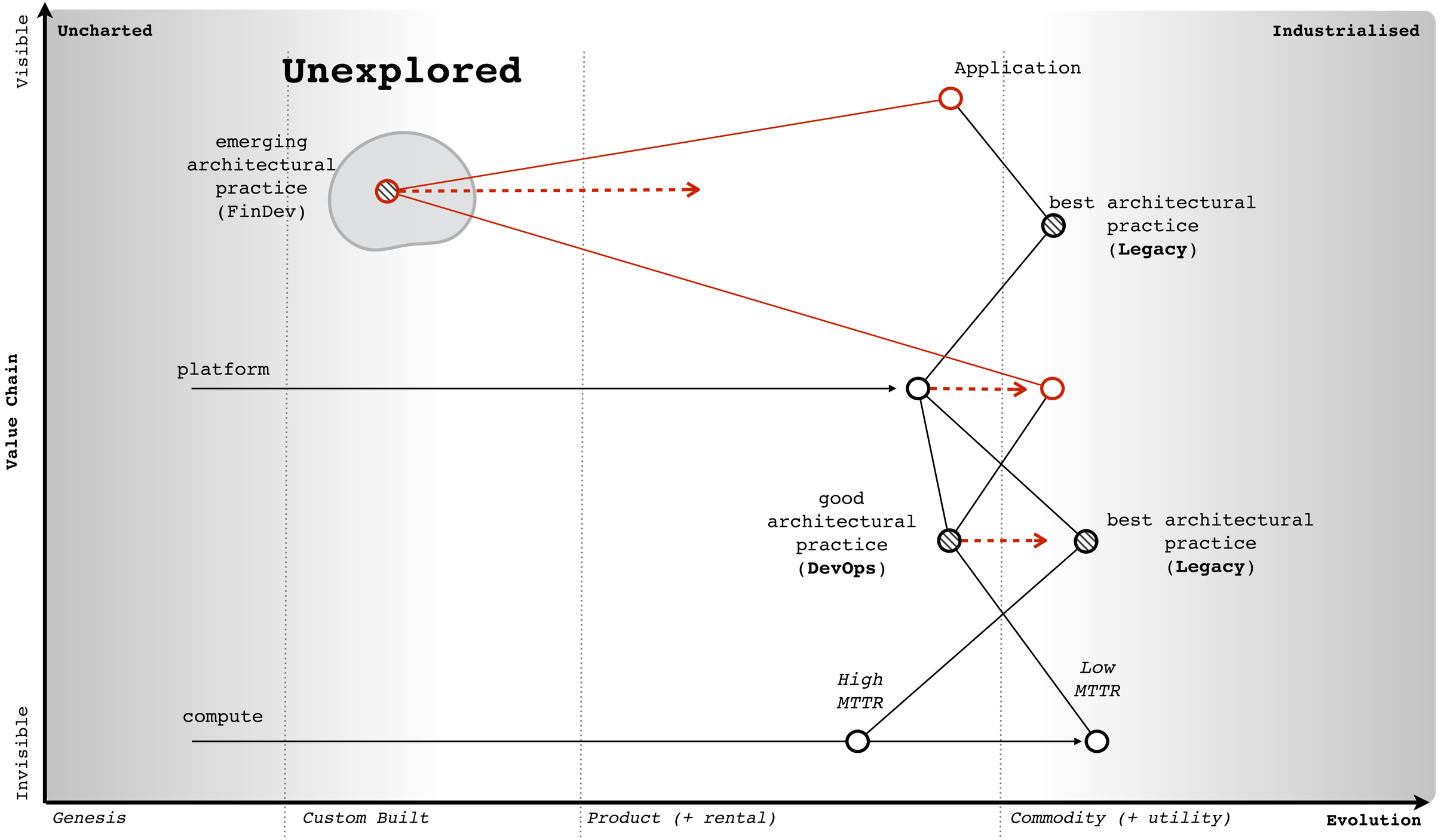
Product (+ rental)
Commodity (+ utility)
Evolution

So what new practices will emerge?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Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

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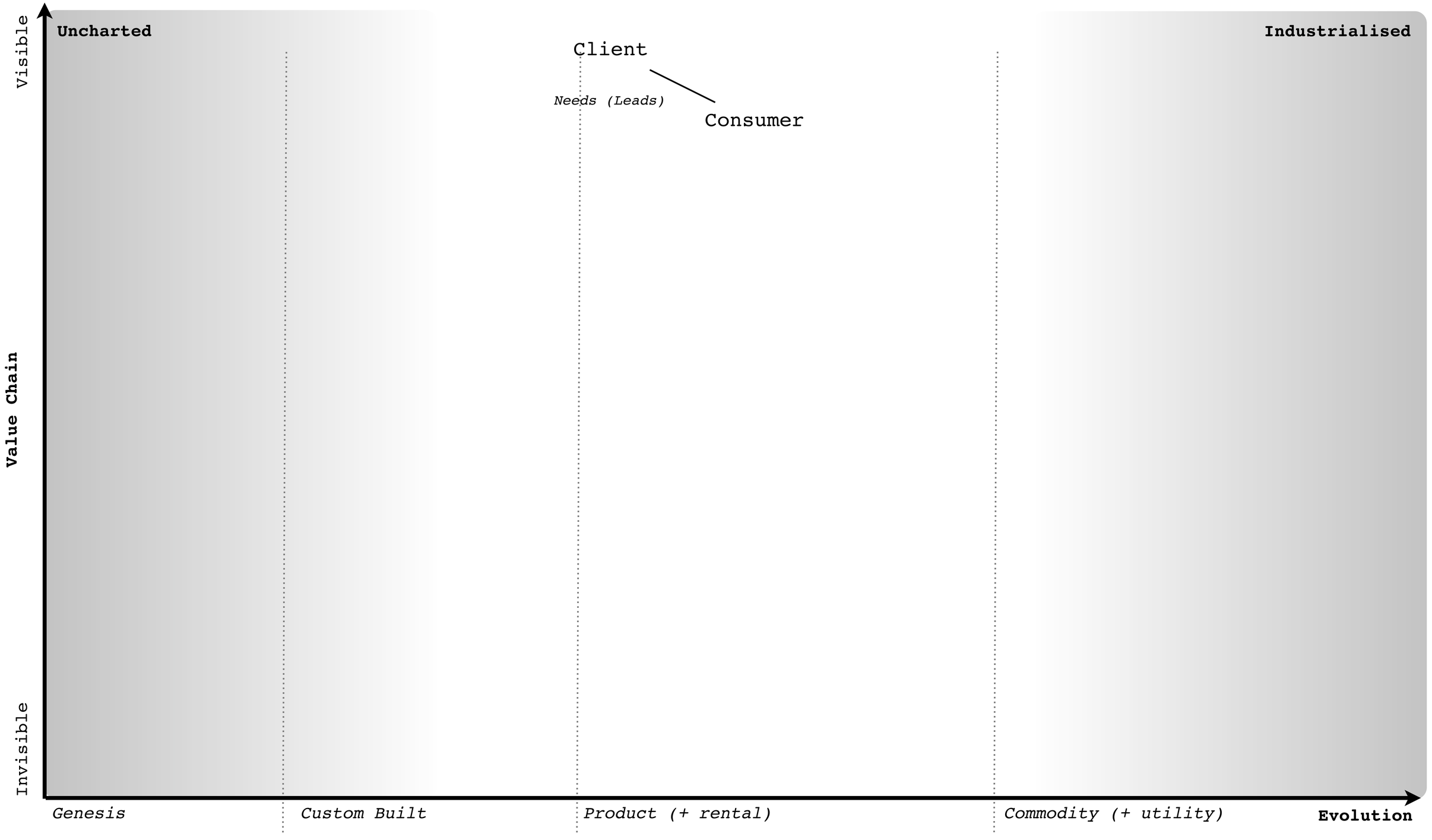
# Obscurity of Cost

imagePROGRAF iPF8000S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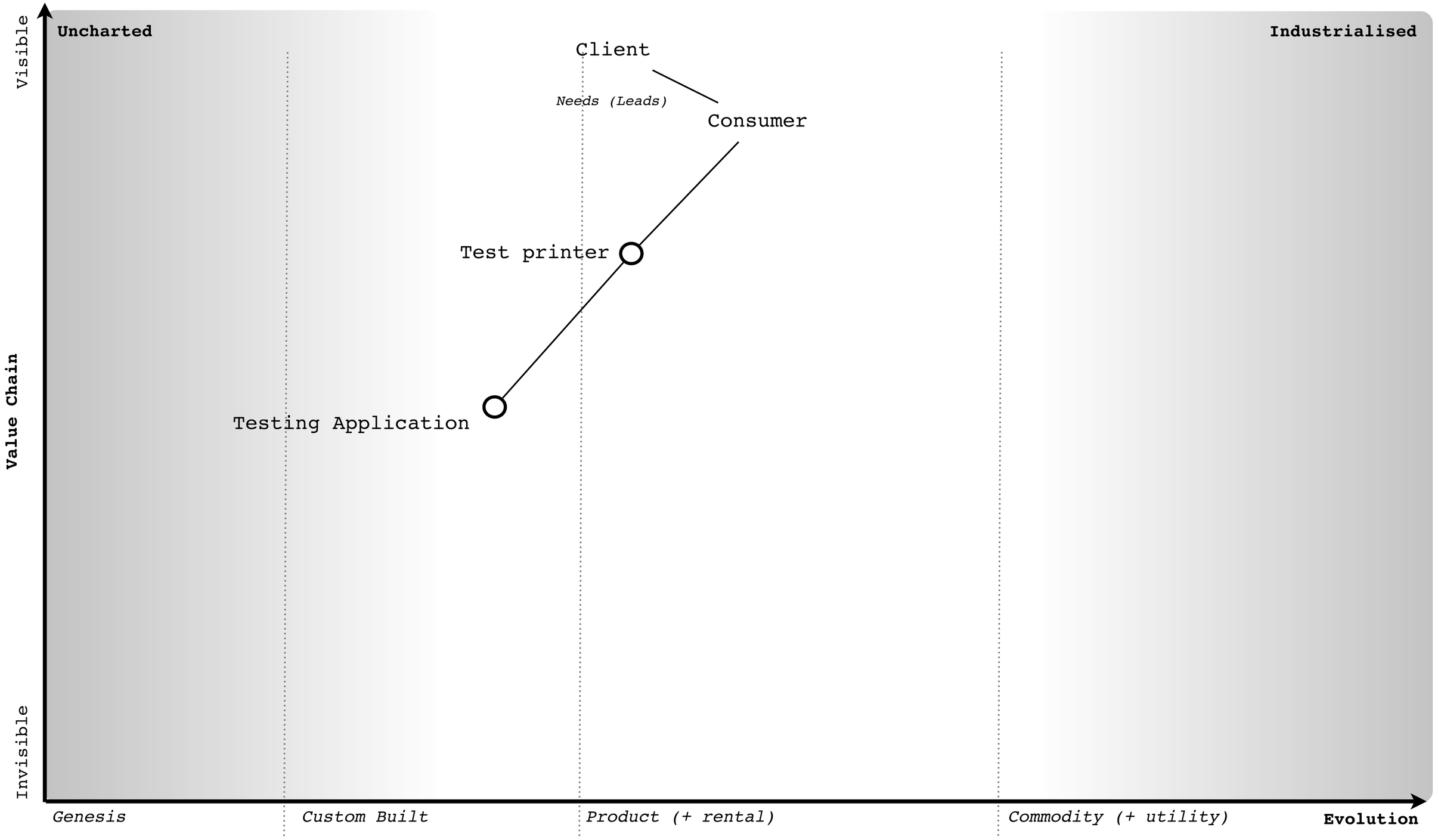
Commodity (+ utility)
Evolution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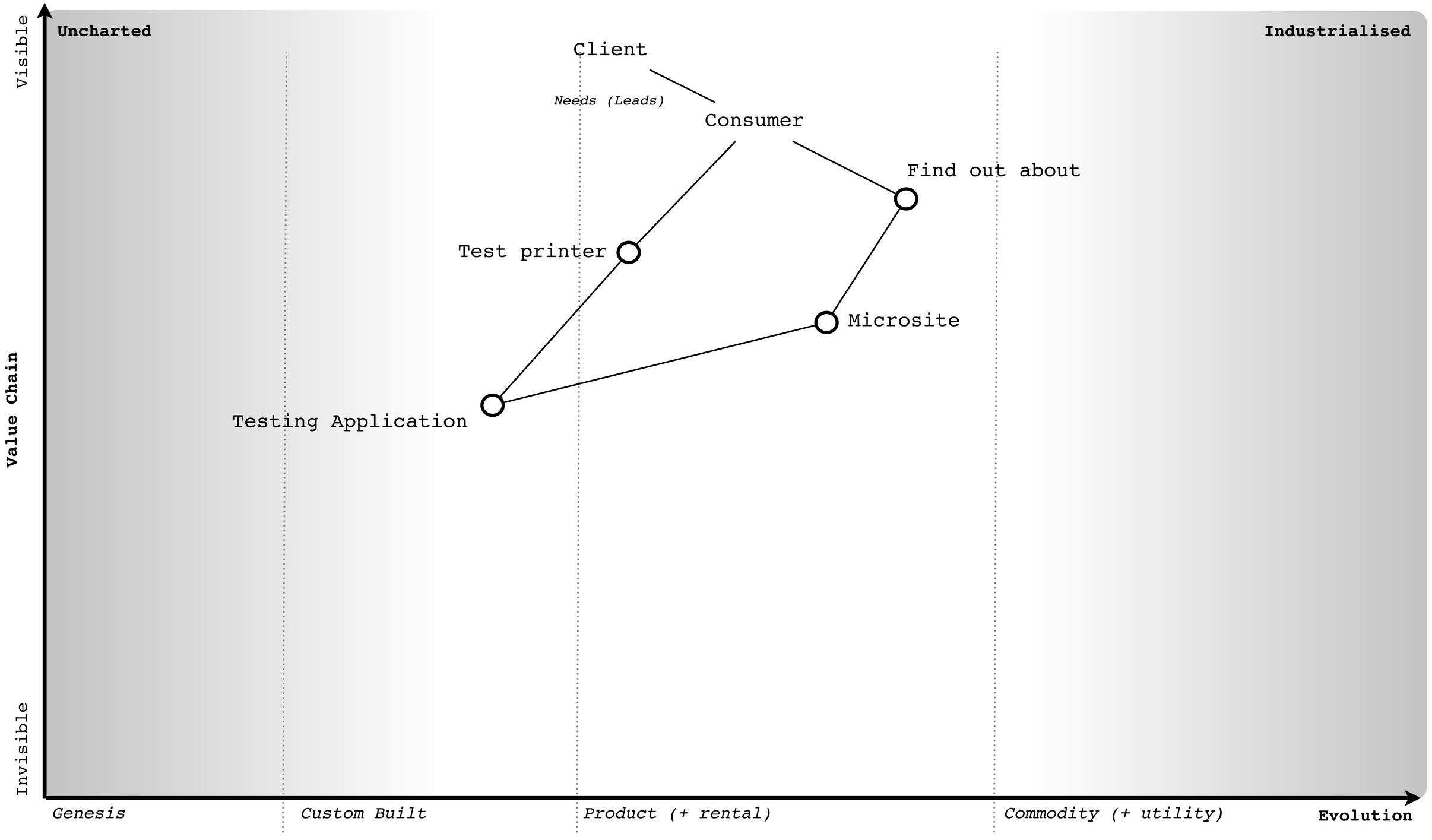
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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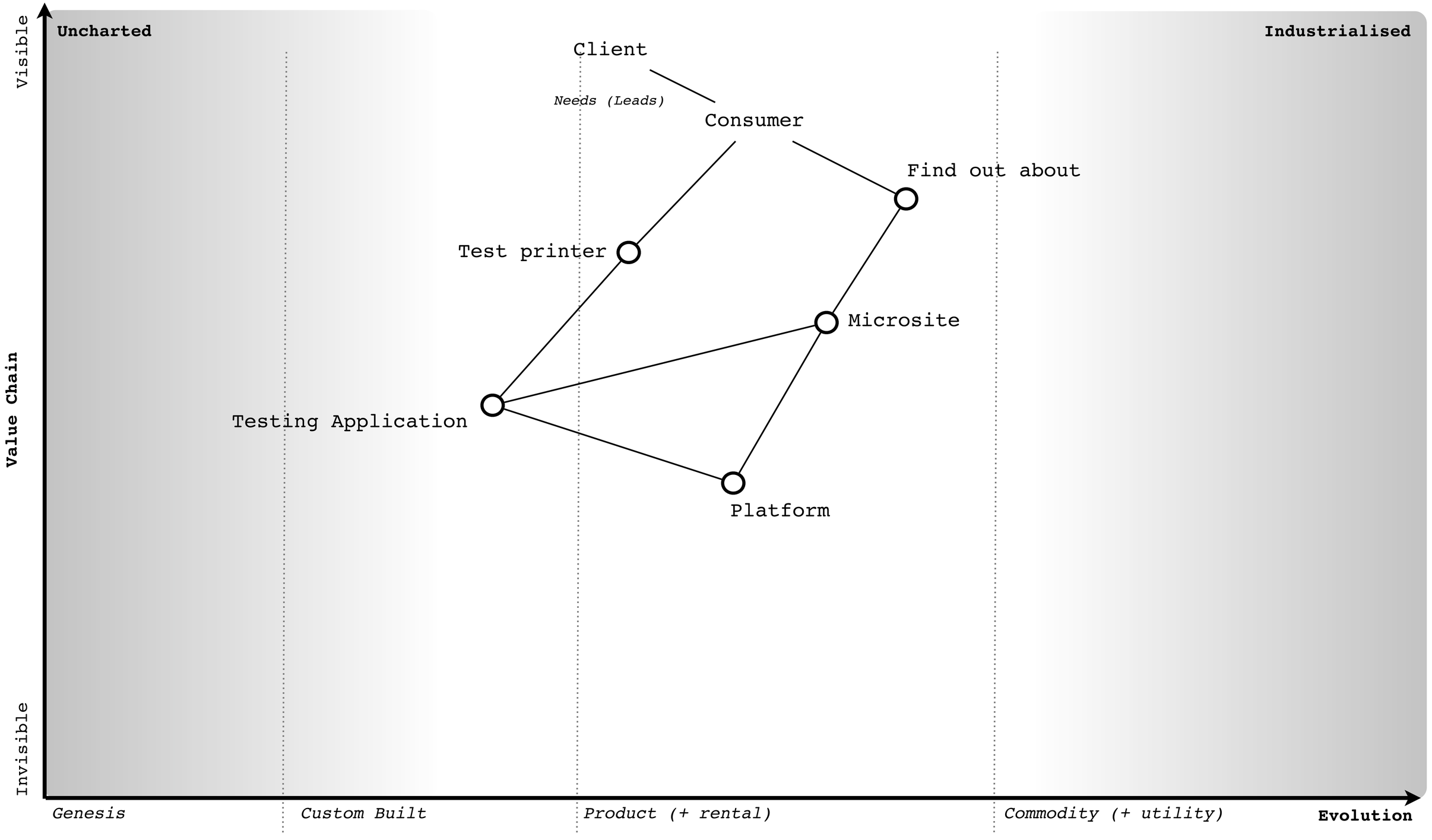
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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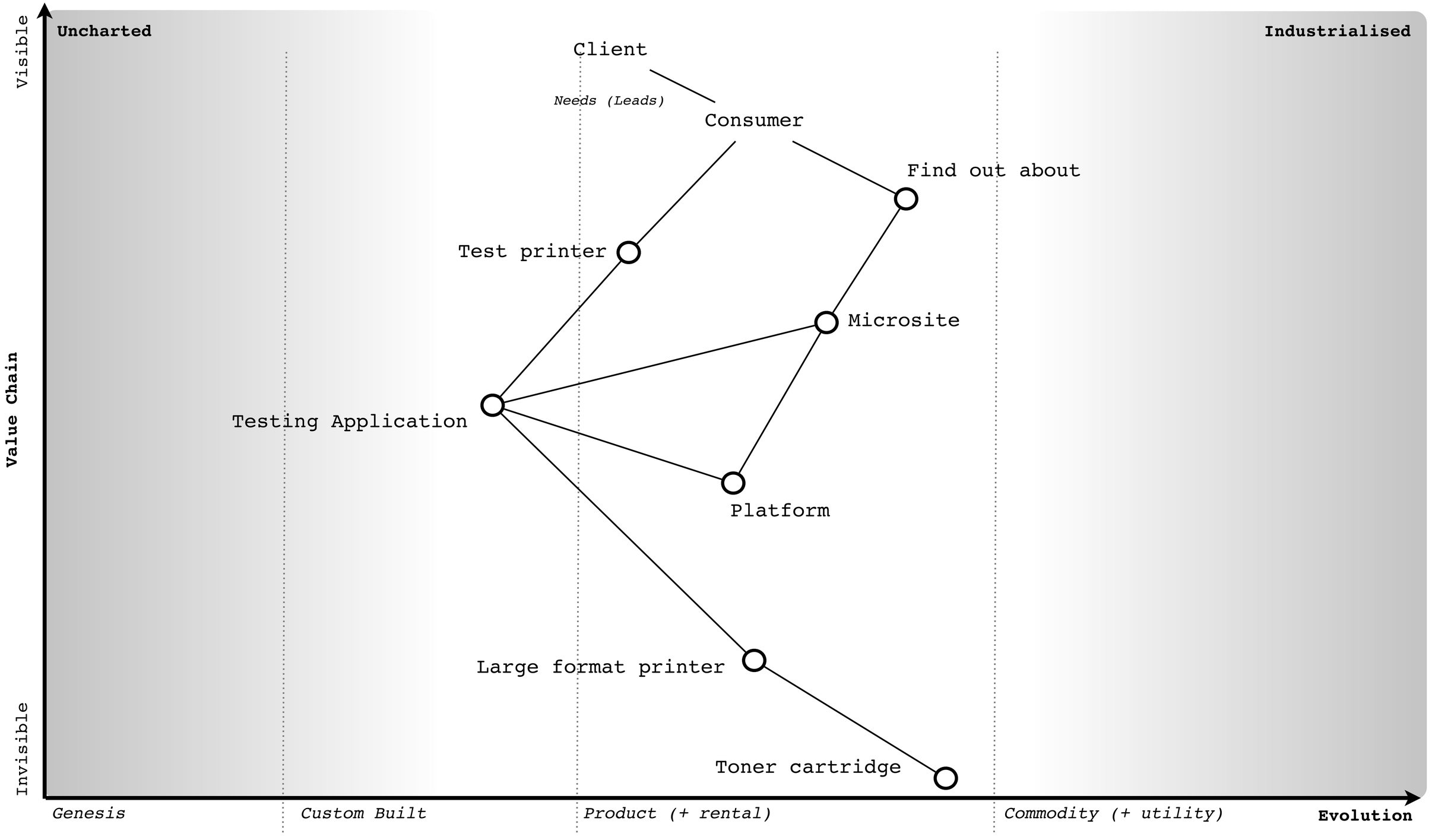
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Toner cartridge
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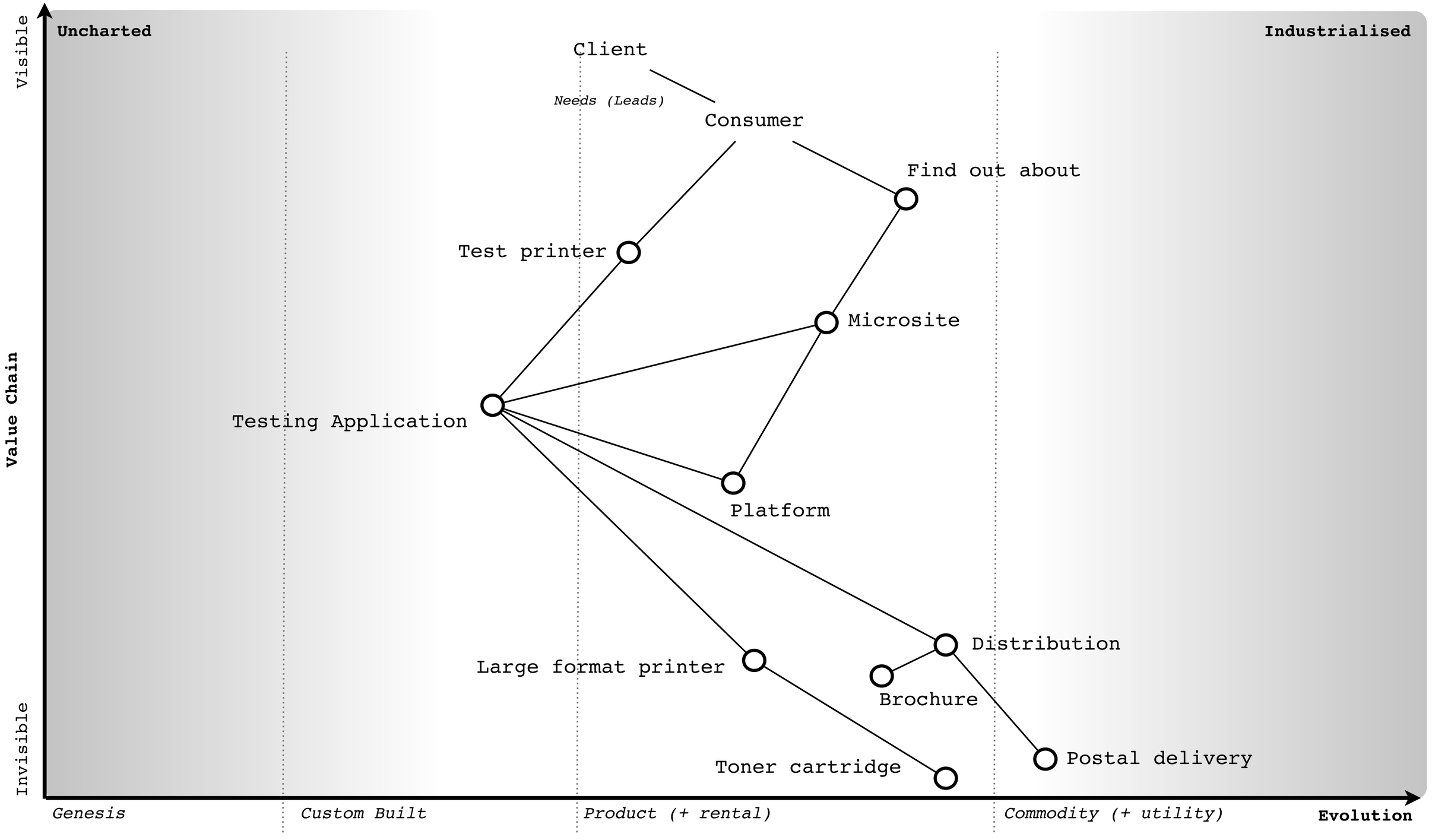
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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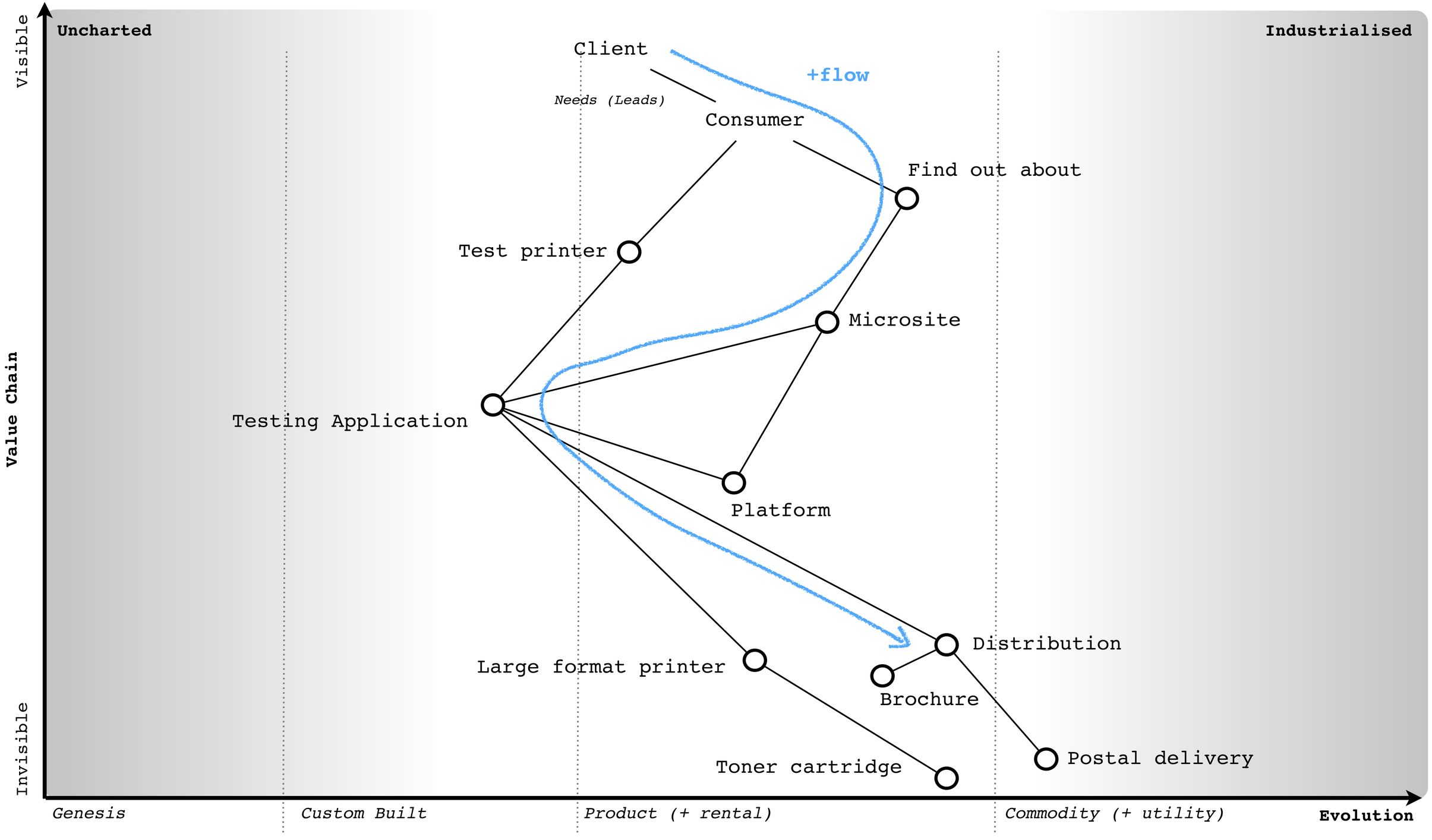
Postal delivery
Toner cartridge
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
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Postal delivery
Toner cartridge
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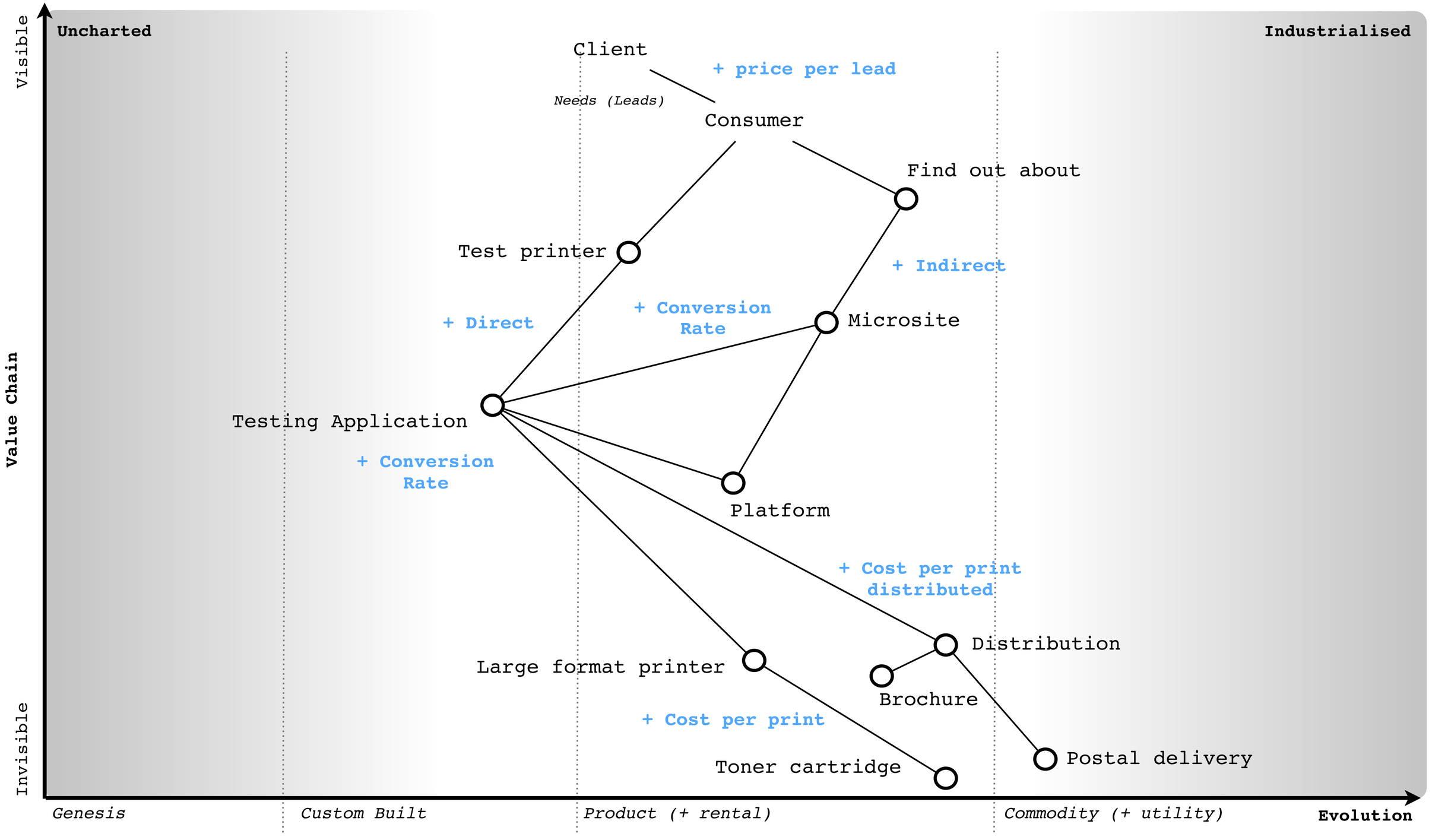
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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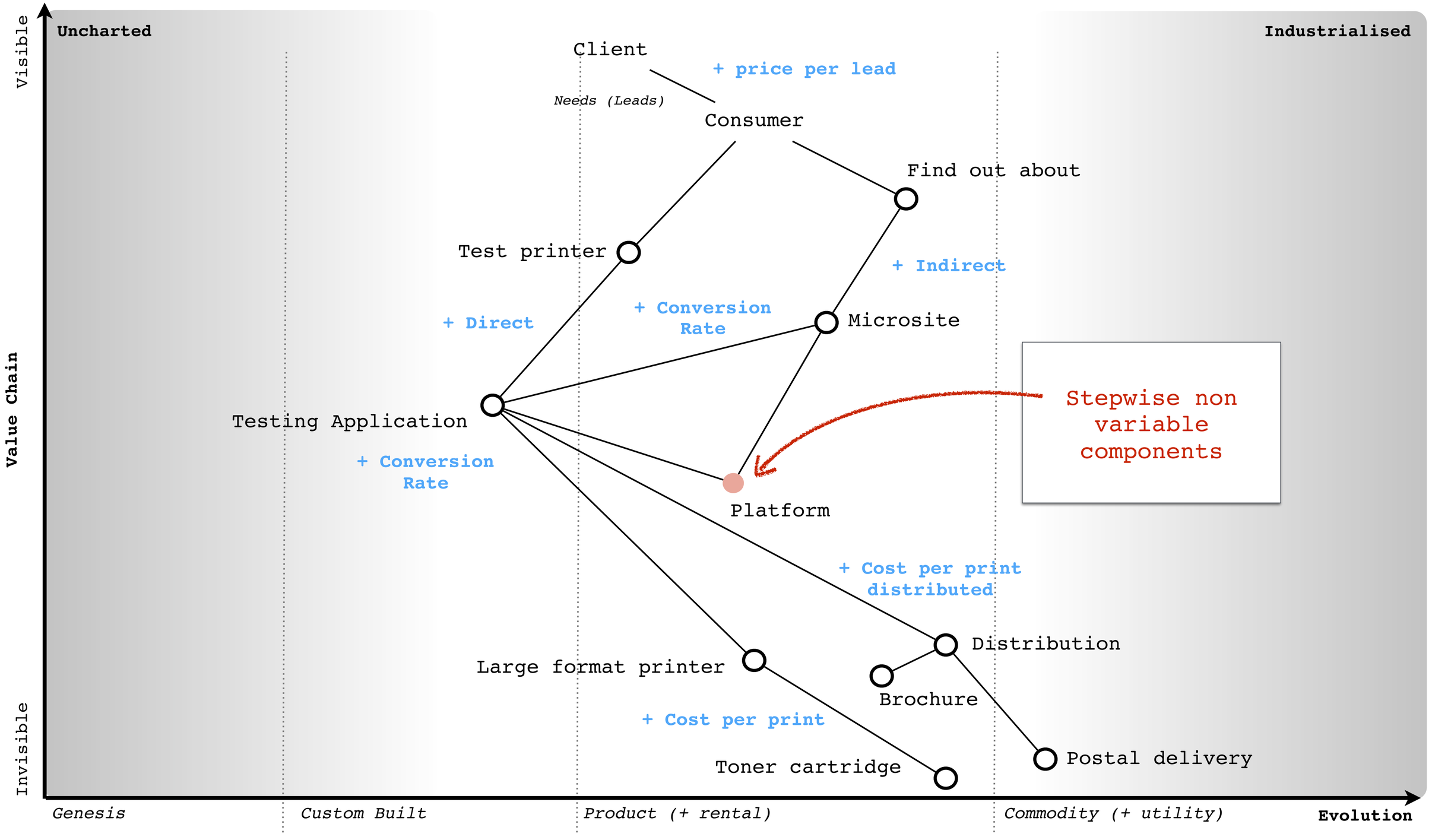
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Postal delivery
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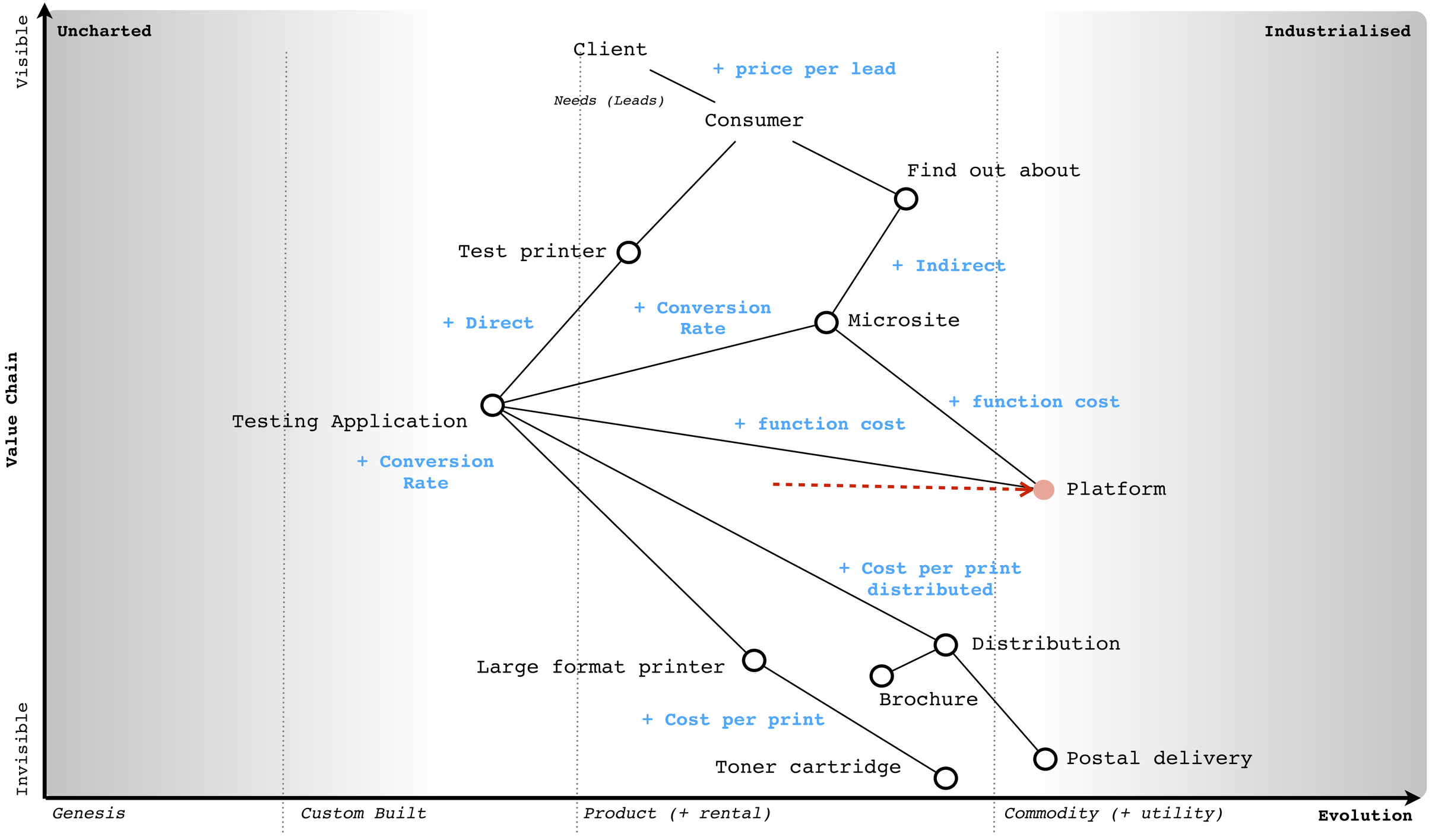
Commodity (+ utility)
Evolution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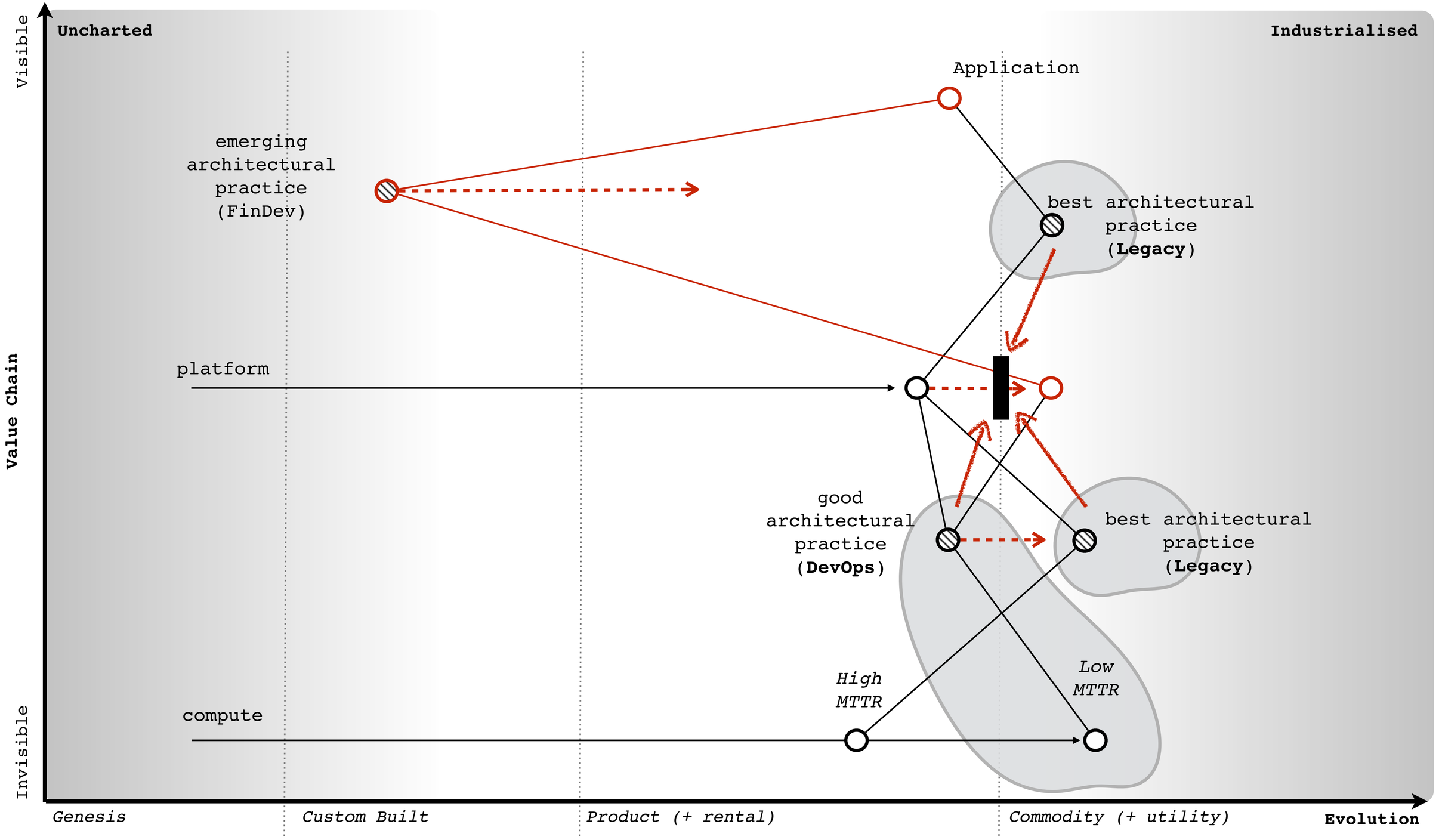
+ Cost per print distributed
Distribution
Large format printer
Brochure
+ Cost per print
Postal delivery
Toner cartridge
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

- Enabled worth base development

- Enabled worth base development
- Refactoring had financial value

- Enabled worth base development
- Refactoring had financial value
- Monitoring by flow of financial value

- Enabled worth base development
- Refactoring had financial value
- Monitoring by flow of financial value
- Rapid acceleration in speed of development and code re-use


Uncharted
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(DevOps)
best architectural
practice
(Legacy)
High
MTTR
Low
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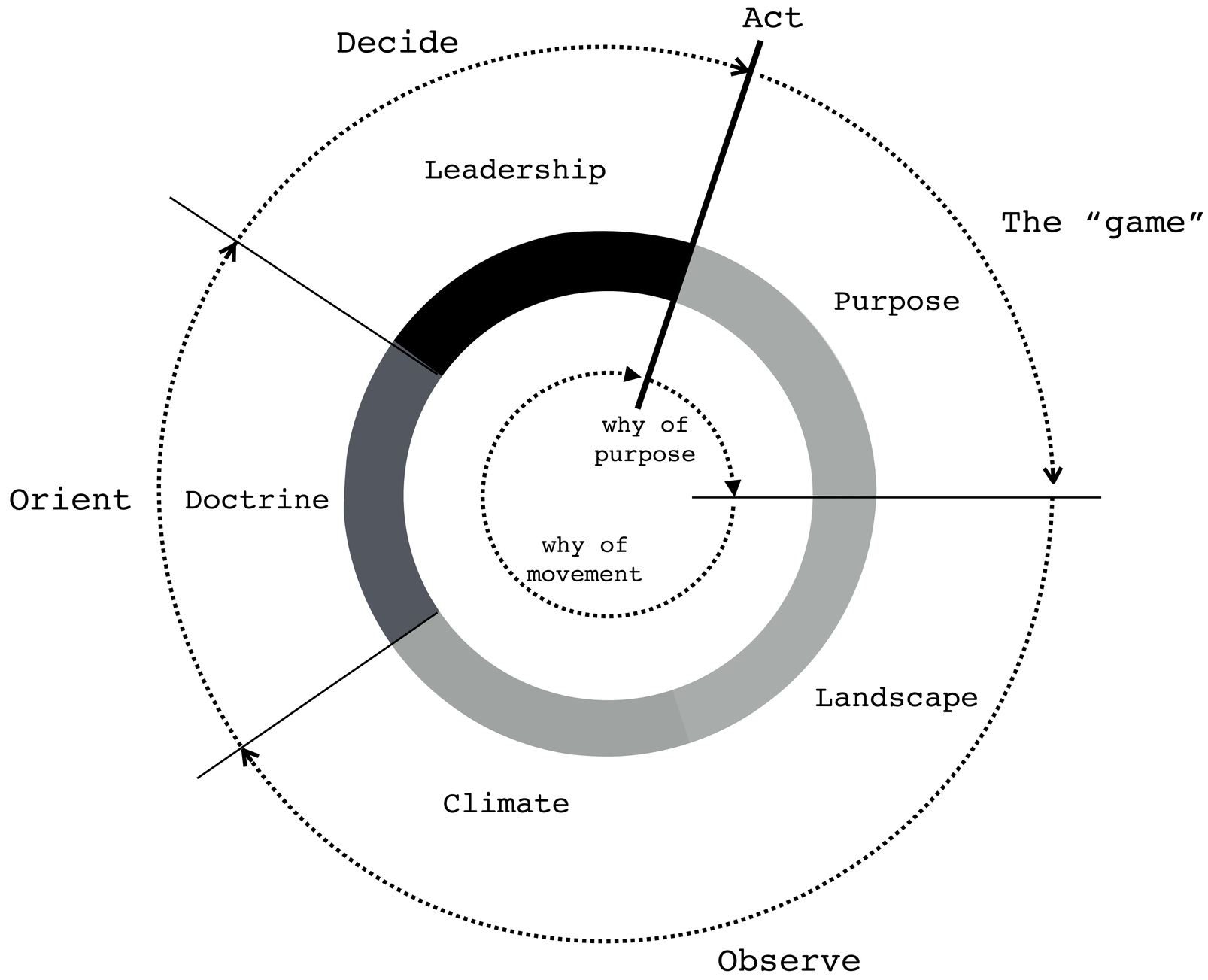
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

DevOps is
future
legacy

Burn him!
Heretic

# Summary


Act
Decide
Leadership
The “game”
Purpose
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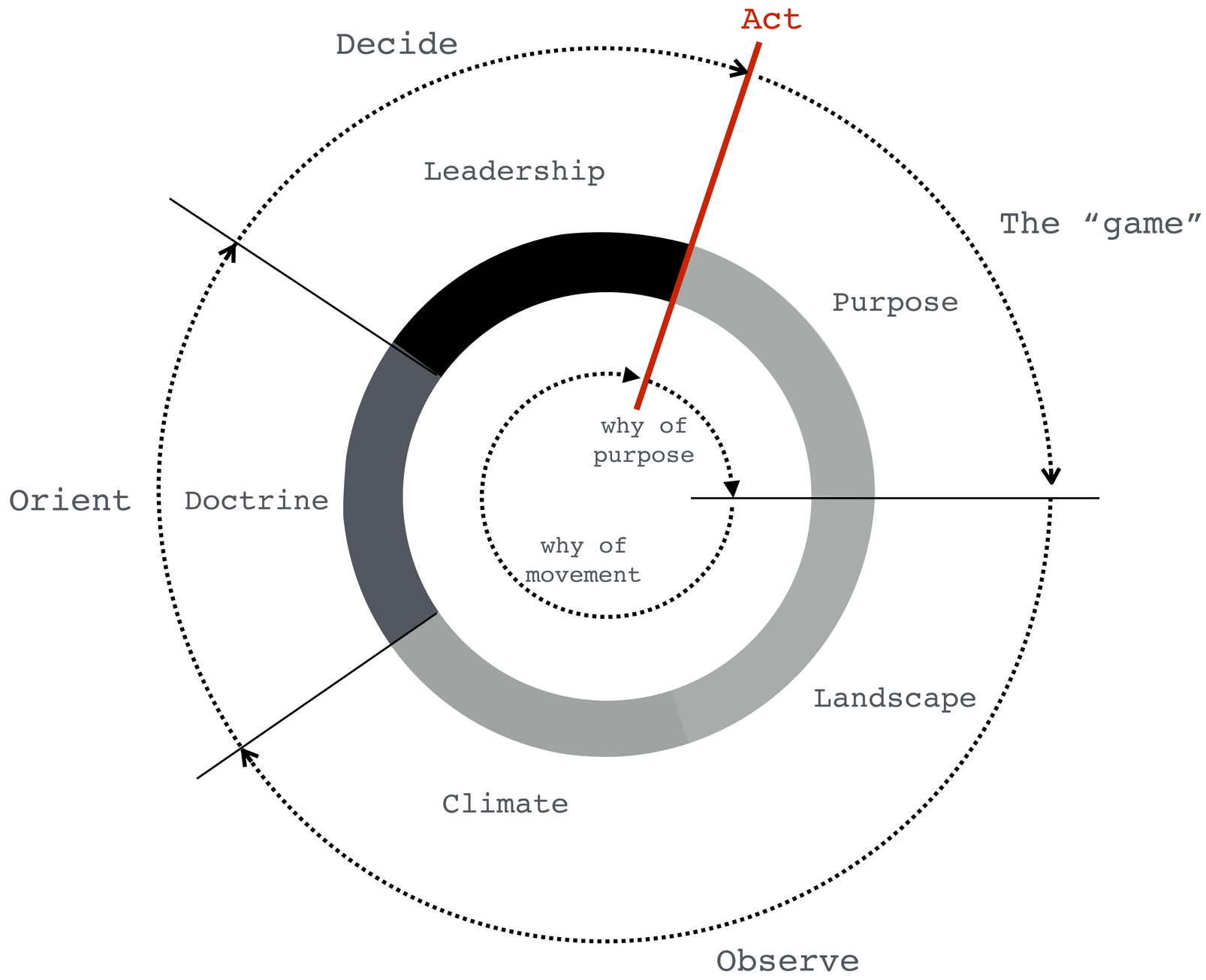
purpose
Orient
Doctrine
why of
movement
Landscape
Climate
Observe


Act
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The “game”
Purpose
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movement
Landscape
Climate
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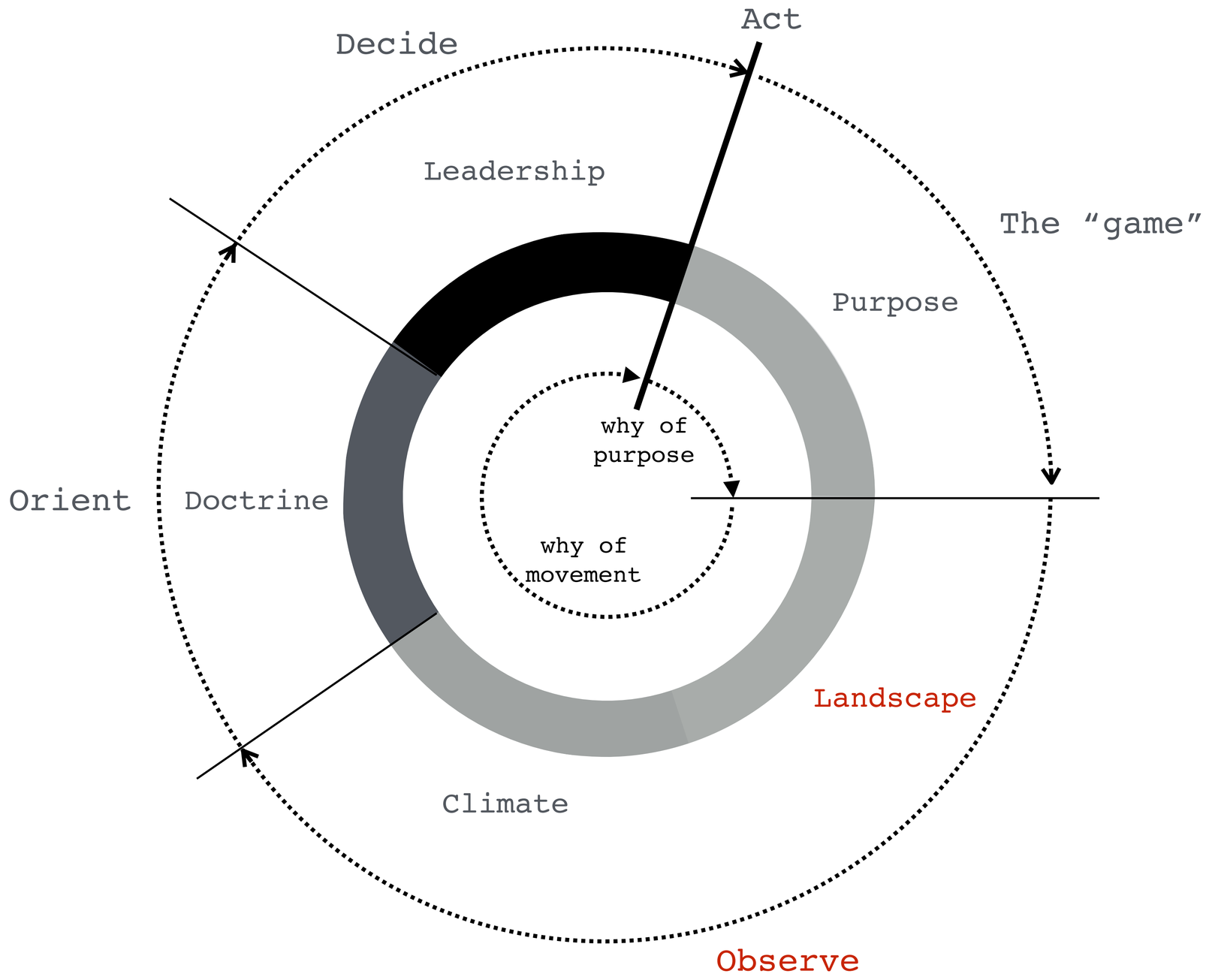
Act
Decide
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The “game”
Purpose
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Doctrine
why of
movement
Landscape
Climate
Observe

“Crossing the river by feeling the stones”
Deng Xiaoping

# Learning More

medium.com/wardleymaps

creative commons

**swardley**
@swardley

Toying with the idea of a mapping camp - 3.5 hour tutorial + some speakers, late Sept, in London - need volunteers, sponsors. Any interest?

1:05pm · 2 Feb 2017 · TweetDeck

2hrs

100 volunteers, building, sponsors

Map Camp Location

# Map Camp

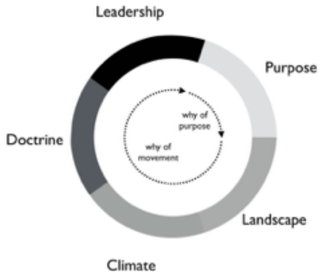
5th October 2017, Newspeak House

Volunteer

## Lost?

'Does this strategy makes sense?' Most Executives have no reasonable way to answer this simple question.

Find Your Path




## Mapping and the Strategic Cycle

Before launching your team of elves and dwarves into the midst of a battle then the first thing you do is scout out the landscape and improve your situational awareness.

Read More

## We'd Love to See You

**Join us** for a workshop and lightening talks with Simon Wardley and friends. We like to call it... **Map Camp**

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Learn how to identify your customers, their needs and their journeys and anticipate the future by looking at economic patterns. By undertaking this online course, you will benefit from:

- Identifying and reacting faster to different business opportunities.
- Learning to communicate and collaborate in a fast-paced environment.
- Better understanding the landscape of your business.
- Appreciating how to understand and manage inertia and avoid risks.

Discount code : SOCIALMAPS

LEF Proprietary and Confidential

LEADING EDGE FORUM

# Thank you

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simon.wardley@leadingedgeforum.com
@swardley

LEADING EDGE FORUM

Into the
DANGER zone!!

Getting Started
Competitor Analysis
Evolution
Flow
Weak Signals
Ecosystem
Type
Brexit

Getting Started

Competitor Analysis

Evolution

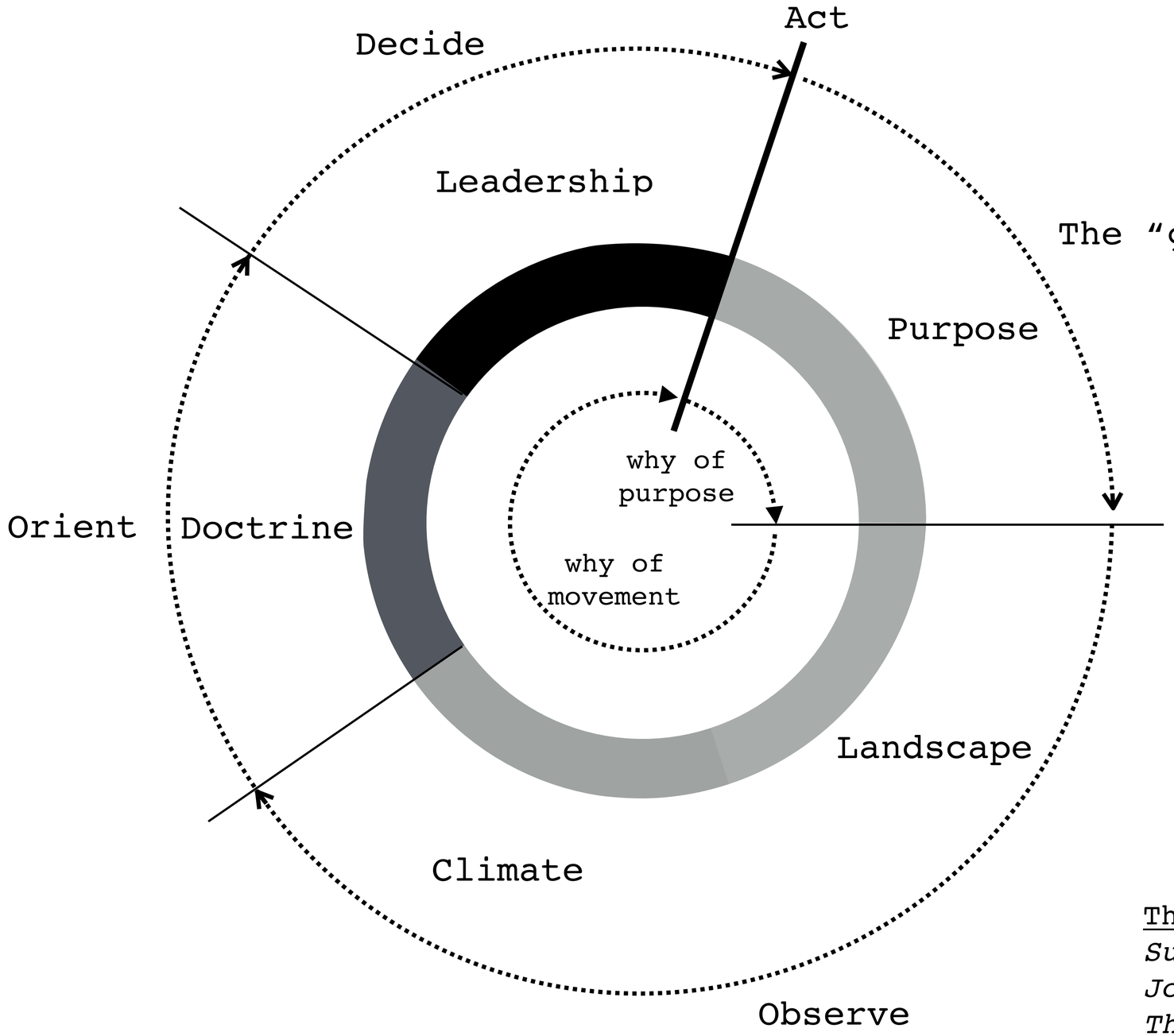
Flow

Weak Signals

Ecosystem

Type

Brexit

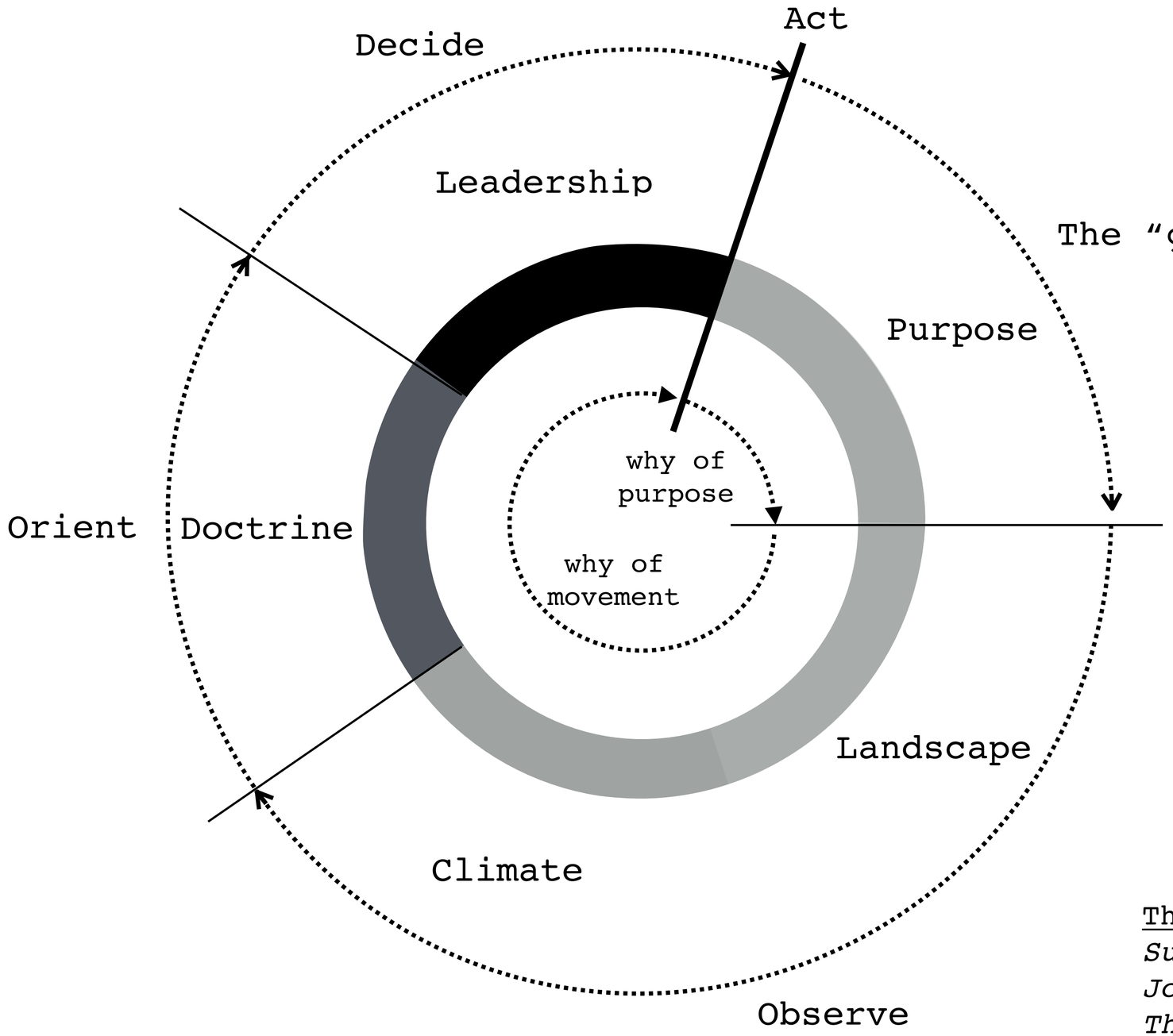



The Strategy Cycle

*Sun Tzu's five factors*

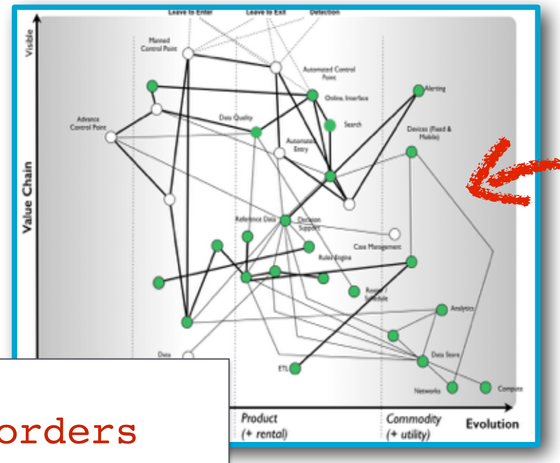
*John Boyd’s OODA loop*

*The two types of why*




**Spend Control**
(collect, collate, challenge and advise)

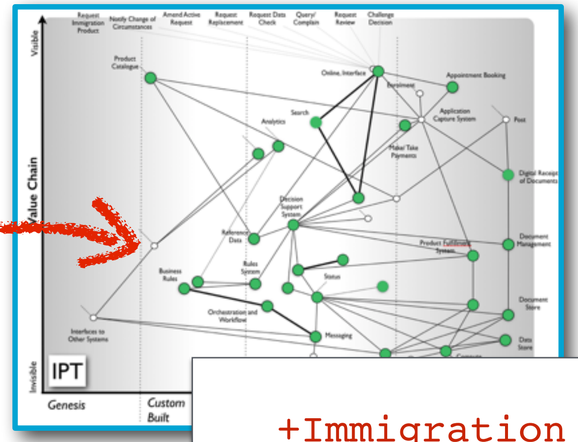
The Strategy Cycle
*Sun Tzu's five factors*
*John Boyd’s OODA loop*
*The two types of why*




+Borders

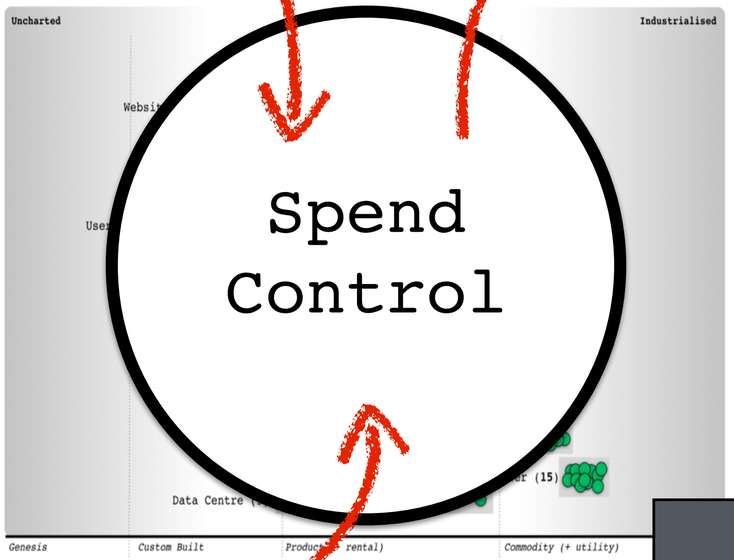
Learn

Challenge

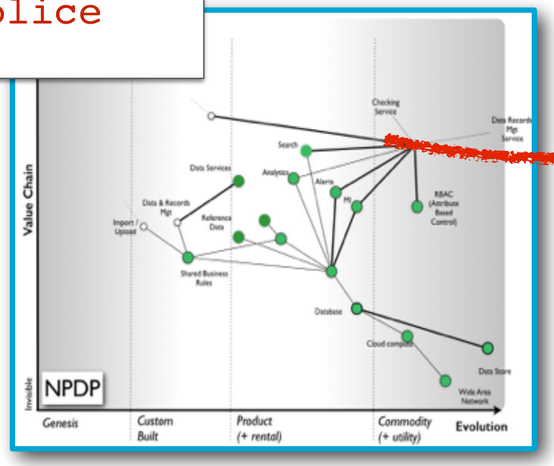



+Immigration

Spend
Control

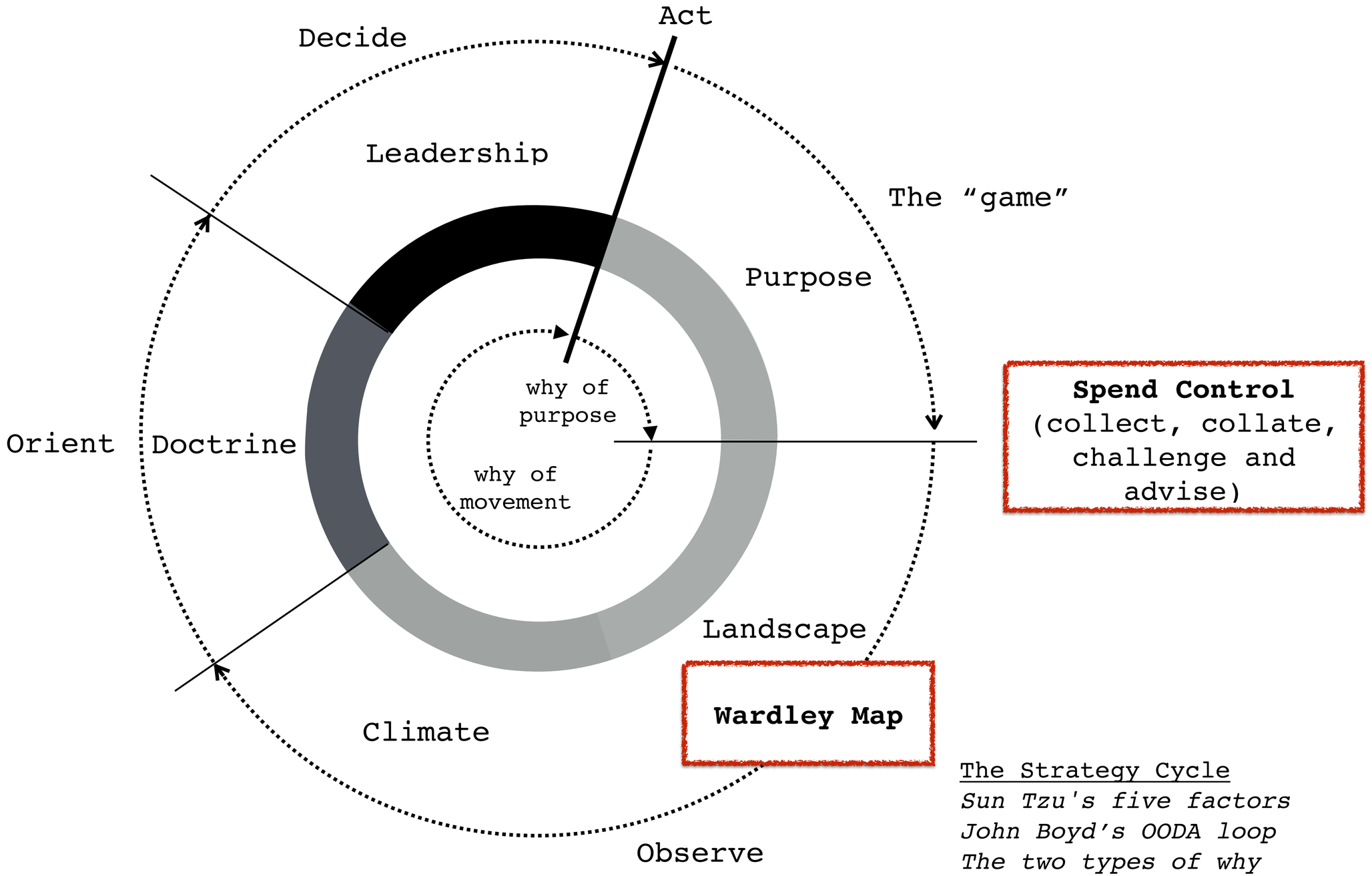



+Police




Collect

Doctrine
Use a systematic mechanism of learning

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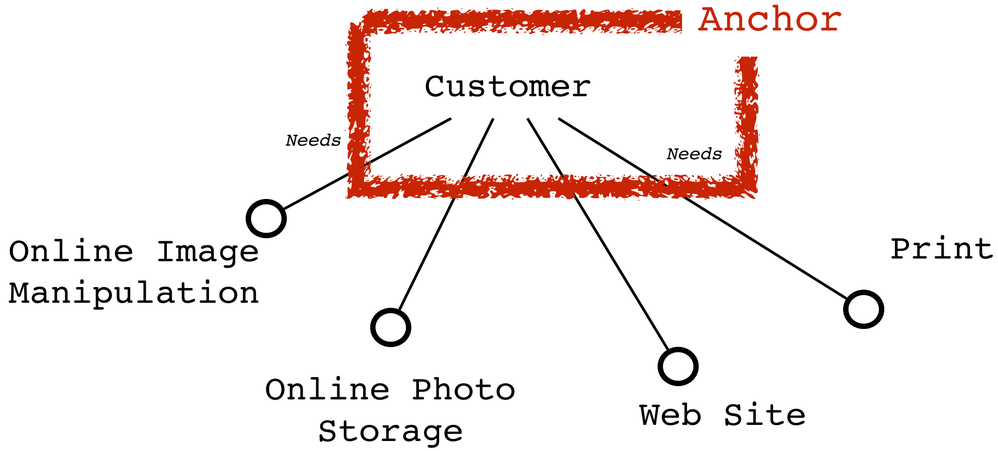
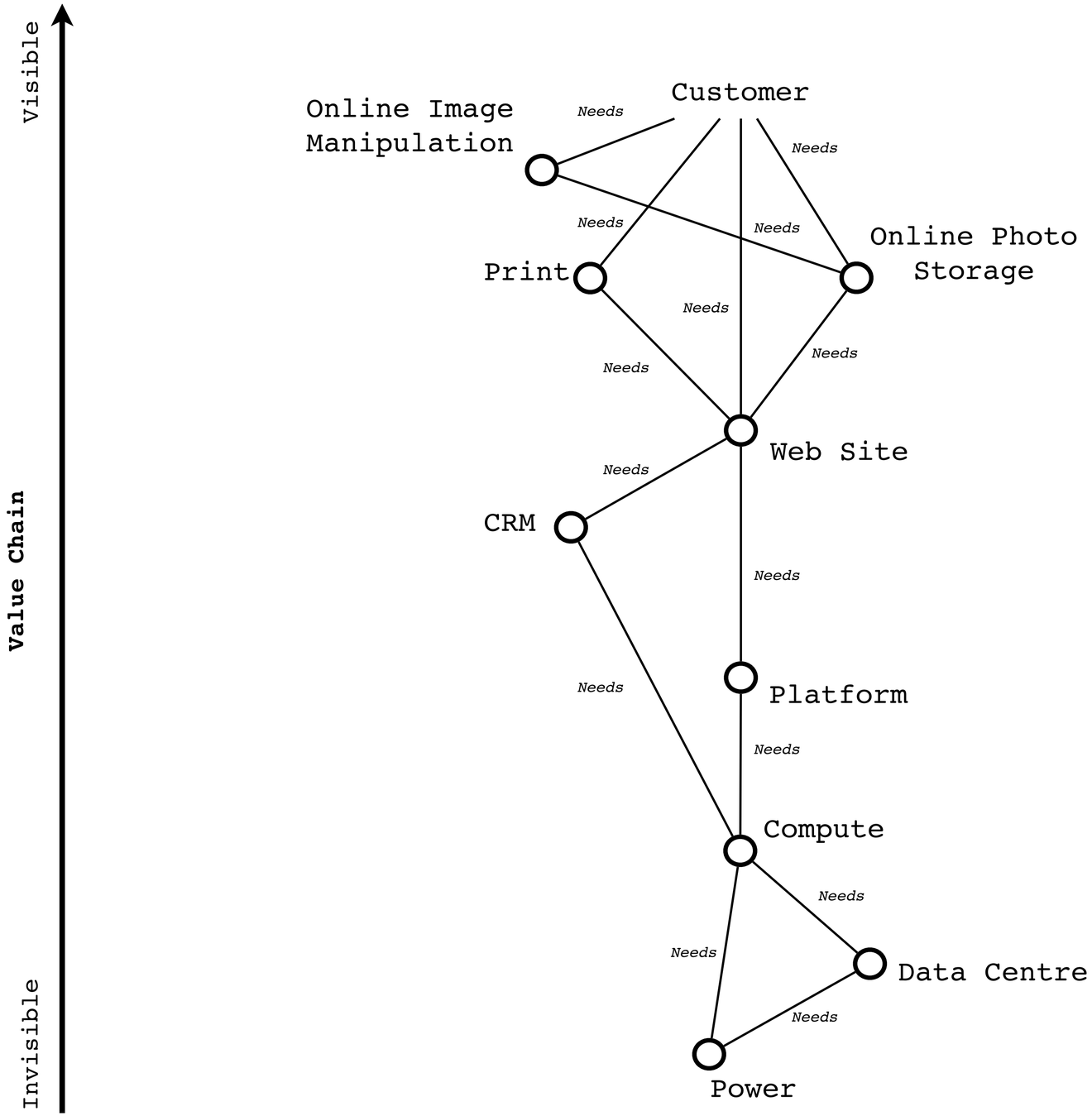

Anchor
Customer
Needs
Needs
Online Image Manipulation
Online Photo Storage
Web Site
Print


Visible
Value Chain
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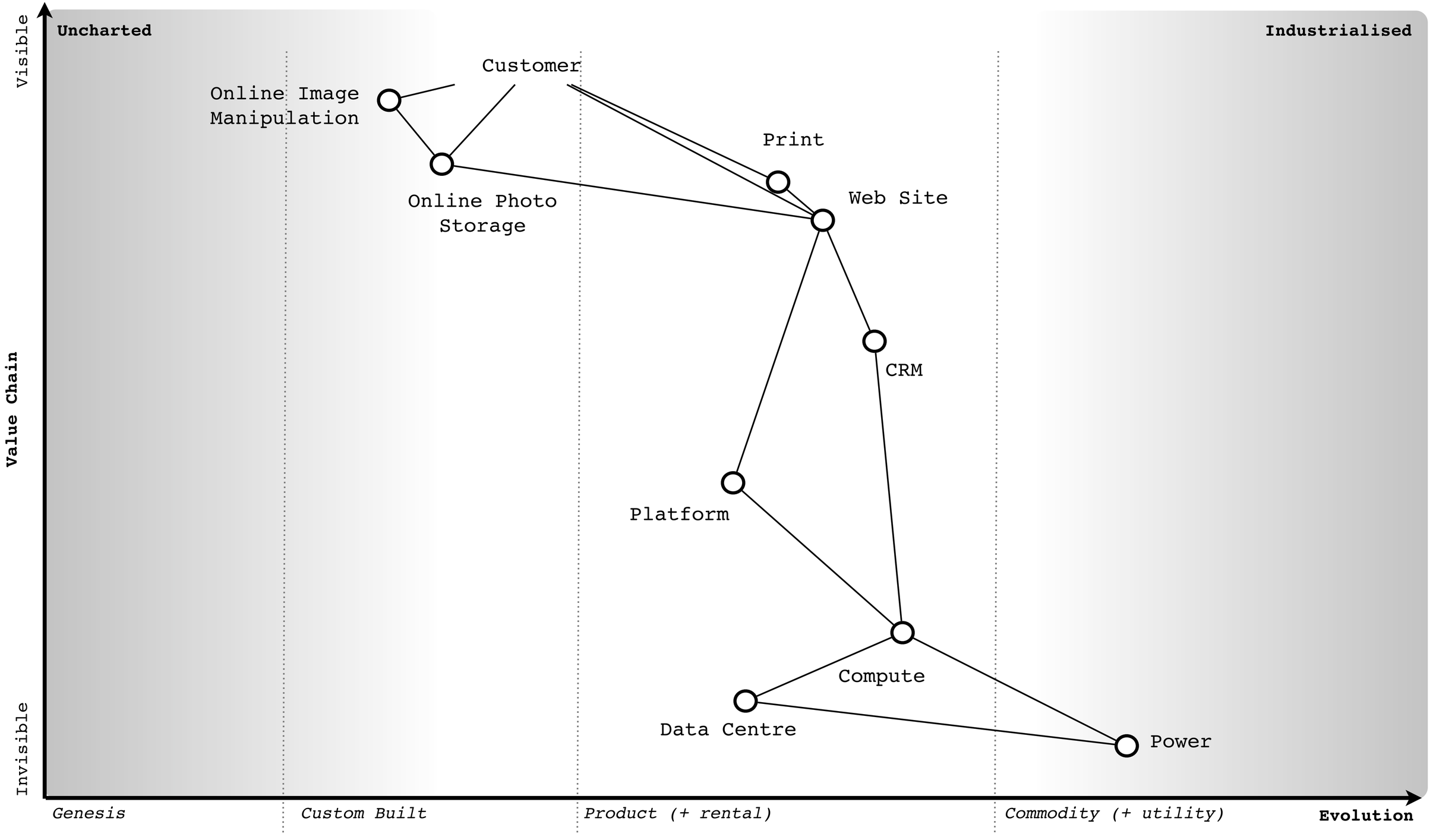
Compute
Data Centre
Power
Needs


Uncharted
Industrialised
Visible
Invisible
Value Chain
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Print
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CRM
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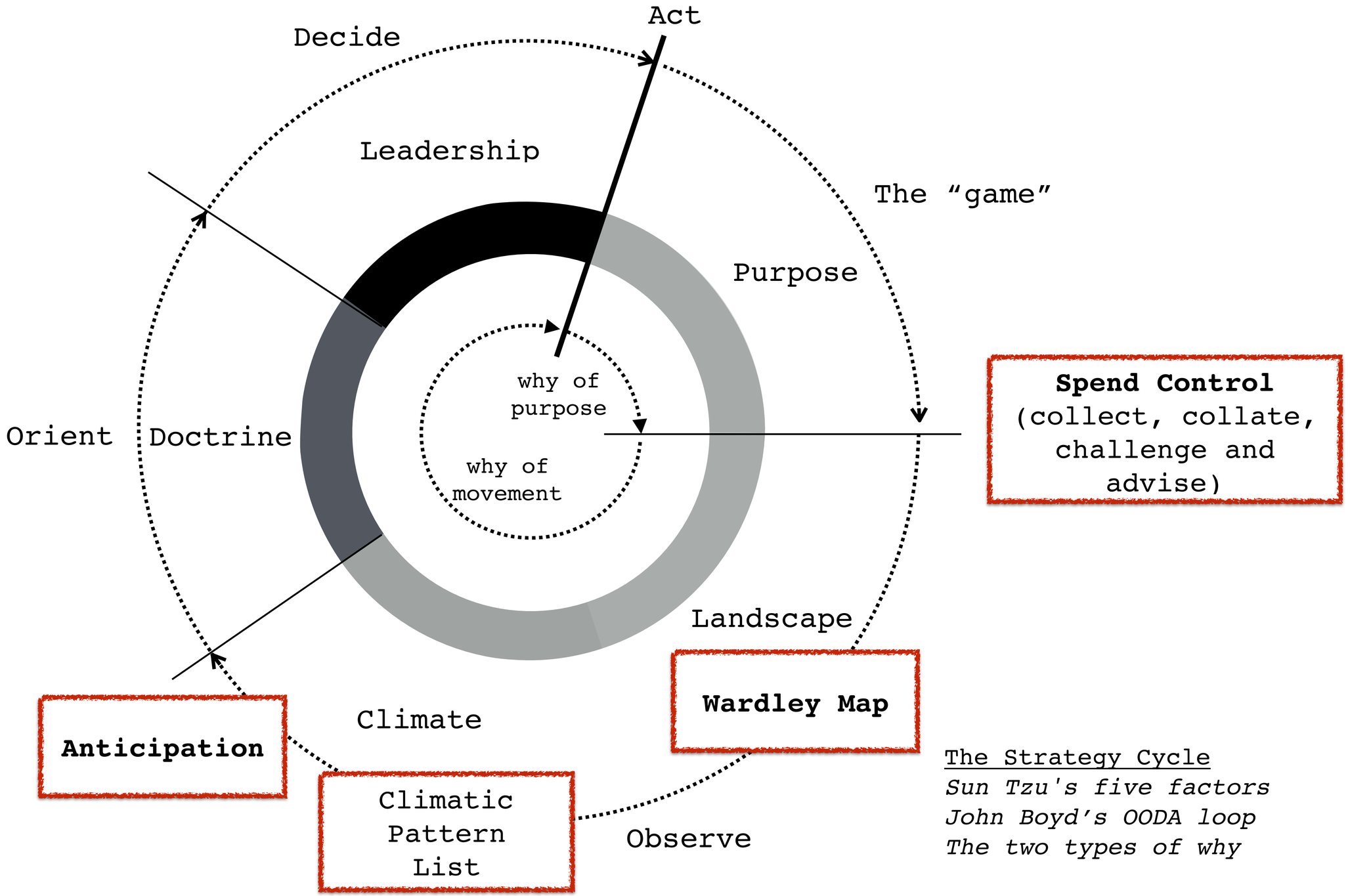
Data Centre
Power
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

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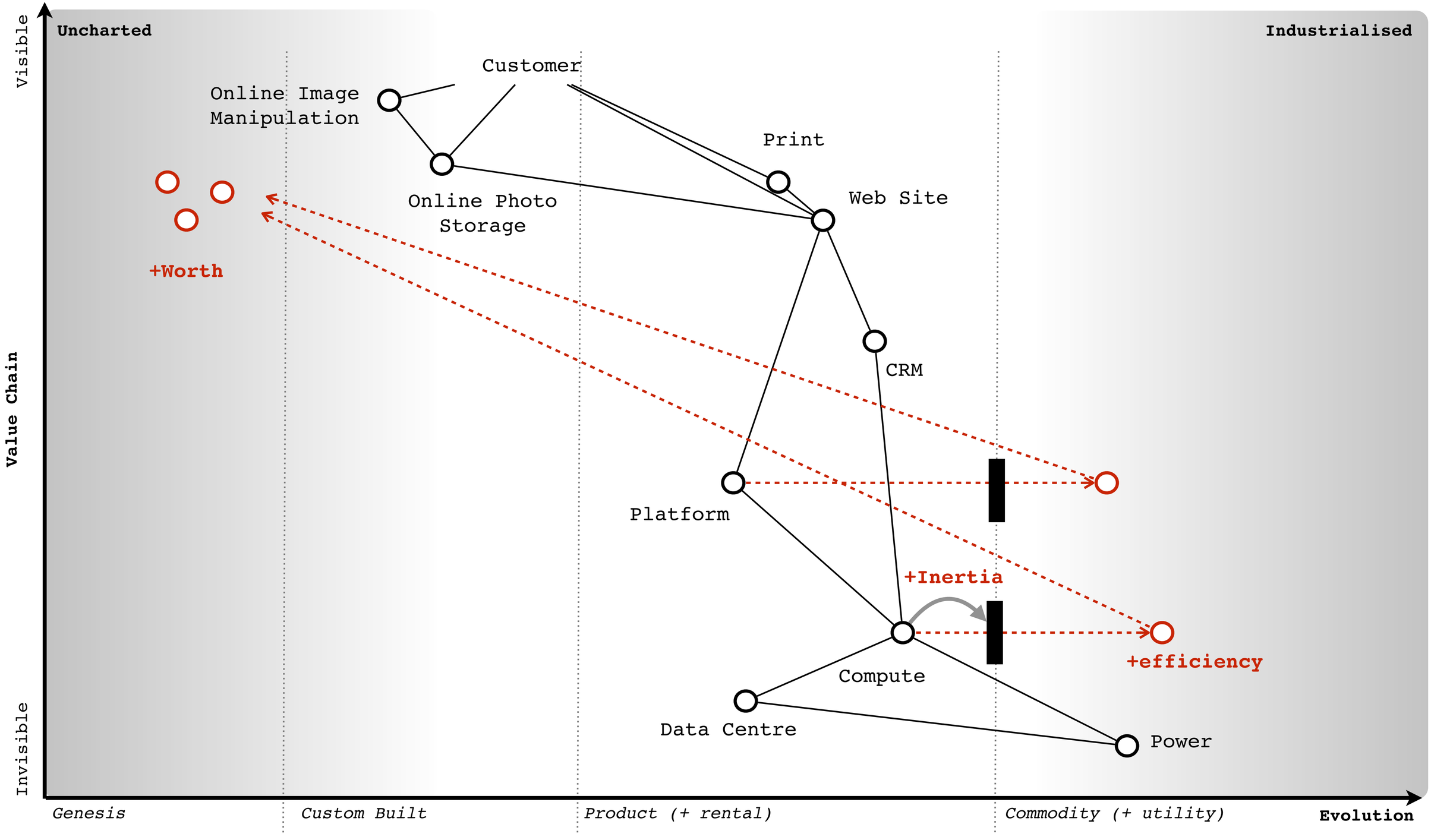
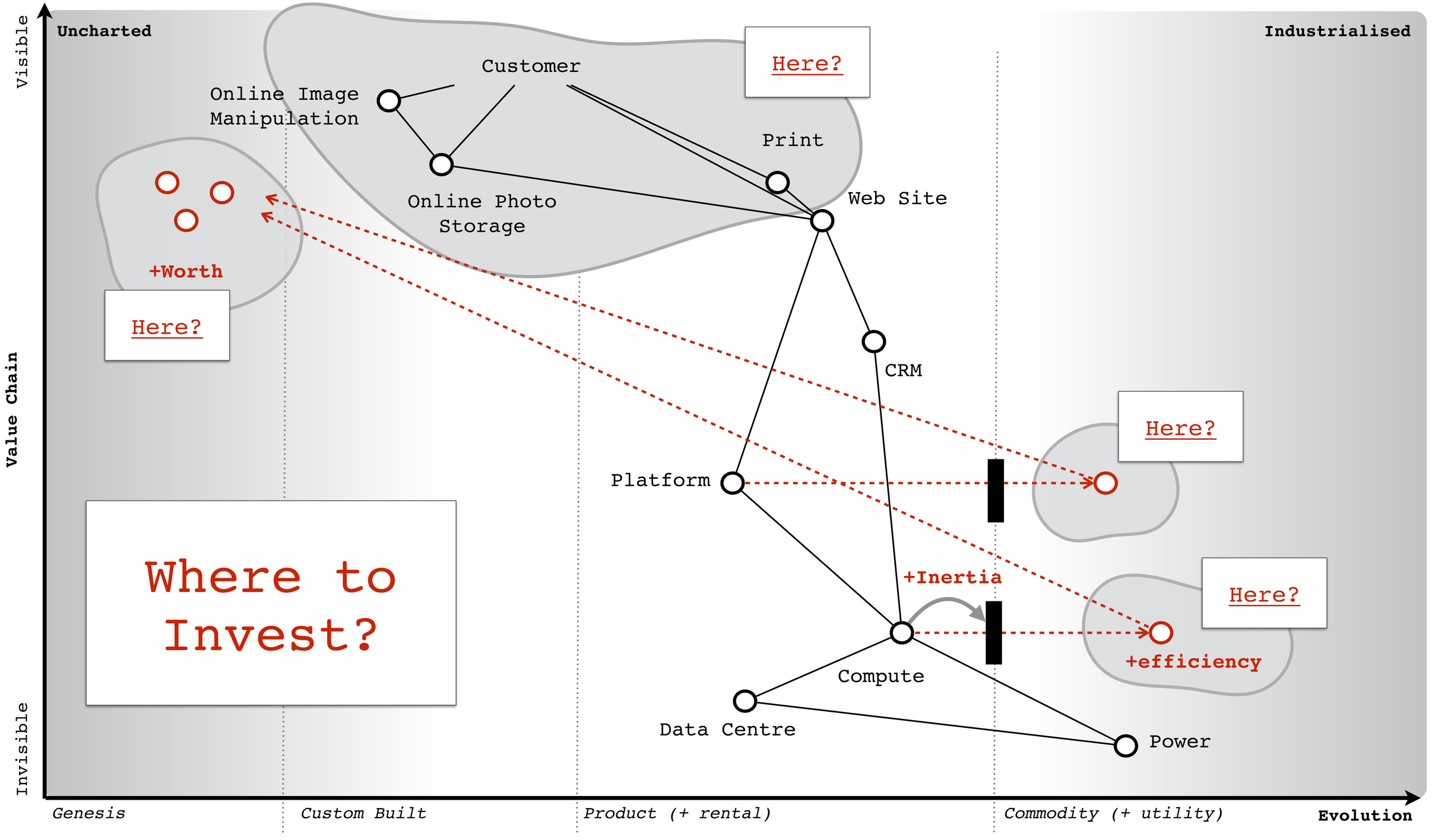
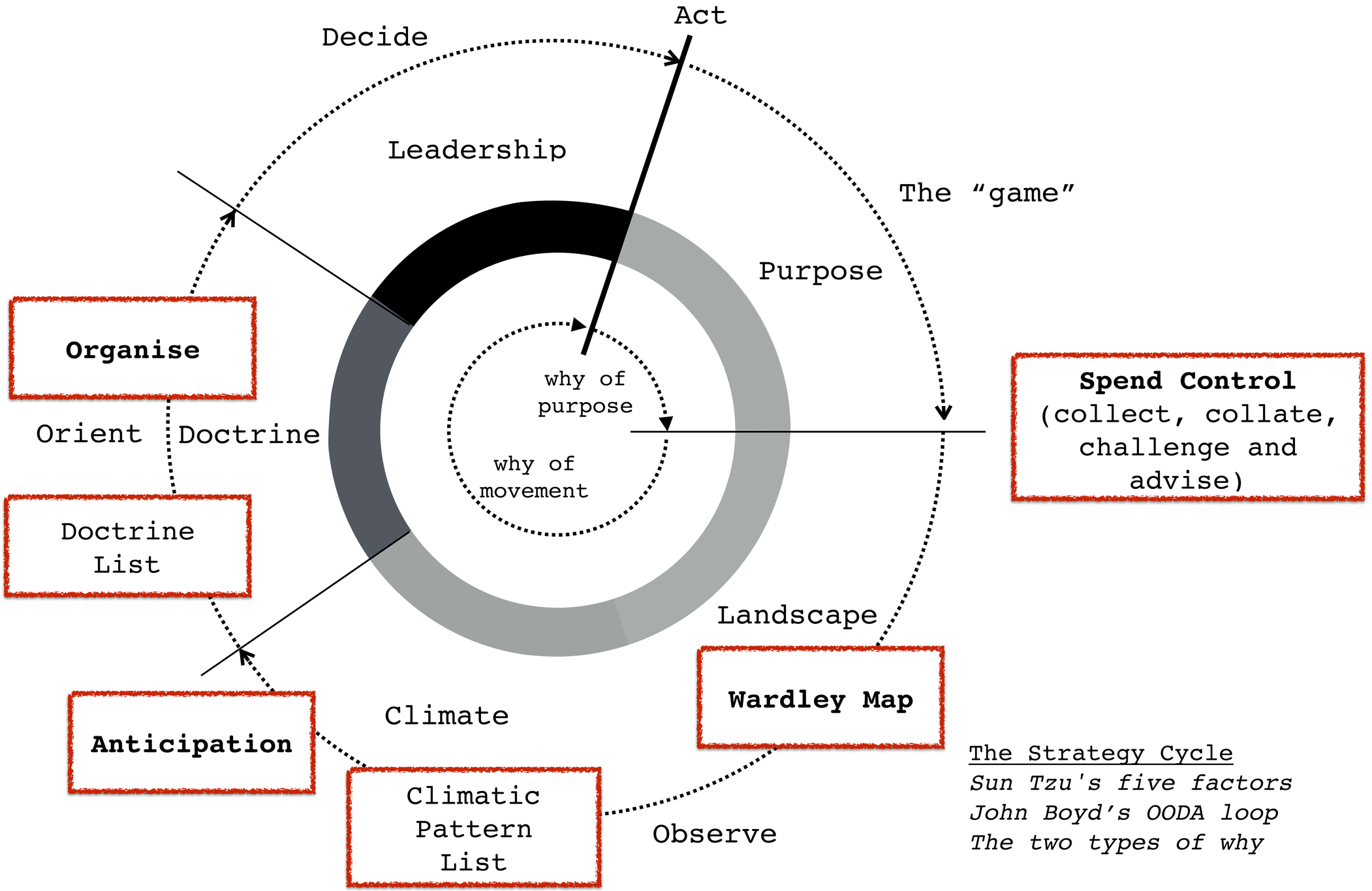
| | | | | |
|---|---|---|---|---|
| *Components* | Everything evolves through supply and demand competition | Rates of evolution can vary by ecosystem *(e.g. consumer vs industrial)* | Characteristics change as components evolve *(Salaman & Storey)* | No choice over evolution *(Red Queen)* |
| | No single method fits all *(e.g. in development or purchasing)* | Components can co-evolve *(e.g. practice with activity)* | Evolution consists of multiple waves of diffusion with many chasms. | Commoditisation <> Centralisation |
| *Financial* | Higher order systems create new sources of value | Efficiency does not mean a reduced spend *(Jevon's Paradox)* | Capital flows to new areas of value | Creative Destruction *(Joseph Schumpeter)* |
| | Future value is inversely proportional to the certainty we have over it. | Evolution to higher order systems results in increasing local order and energy consumption | | |
| *Speed* | Efficiency enables innovation | Evolution of communication mechanisms can increase the speed of evolution overall and the diffusion of a single example of change | Increased stability of lower order systems increases agility & speed of re-combination | Change is not always linear (discontinuous & exponential change exists) |
| | Shifts from product to utility tend to demonstrate a punctuated equilibrium | | | |
| *Inertia* | Success breeds inertia | Inertia can kill an organisation | Inertia increases the more successful the past model is | |
| *Competitors* | Competitors actions will change the game | Most competitors have poor situational awareness | | |
| *Prediction* | Not everything is random *(p[what] vs p[when])* | Economy has cycles *(peace, war and wonder)* | Two different forms of disruption *(predictable vs non-predictable)* | A "war" (point of industrialisation) causes organisations to evolve |
| | You cannot measure evolution over time or adoption, you need to embrace uncertainty. | The less evolved something is then the more uncertain it becomes | | |


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
+Worth
Platform
+Inertia
Compute
Data Centre
Power
+efficiency
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Visible
Invisible
Value Chain
Uncharted
Industrialised
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution
Customer
Here?
Online Image Manipulation
Print
Online Photo Storage
Web Site
+Worth
Here?
CRM
Here?
Platform
+Inertia
Here?
+efficiency
Compute
Data Centre
Power
Where to Invest?

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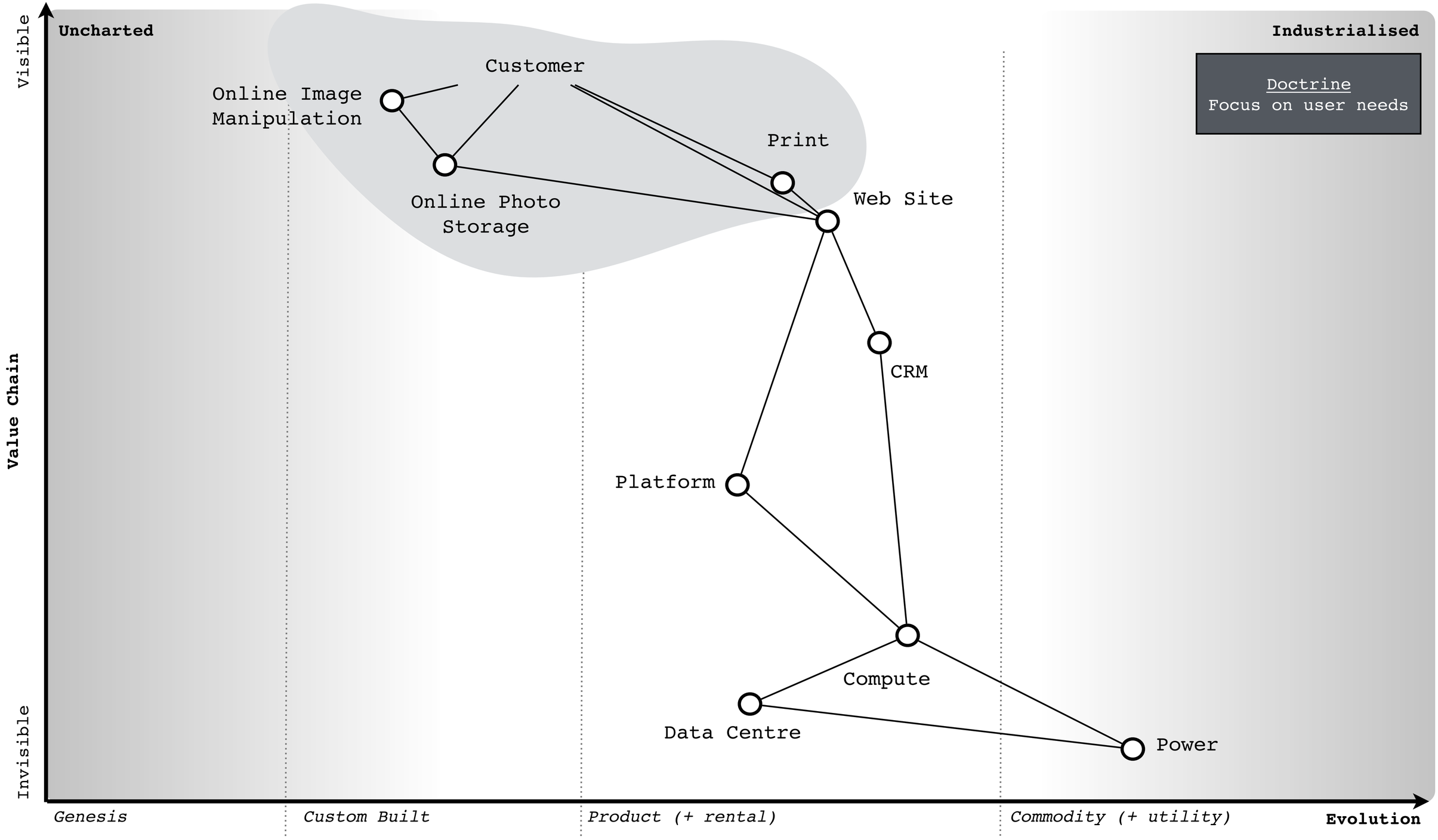
| | Exploit the landscape | | | |


Uncharted
Industrialised
Visible
Invisible
Value Chain
Doctrine
Focus on user needs
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
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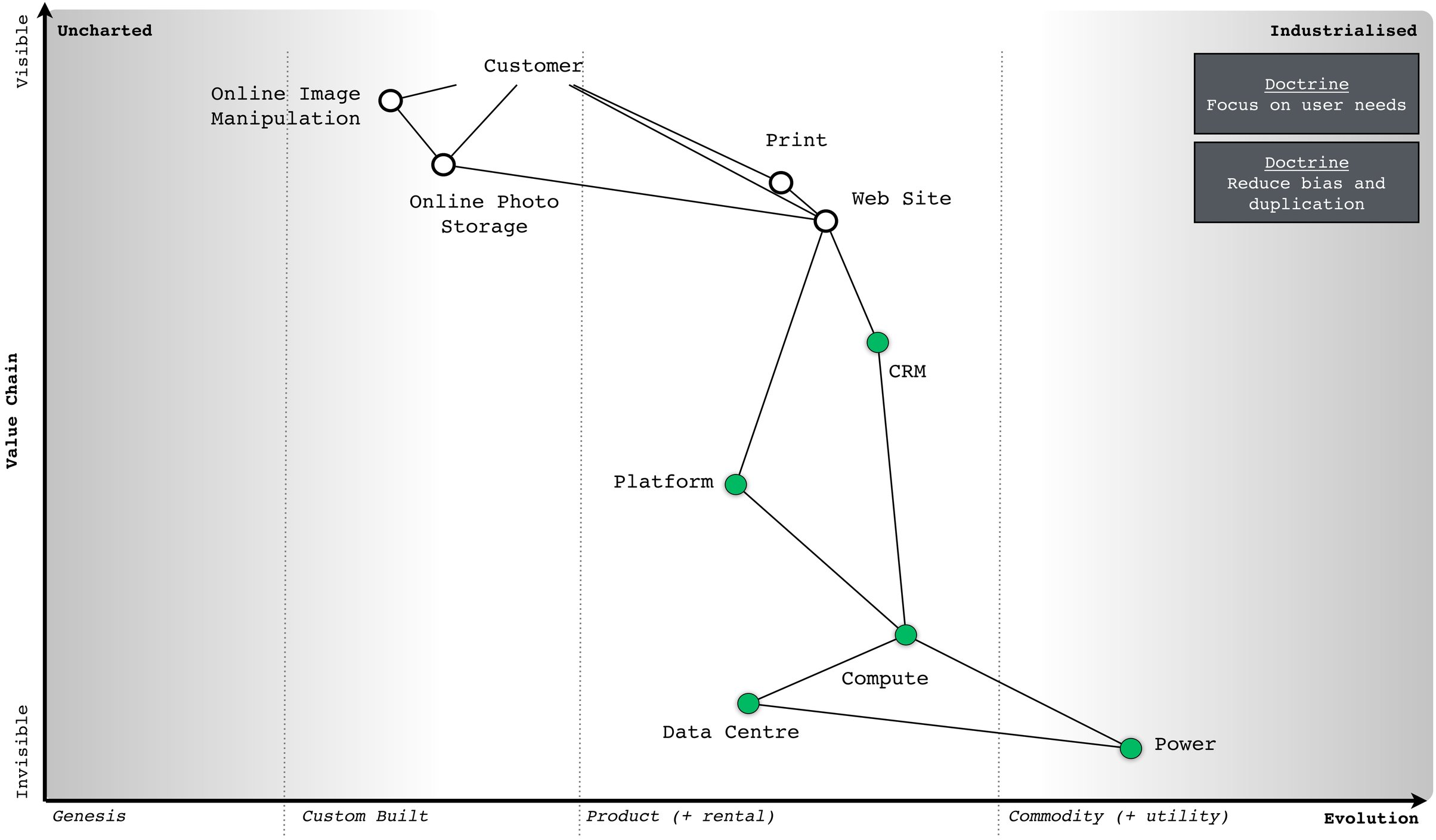
Compute
Data Centre
Power
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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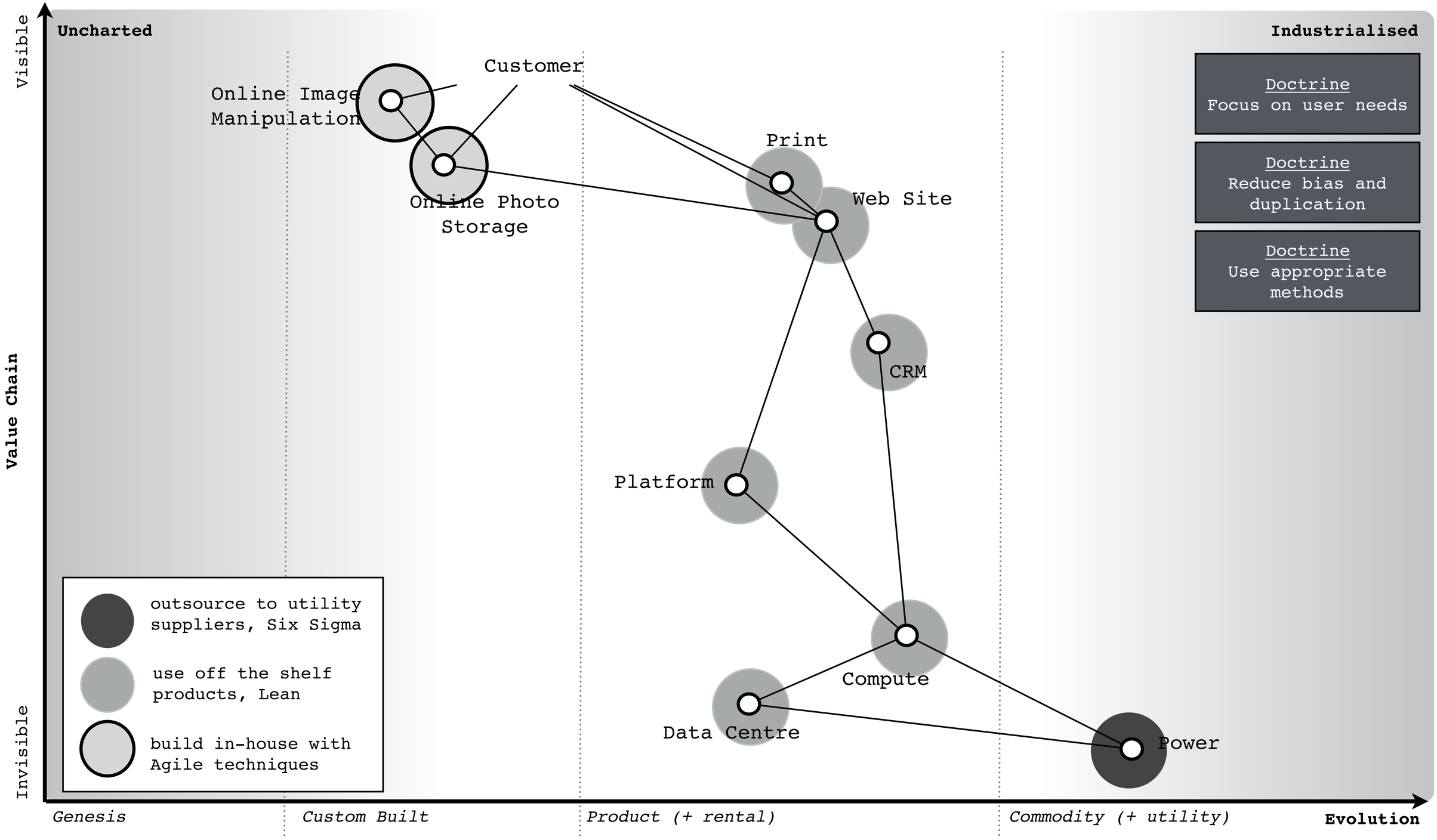
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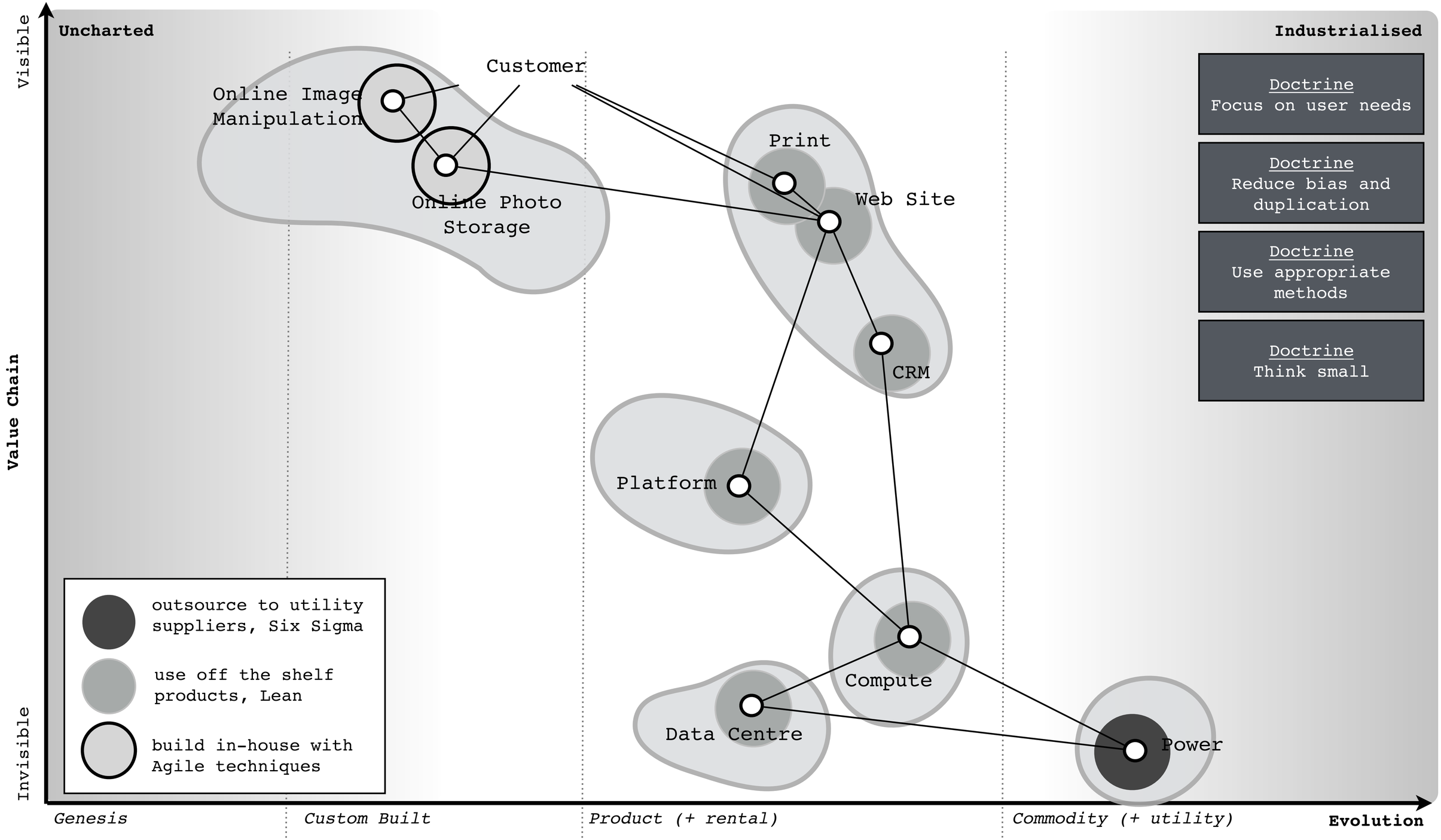
Doctrine
Focus on user needs
Doctrine
Reduce bias and duplication
Doctrine
Use appropriate methods
outsource to utility suppliers, Six Sigma
use off the shelf products, Lean
build in-house with Agile techniques
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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Visible
Invisible
Value Chain
Evolution
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Customer
Online Image Manipulation
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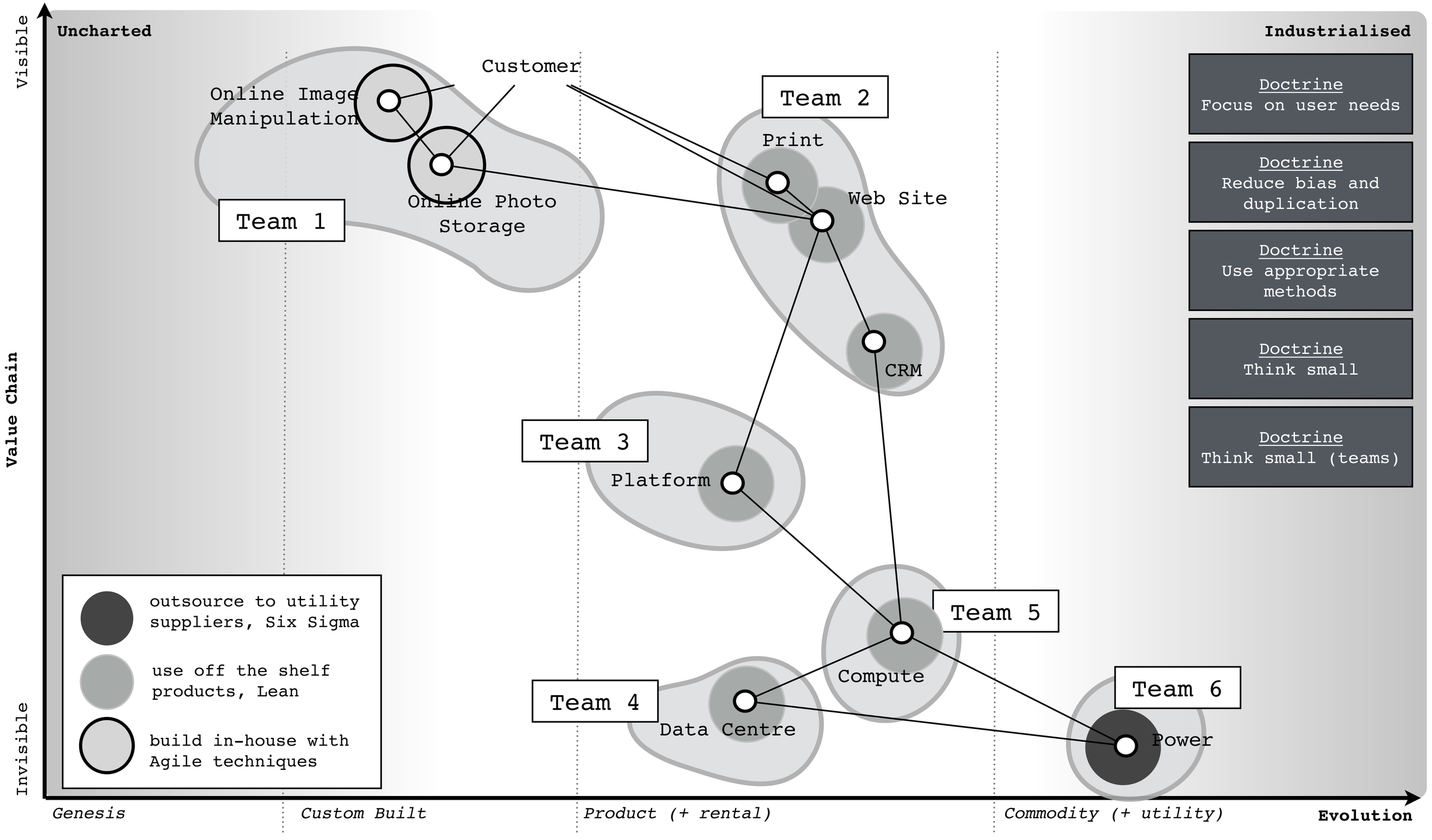
Doctrine
Reduce bias and duplication
Doctrine
Use appropriate methods
Doctrine
Think small
outsource to utility suppliers, Six Sigma
use off the shelf products, Lean
build in-house with Agile techniques


Visible
Invisible
Value Chain
Uncharted
Industrialised
Customer
Online Image Manipulation
Online Photo Storage
Team 1
Team 2
Print
Web Site
CRM
Team 3
Platform
Team 4
Data Centre
Team 5
Compute
Team 6
Power
Doctrine
Focus on user needs
Doctrine
Reduce bias and duplication
Doctrine
Use appropriate methods
Doctrine
Think small
Doctrine
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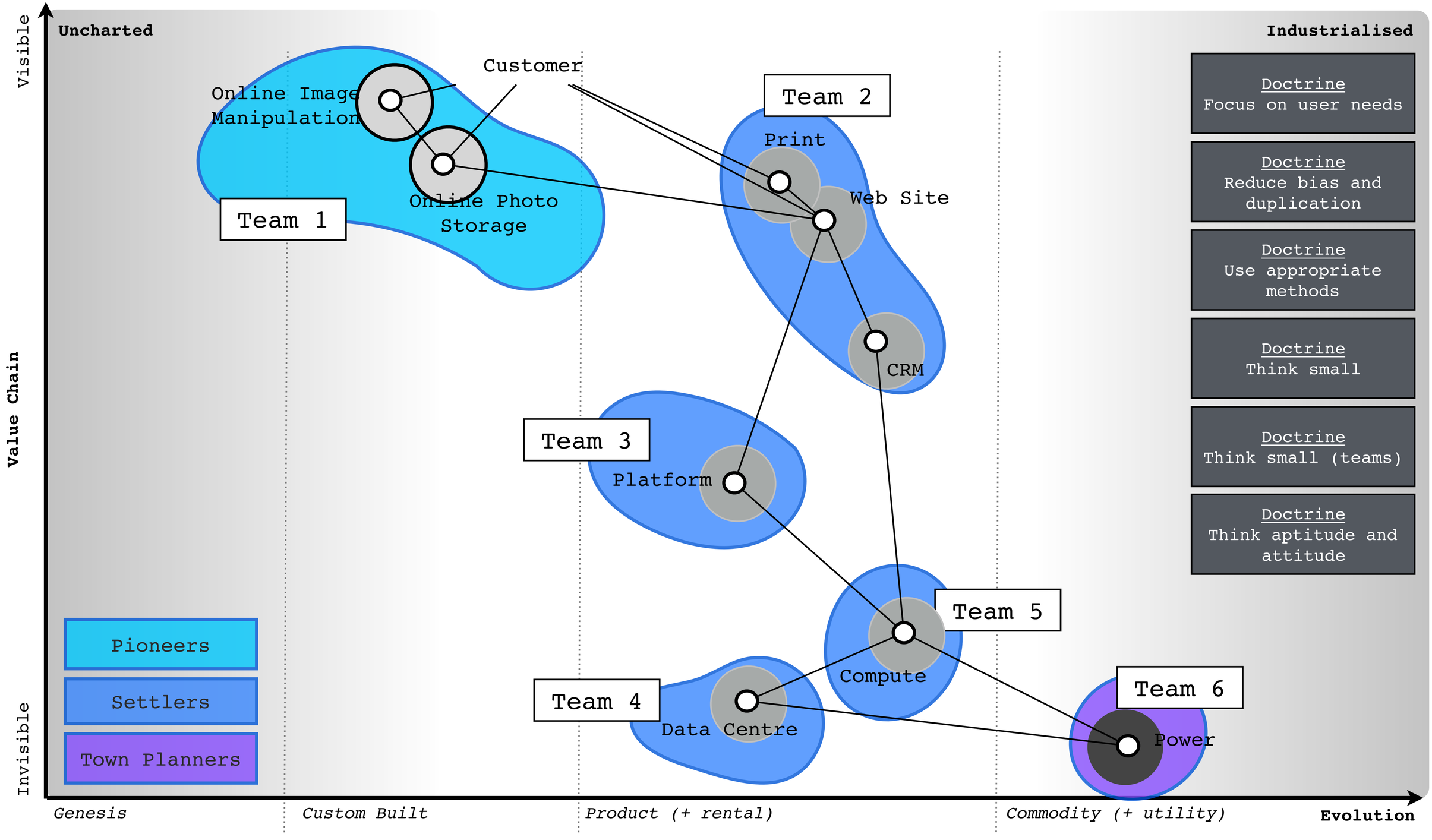
build in-house with Agile techniques
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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Data Centre
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Team 6
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Doctrine
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Doctrine
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Doctrine
Think small
Doctrine
Think small (teams)
Doctrine
Think aptitude and attitude
Pioneers
Settlers
Town Planners
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Product (+ rental)
Commodity (+ utility)
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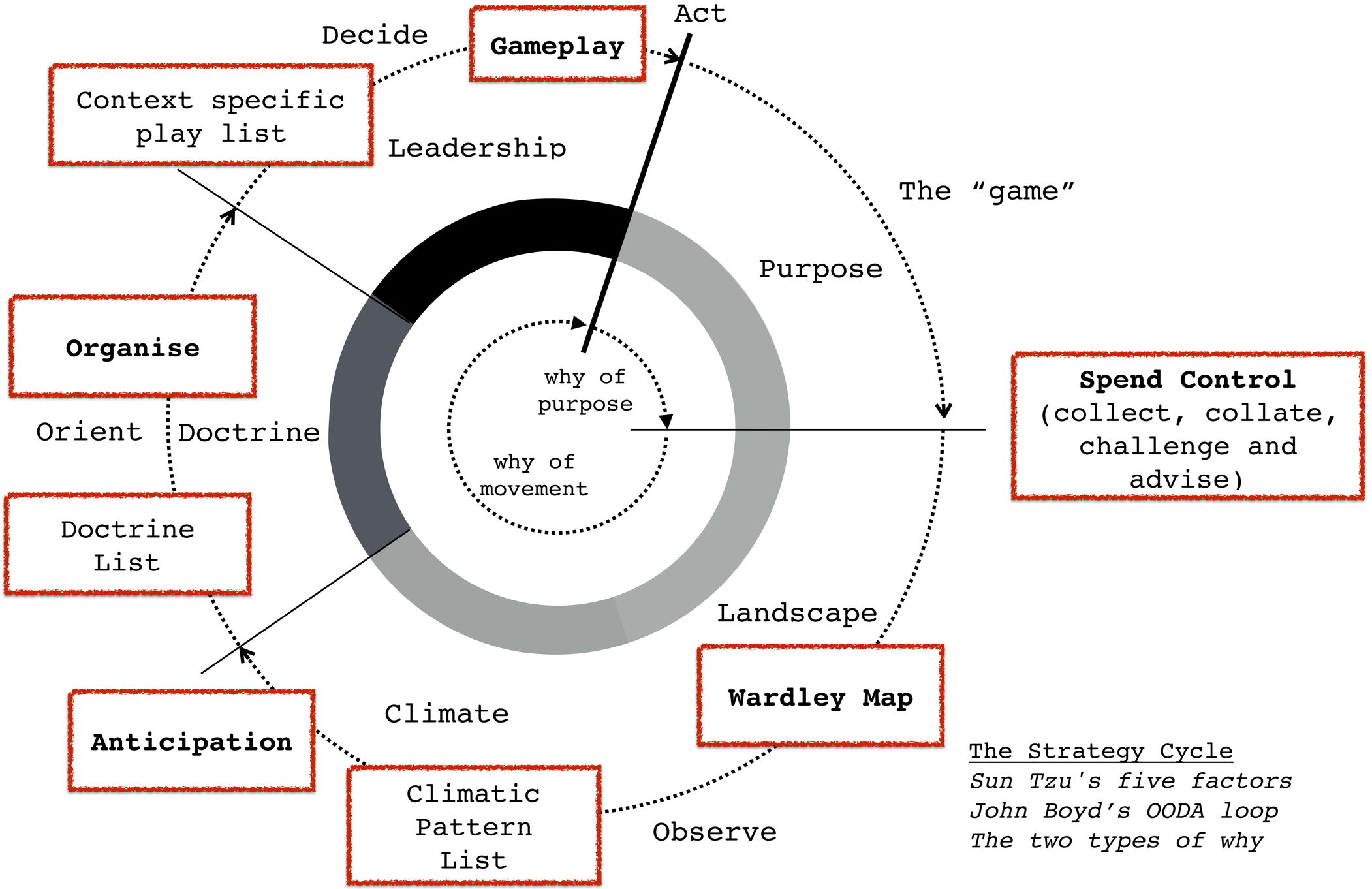
Phase I
Phase II
Phase III
Phase IV



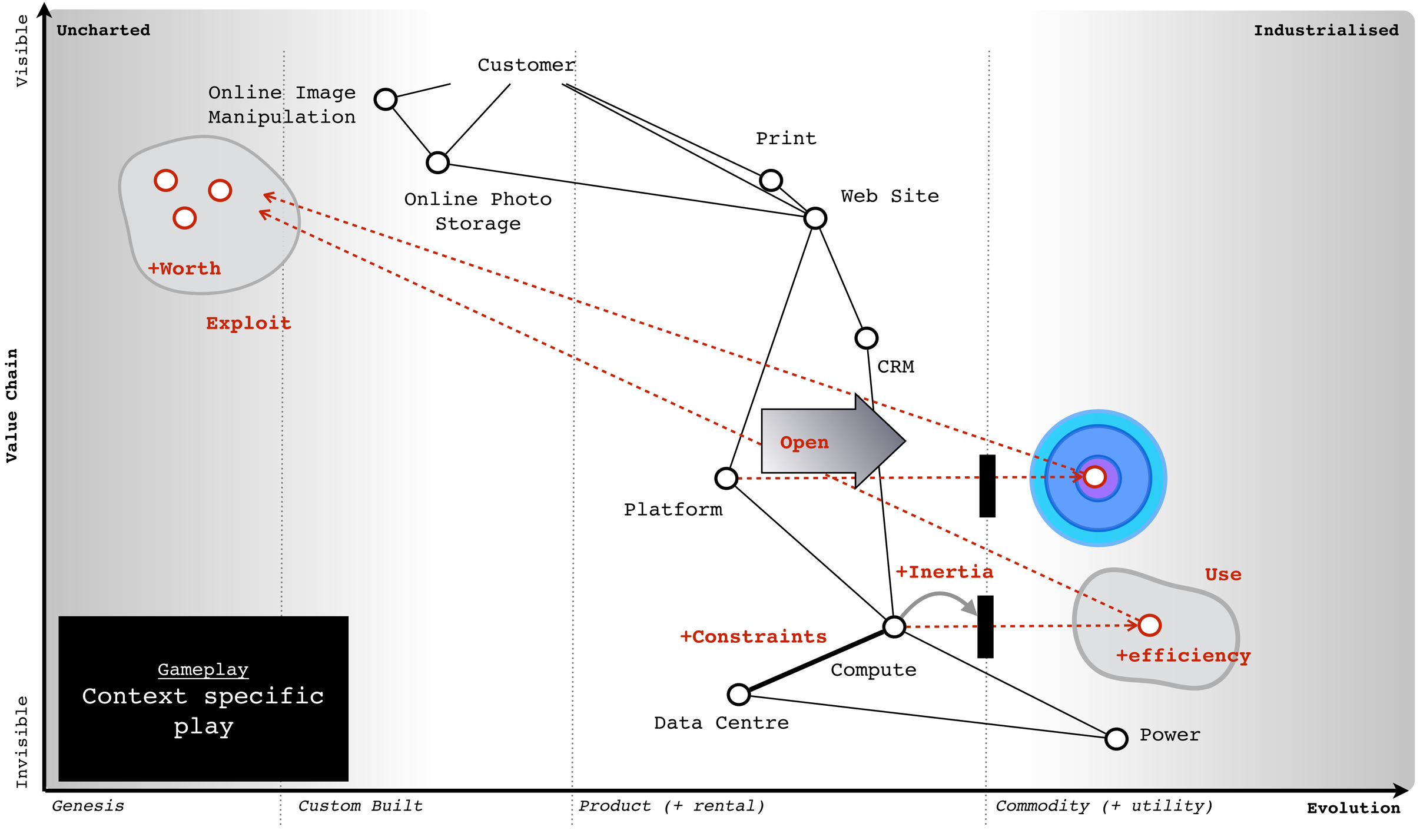

The Strategy Cycle

*Sun Tzu's five factors*

*John Boyd's OODA loop*

*The two types of why*

| | | | | |
|---|---|---|---|---|
| *User Perception* | Education | Bundling | Creating artificial needs | Confusion of choice |
| | Brand and marketing | Fear, uncertainty and doubt | Artificial competition | Lobbying / counterplay |
| *Accelerators* | Market enablement | Open approaches | Exploiting network effects | Co-operation |
| | Industrial policy | | | |
| *De-accelerators* | Exploiting constraint | IPR | Creating constraints | |
| *Dealing with toxicity* | Pig in a poke | Disposal of liability | Sweat and dump | Refactoring |
| *Market* | Differentiation | Pricing policy | Buyer / supplier power | Harvesting |
| | Standards game | Last man standing | Signal distortion | Trading |
| *Defensive* | Threat acquisition | Raising barriers to entry | Procrastination | Defensive regulation |
| | Limitation of competition | Managing inertia | | |
| *Attacking* | Directed investment | Experimentation | Centre of gravity | Undermining barriers to entry |
| | Fool's mate | Press release process | Playing both sides | |
| *Ecosystem* | Alliances | Co-creation | Sensing Engines (ILC) | Tower and moat |
| | Two factor markets | Co-opting and intercession | Embrace and extend | Channel conflicts & disintermediation |
| *Competitor* | Ambush | Fragmentation play | Reinforcing competitor inertia | Sapping |
| | Misdirection | Restriction of movement | Talent raid | |
| *Positional* | Land grab | First mover | Fast follower | Weak signal / horizon |
| *Poison* | Licensing play | Insertion | Designed to fail | |


Uncharted
Industrialised
Visible
Invisible
Value Chain
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
+Worth
Exploit
Open
Platform
+Inertia
Use
+Constraints
+efficiency
Compute
Data Centre
Power
Gameplay
Context specific play
Genesis
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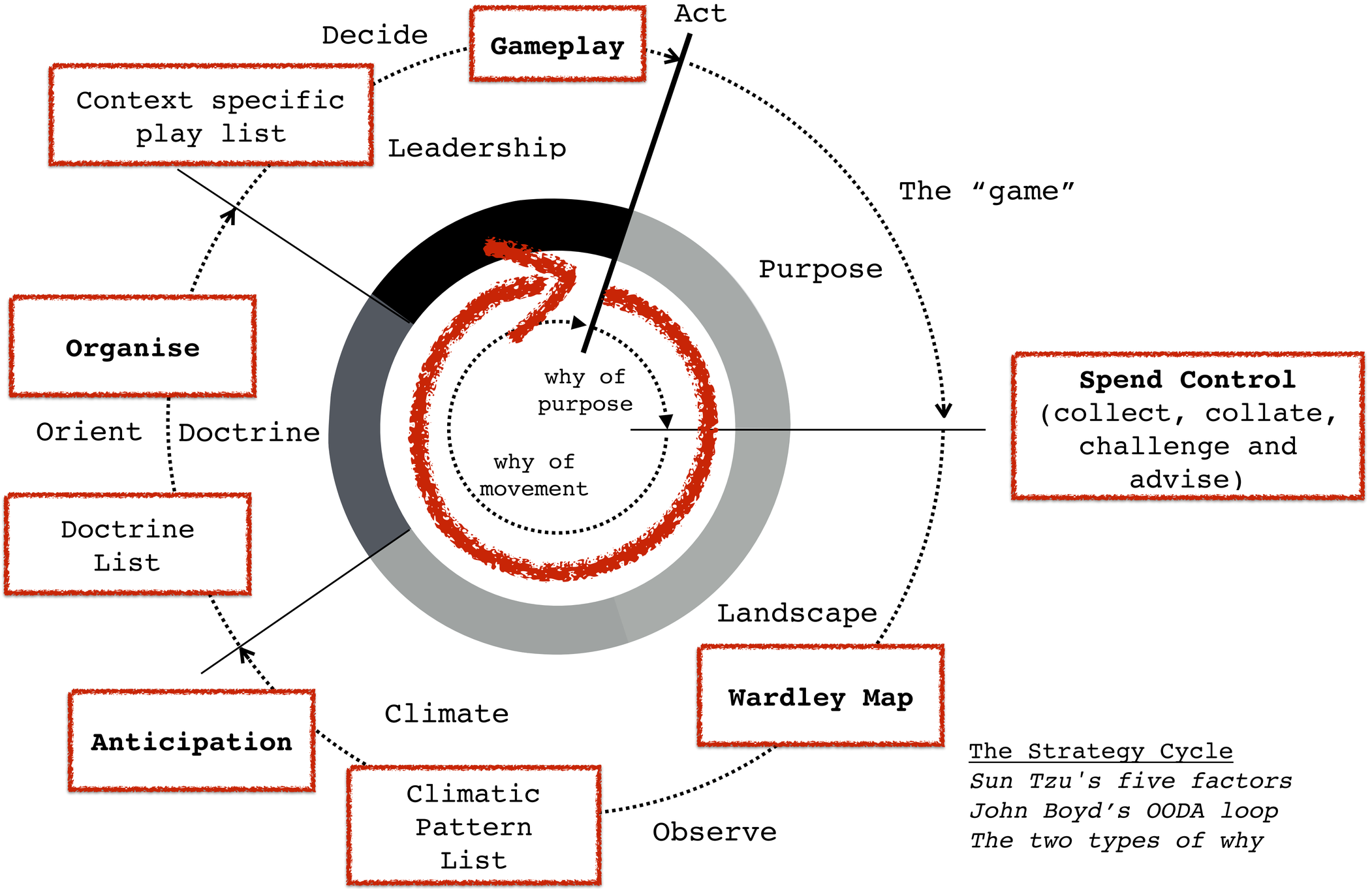
Product (+ rental)
Commodity (+ utility)
Evolution




The Strategy Cycle

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Getting Started

Competitor Analysis

Evolution

Flow

Weak Signals

Ecosystem

Type

Brexit

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Good
Neutral / unknown
Weak
Warning

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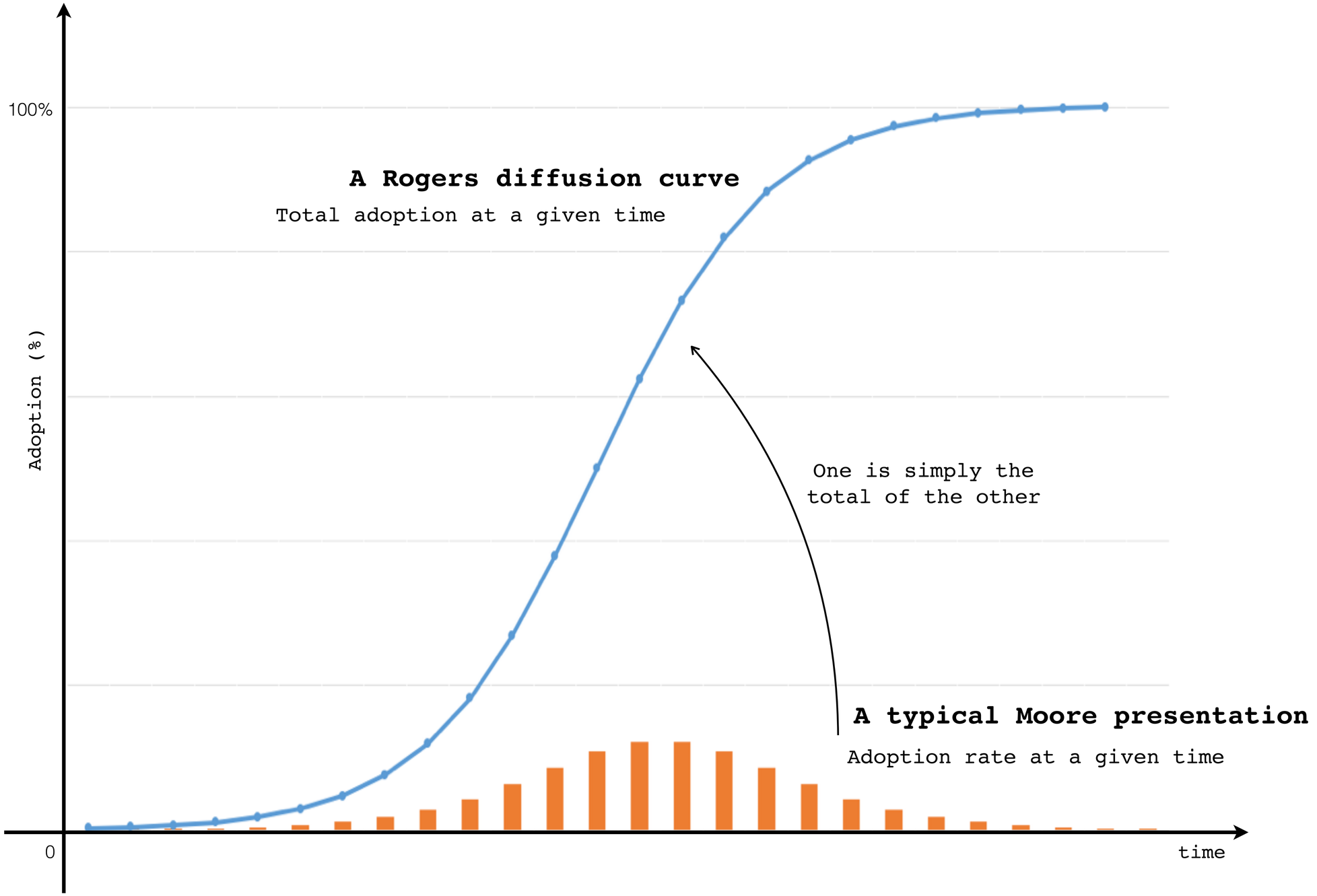
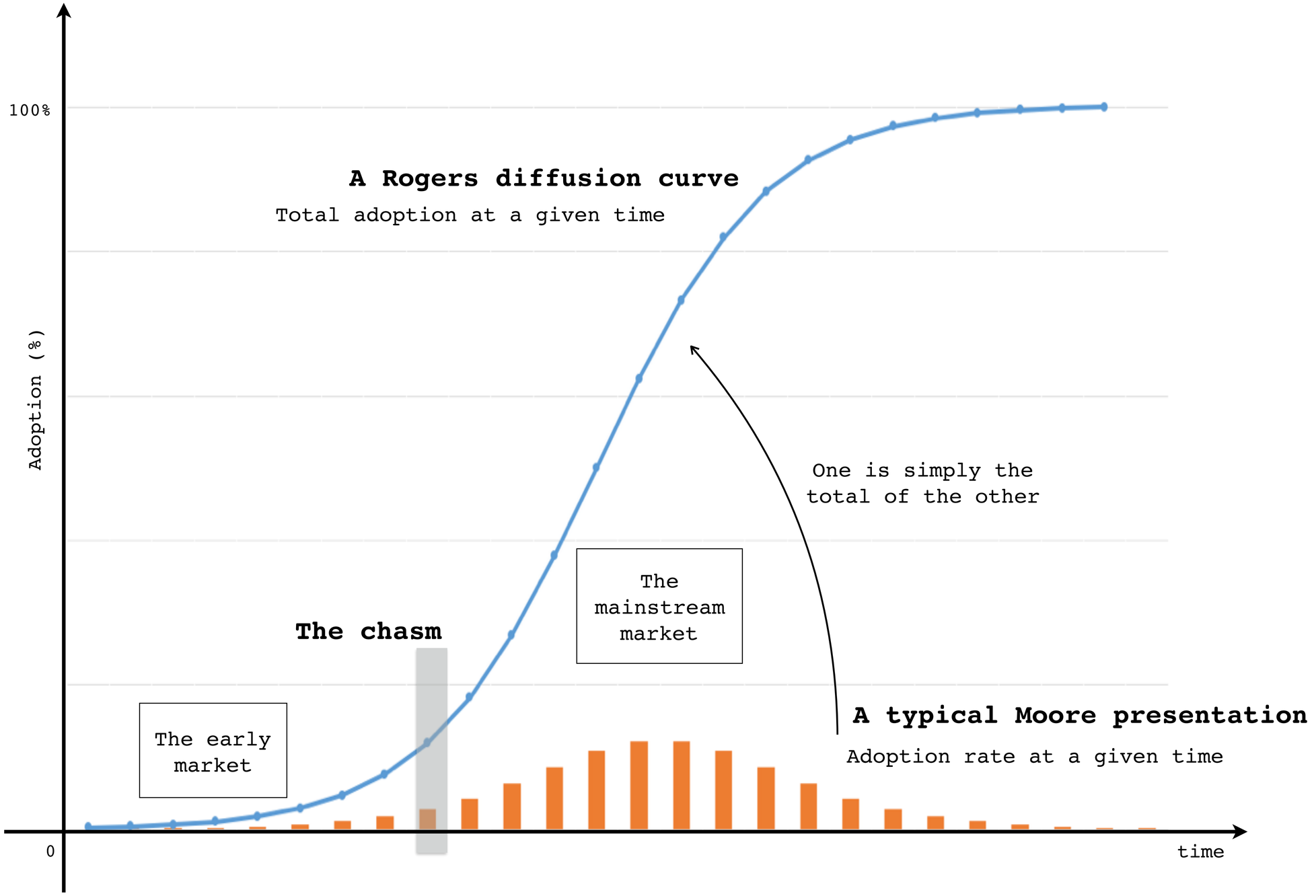
| *Structure* | Provide purpose, mastery & autonomy | Think small *(as in teams)* | Distribute power and decision making | Think aptitude and attitude |
| | Design for constant evolution | There is no one culture *(e.g. pioneers, settlers and town planners)* | Seek the best | |
| *Learning* | Use a systematic mechanism of learning *(a bias towards data)* | A bias towards action *(learn by playing the game)* | A bias towards the new *(be curious, take appropriate risks)* | Listen to your ecosystems *(acts as future sensing engines)* |
| *Leading* | Be the owner *(take responsibility)* | Move fast *(an imperfect plan executed today is better than a perfect plan executed tomorrow)* | Think big *(inspire others, provide direction)* | Strategy is iterative not linear *(fast reactive cycles)* |
| | Strategy is complex *(there will be uncertainty)* | Commit to the direction, be adaptive along the path *(crossing the river by feeling the stones)* | There is no core *(everything is transient)* | Be humble *(listen, be selfless, have fortitude)* |
| | Exploit the landscape | | | |

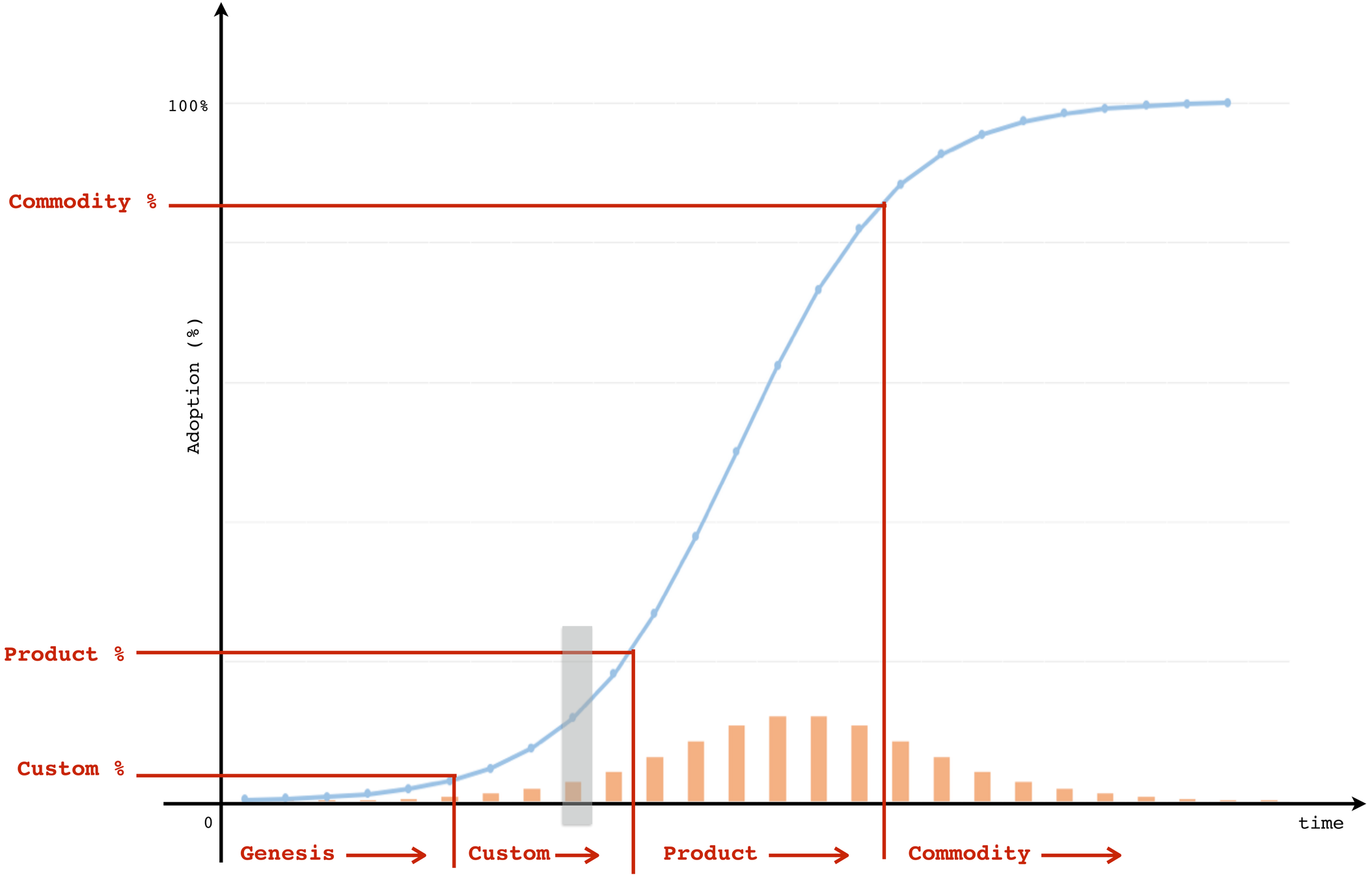
Good
Neutral / unknown
Weak
Warning

Getting Started
Competitor Analysis
Evolution
Flow
Weak Signals
Ecosystem
Type
Brexit

Evolution = Change = Movement

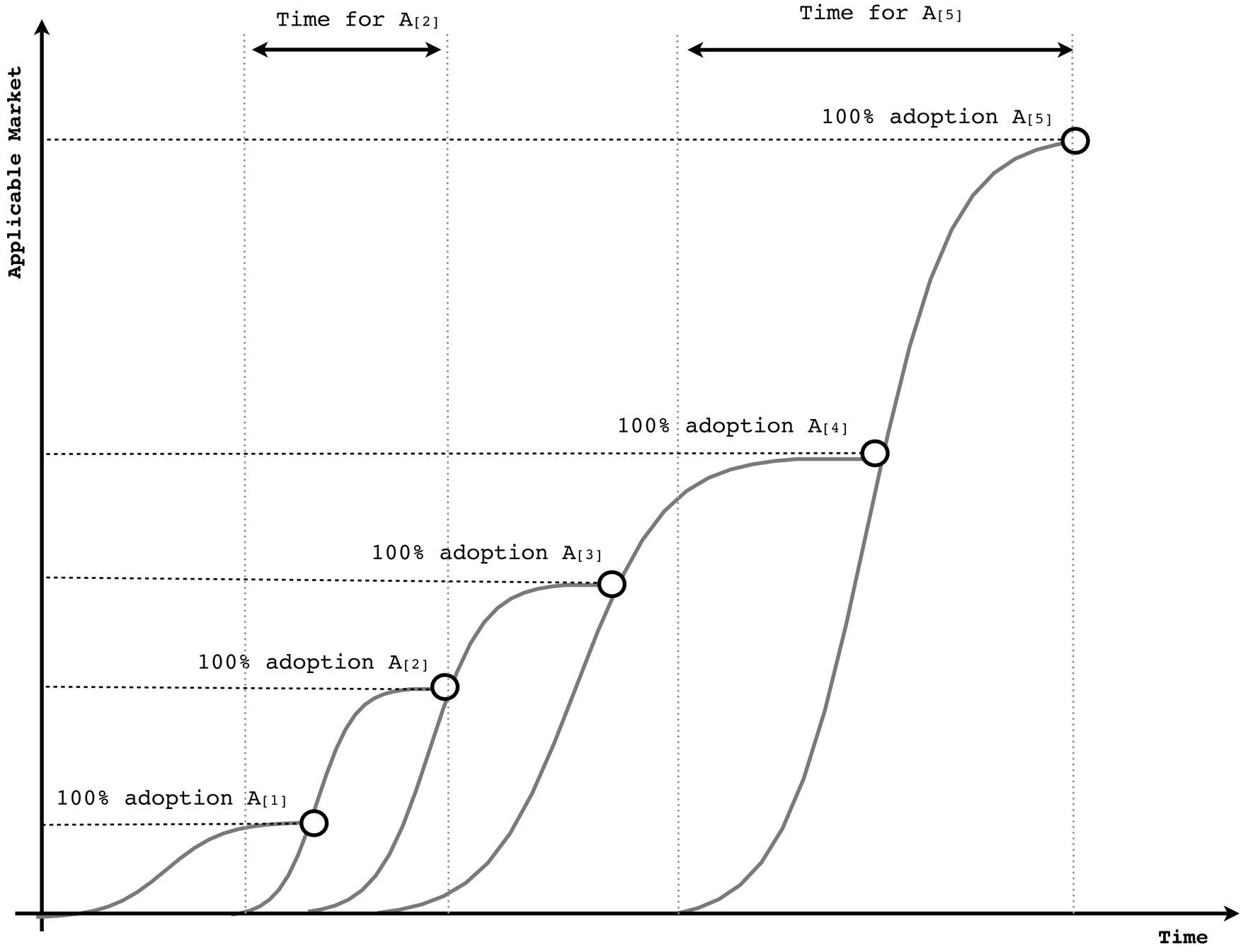

100%
Adoption (%)
A Rogers diffusion curve
Total adoption at a given time
One is simply the
total of the other
A typical Moore presentation
Adoption rate at a given time
0
time


100%
Adoption (%)
A Rogers diffusion curve
Total adoption at a given time
One is simply the
total of the other
The
mainstream
market
The chasm
The early
market
A typical Moore presentation
Adoption rate at a given time
0
time


100%
Commodity %
Adoption (%)
Product %
Custom %
0
time
Genesis
Custom
Product
Commodity

AT&T
9:42 AM
SMS
Text
Tuesday
9
Calendar
Photos
Camera
YouTube
Stocks
Maps
73°
Weather
Clock
Calculator
Notes
Settings
iTunes
App Store
Phone
Mail
Safari
iPod

valcambi
suisse
1kg
999,9
Fine Gold
AA00001


Time for A[2]
Time for A[5]
Applicable Market
100% adoption A[5]
100% adoption A[4]
100% adoption A[3]
100% adoption A[2]
100% adoption A[1]
Time

# THE TELEPHONE

*and How We Use It*

BELL TELEPHONE SYSTEM



## HOW TO TALK ON THE TELEPHONE

When using the telephone, hold the receiver close to your ear. The receiver is the end without the cord.

Talk directly into the mouthpiece.

This way.

Not this way.

Not this way.

Speak in a natural, clear voice.

You do not have to shout. Speak as though the other person were in the same room.

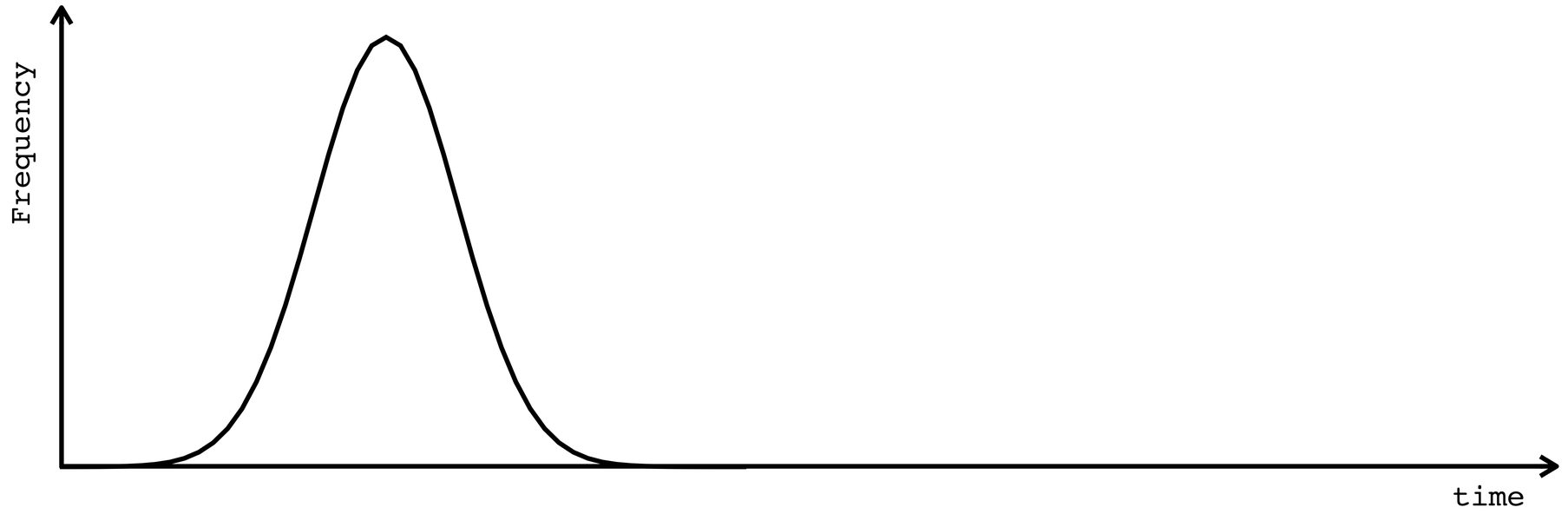
This Room Is Equipped With

# Edison Electric Light.

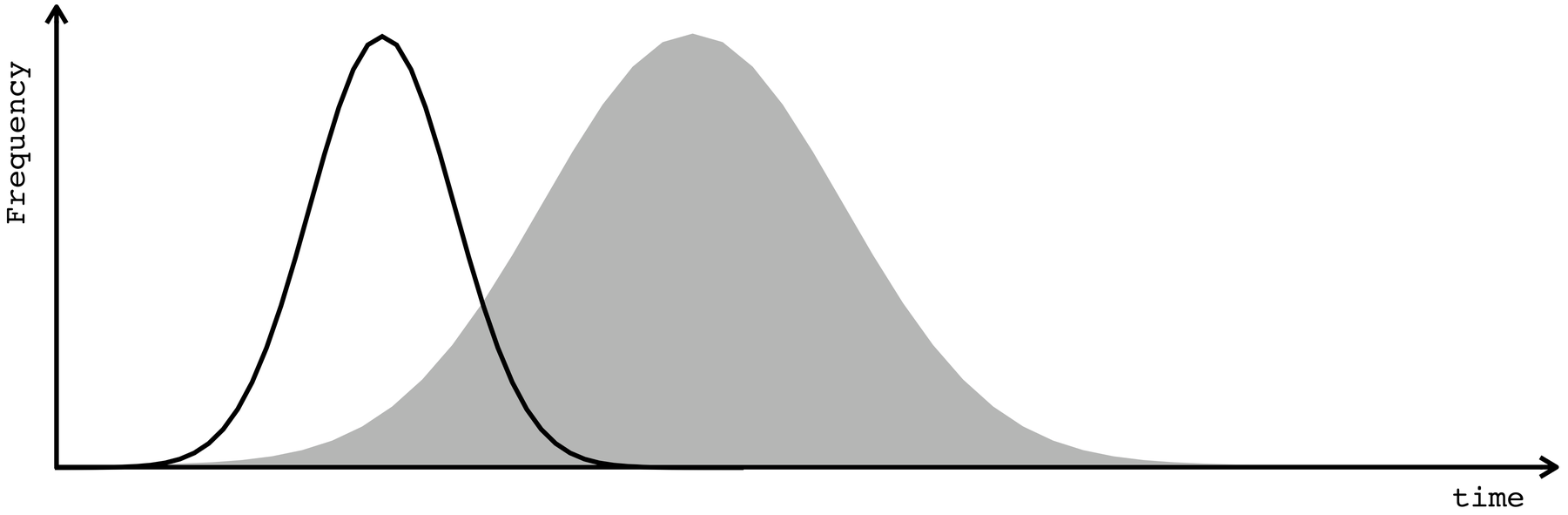
**Do not attempt to light with match. Simply turn key on wall by the door.**

The use of Electricity for lighting is in no way harmful to health, nor does it affect the soundness of sleep.

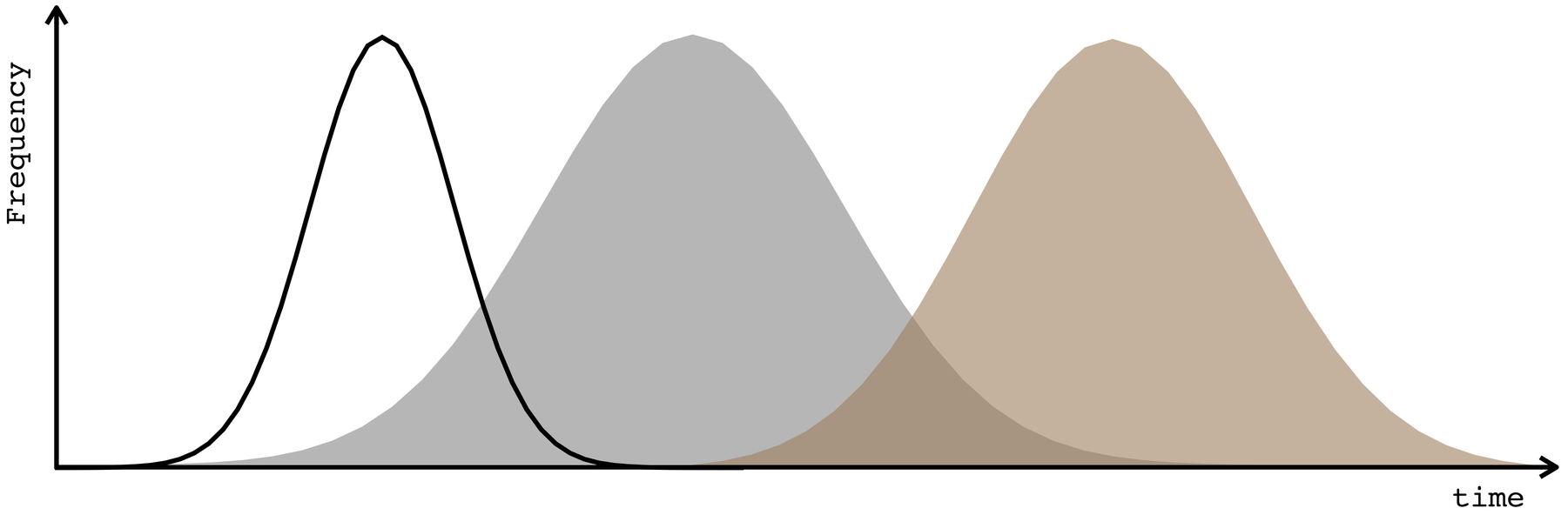
| Stage | I |
| --- | --- |
| Publication Type | **Wonder** |



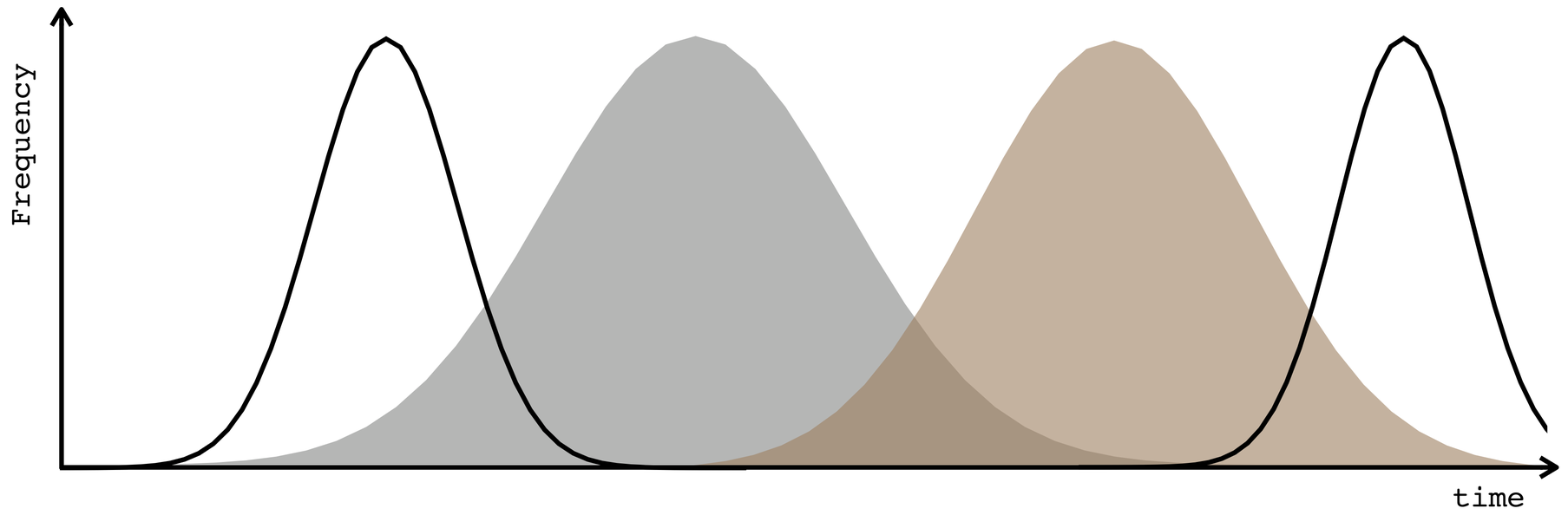
| Stage | I | II (key) |
| --- | --- | --- |
| Publication Type | **Wonder** | **building, construction** and **awareness** |



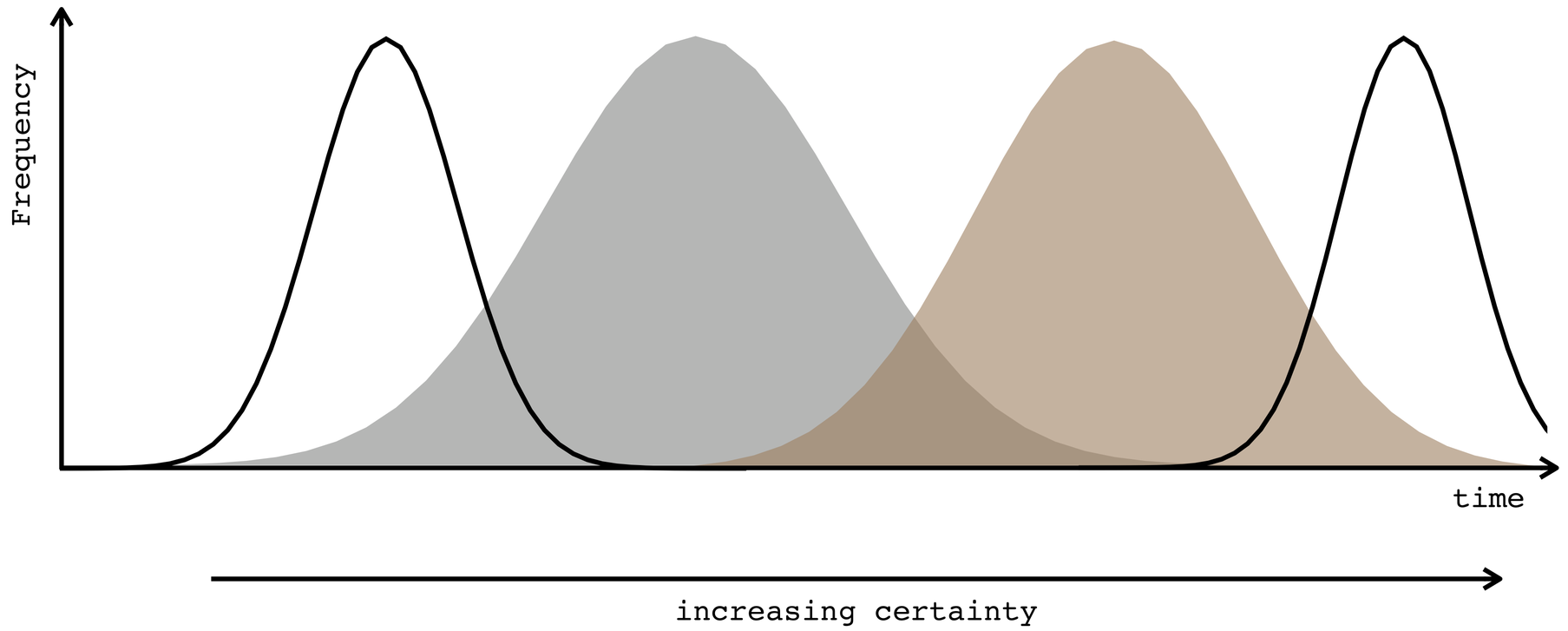
| Stage | I | II (key) | III (key) |
|---|---|---|---|
| Publication Type | **Wonder** | **building, construction** and **awareness** | **operation, maintenance** and **feature differences** |



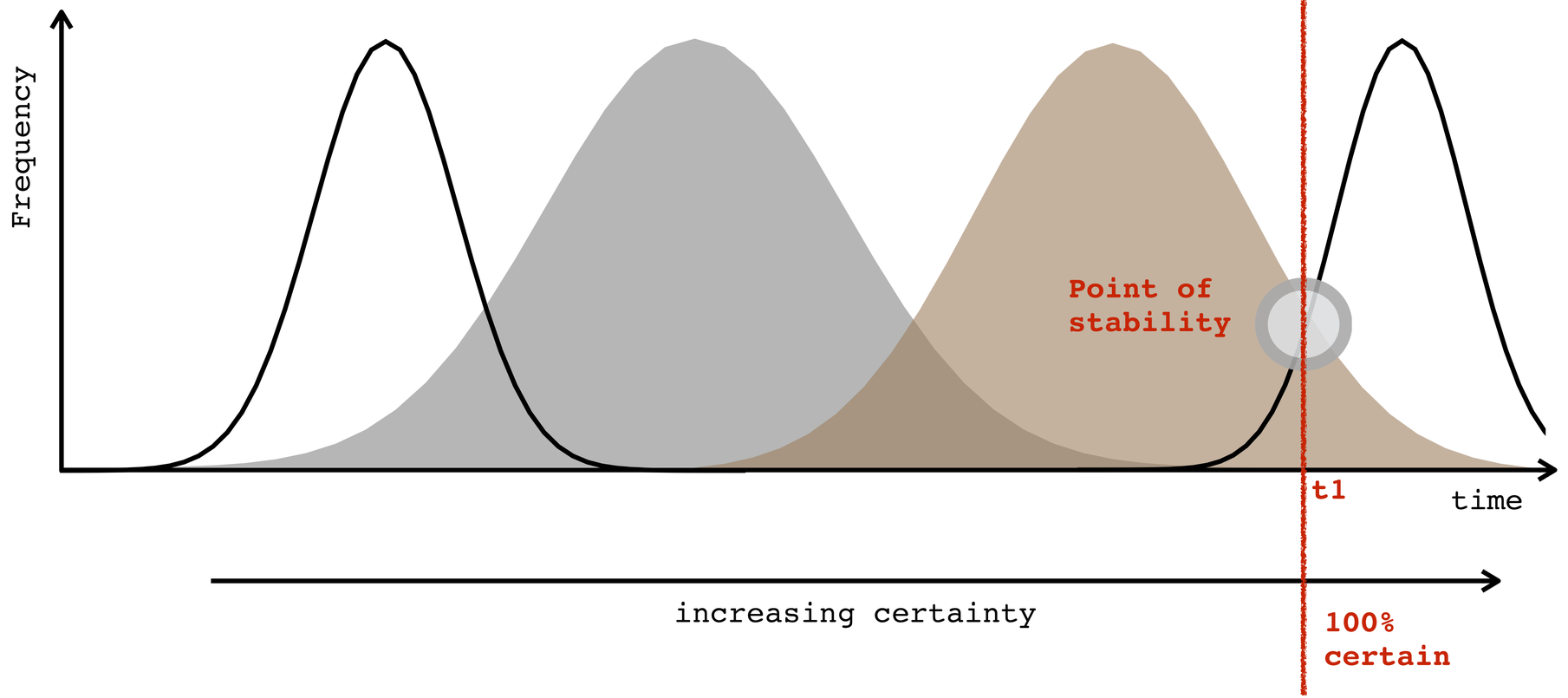
| Stage | I | II (key) | III (key) | IV |
|---|---|---|---|---|
| Publication Type | **Wonder** | **building, construction** and **awareness** | **operation, maintenance** and **feature differences** | **use** |

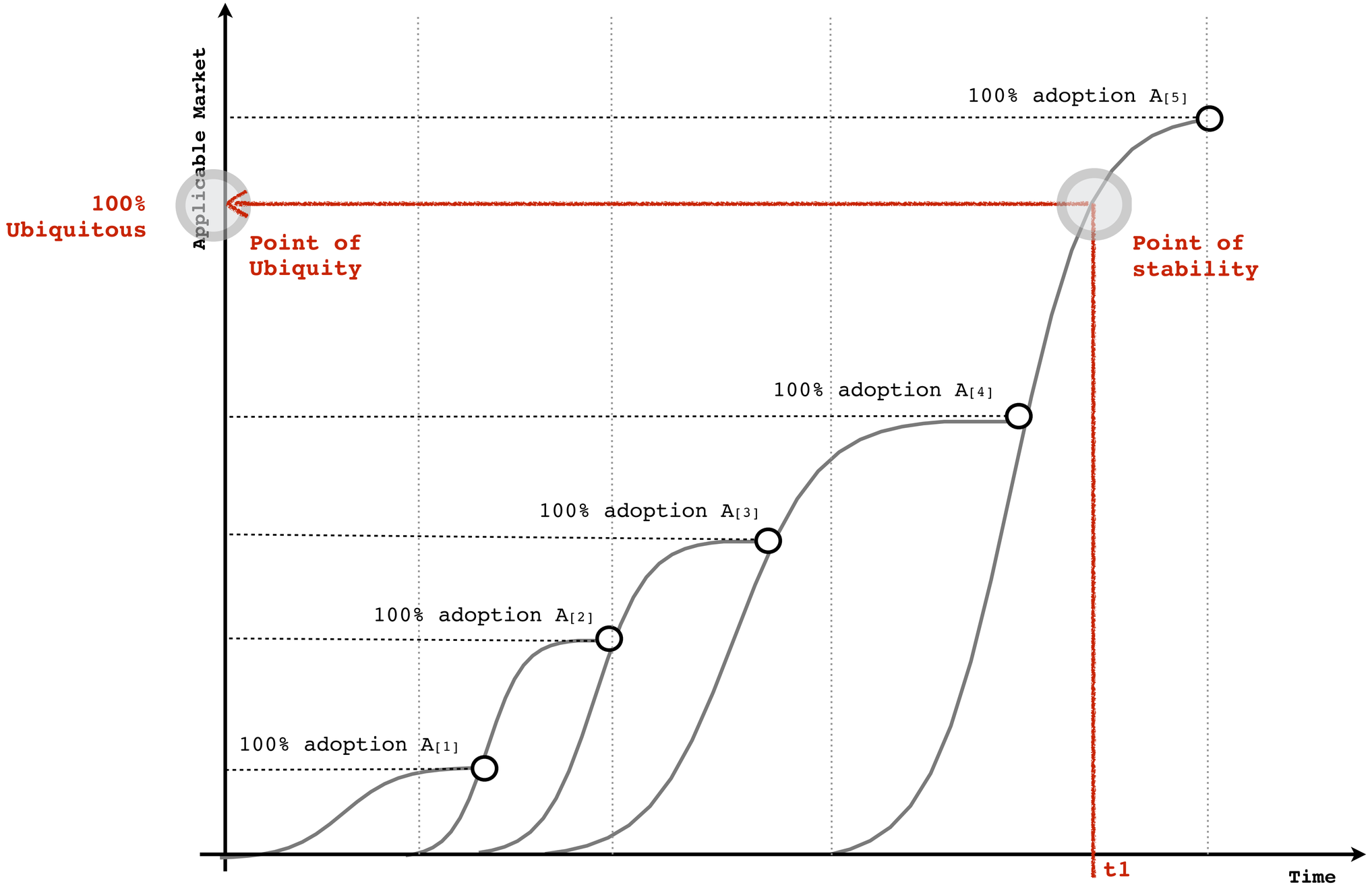


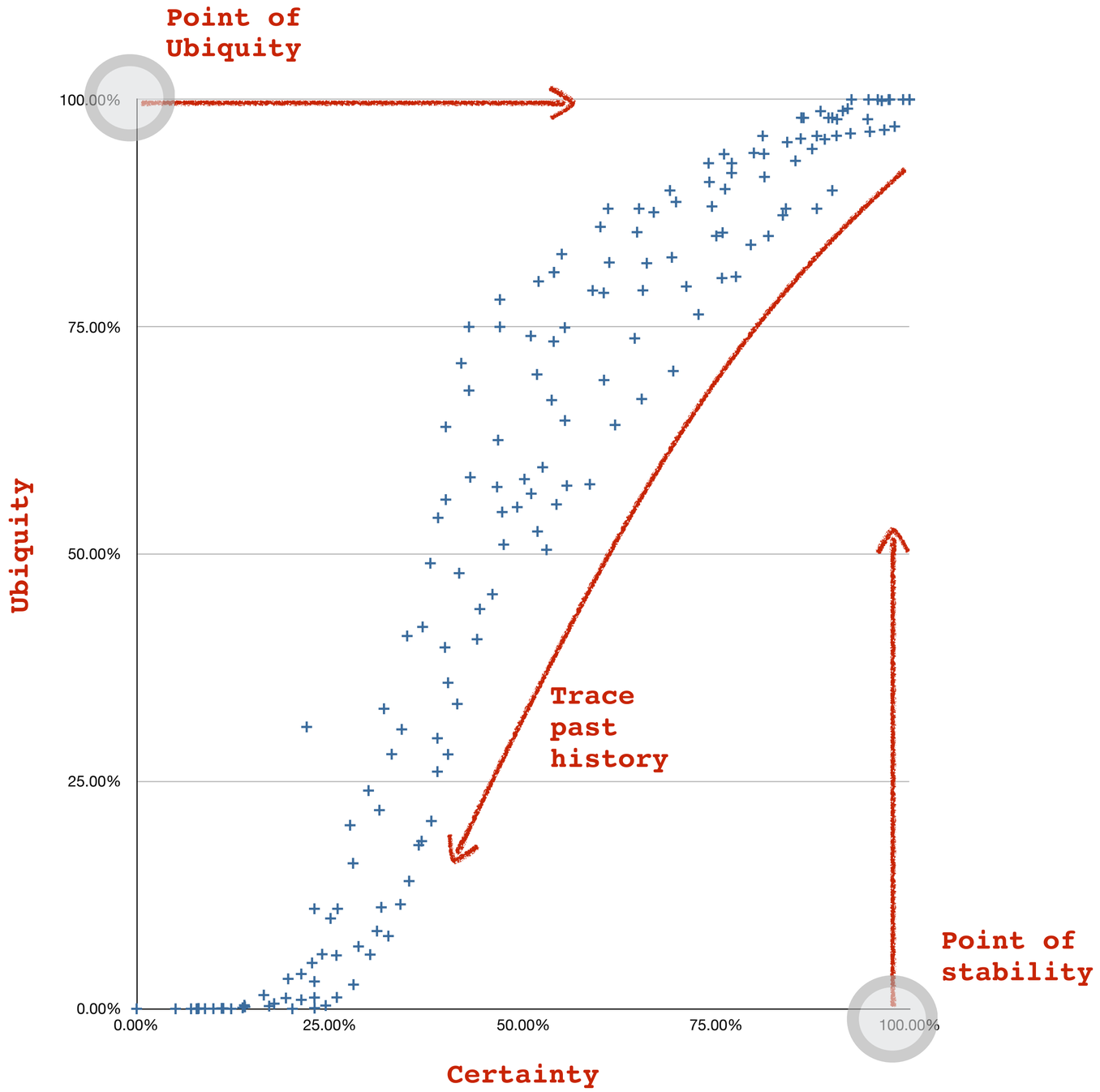
| Stage | I | II (key) | III (key) | IV |
|---|---|---|---|---|
| Publication Type | **Wonder** | **building, construction** and **awareness** | **operation, maintenance** and **feature differences** | **use** |

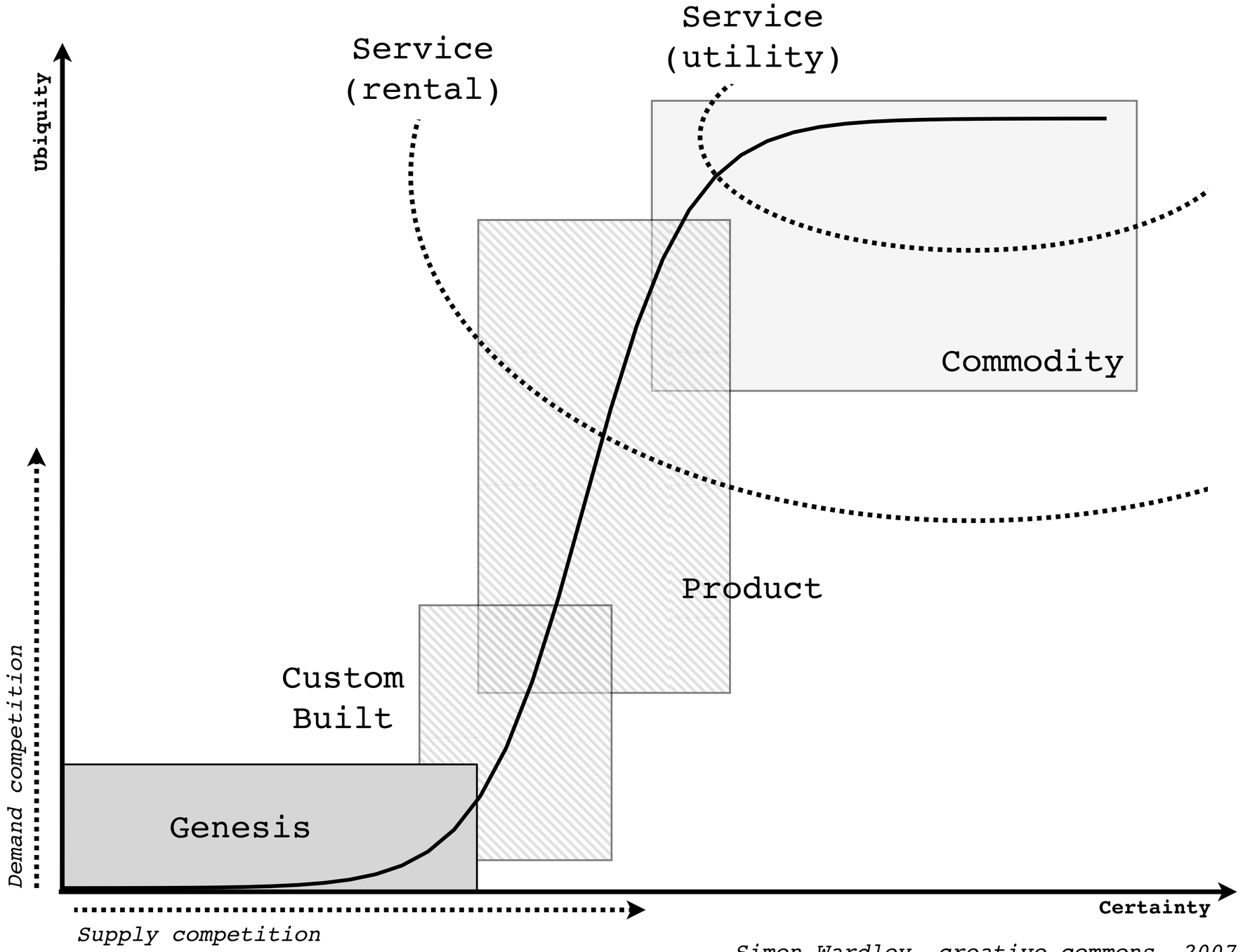


| Stage | I | II (key) | III (key) | IV |
|---|---|---|---|---|
| Publication Type | **Wonder** | **building, construction** and **awareness** | **operation, maintenance** and **feature differences** | **use** |

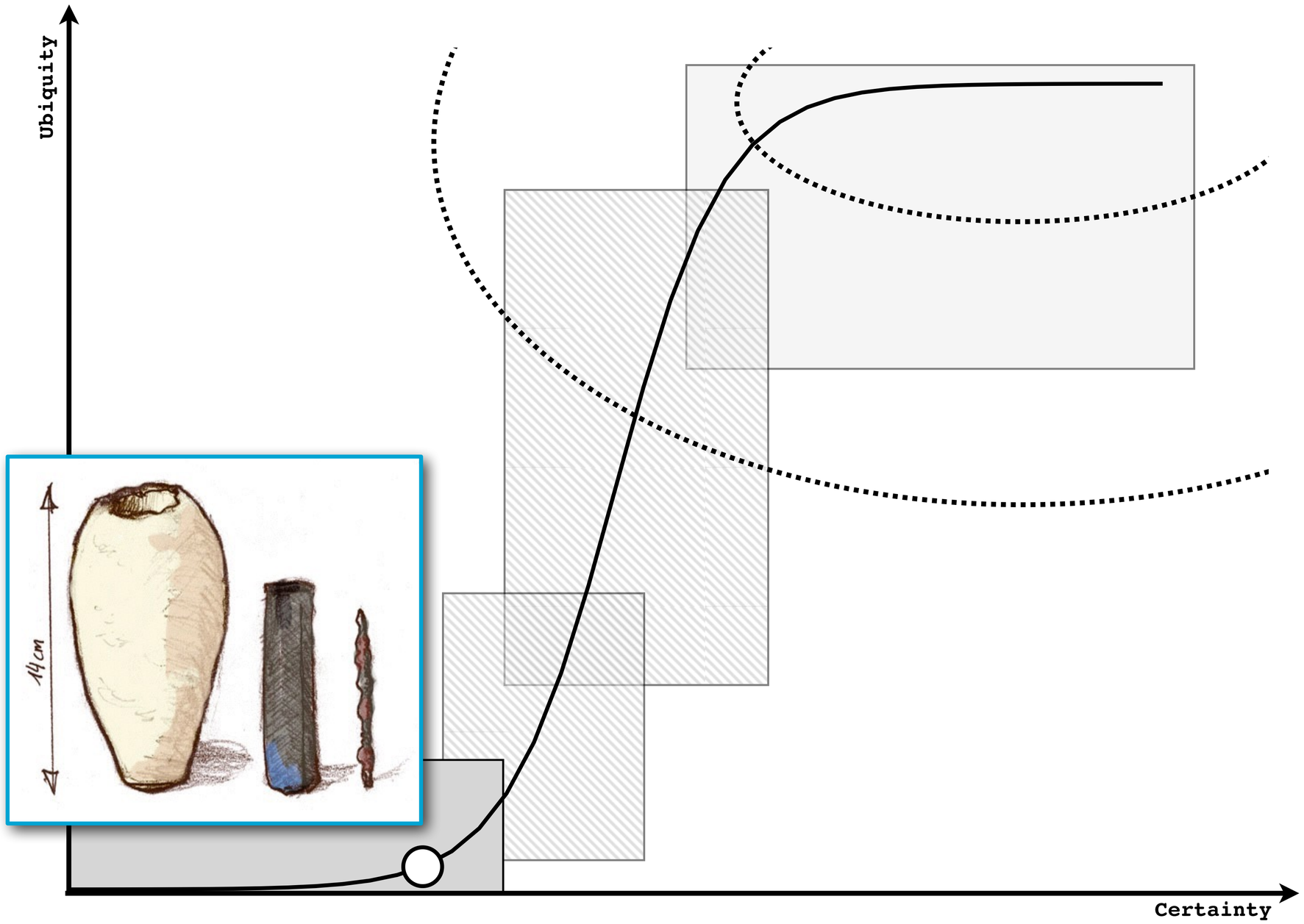



Applicable Market
100% adoption A[5]
100%
Ubiquitous
Point of
Ubiquity
Point of
stability
100% adoption A[4]
100% adoption A[3]
100% adoption A[2]
100% adoption A[1]
t1
Time


Point of Ubiquity
100.00%
75.00%
50.00%
25.00%
0.00%
Ubiquity
Trace past history
Point of stability
0.00%
25.00%
50.00%
75.00%
100.00%
Certainty




*Simon Wardley, creative commons, 2007*


Ubiquity
14cm
Certainty

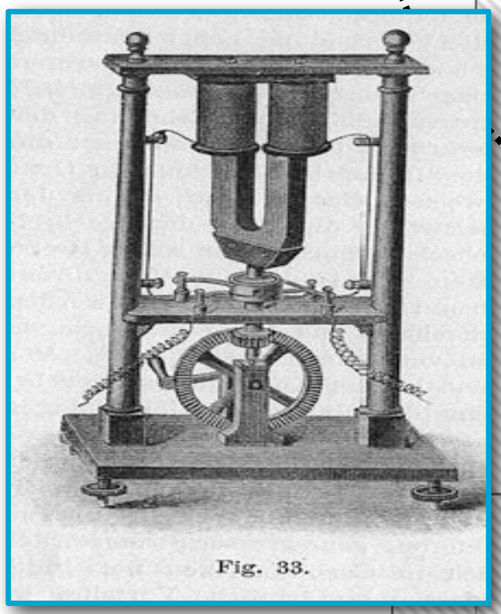
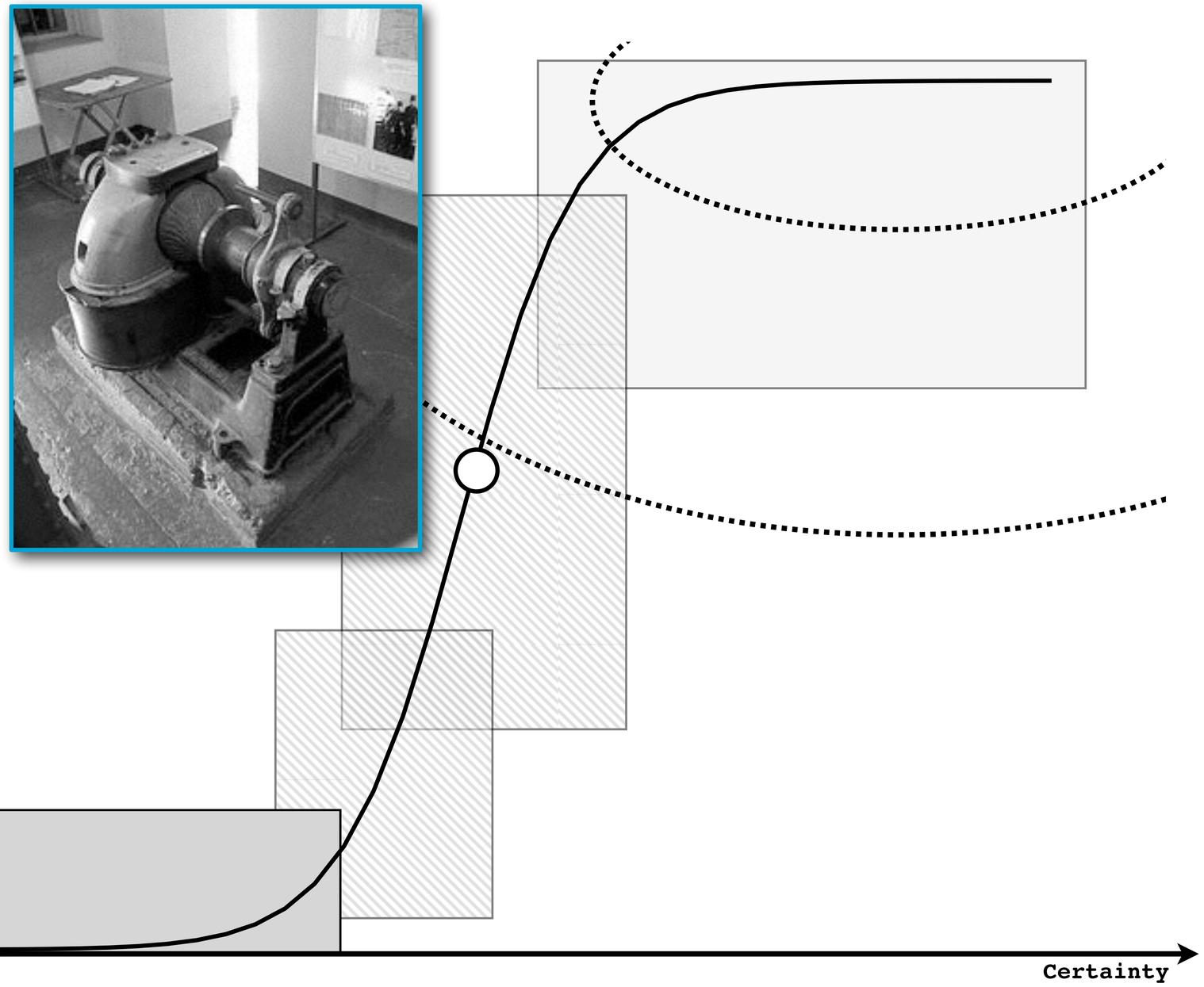
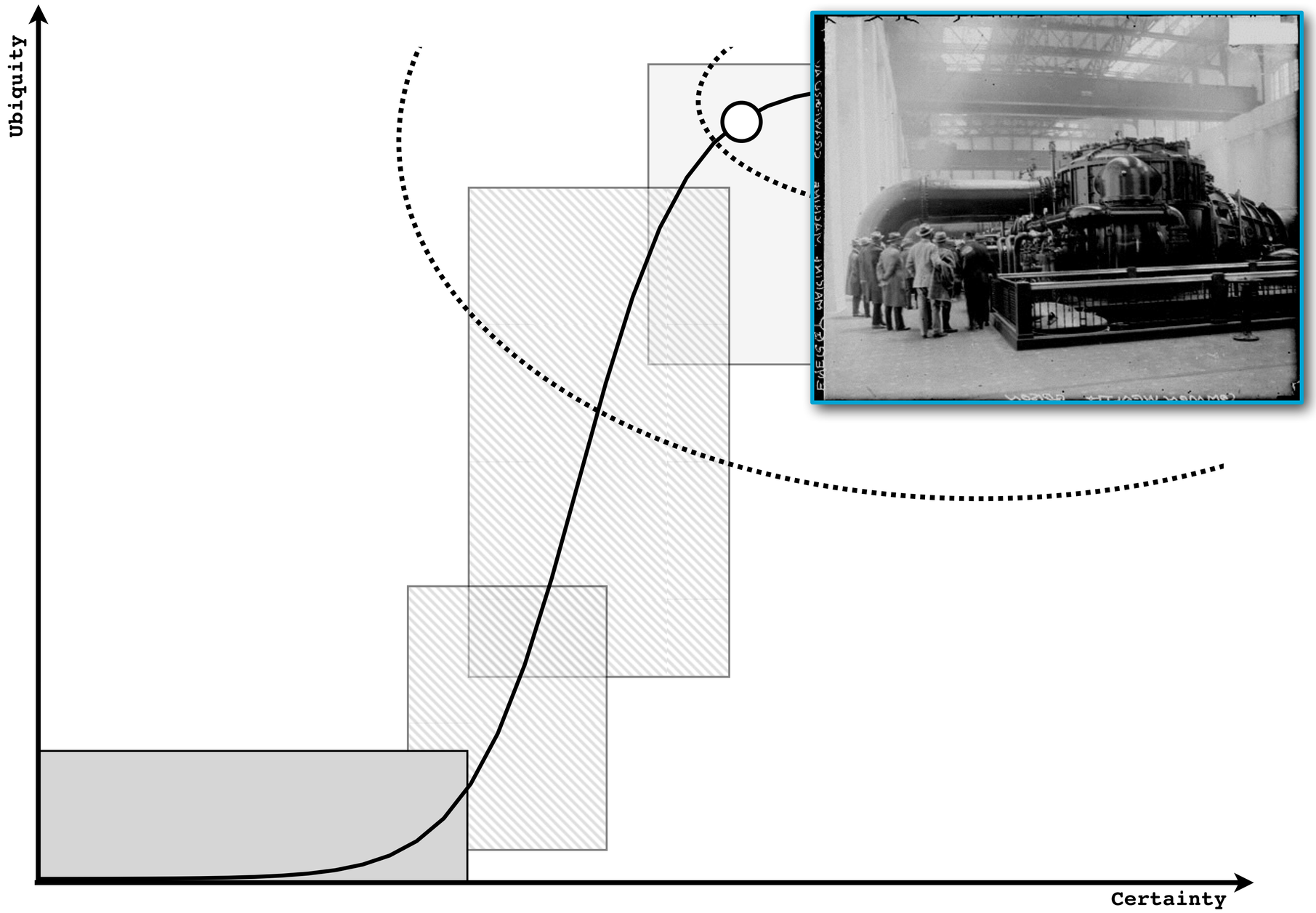


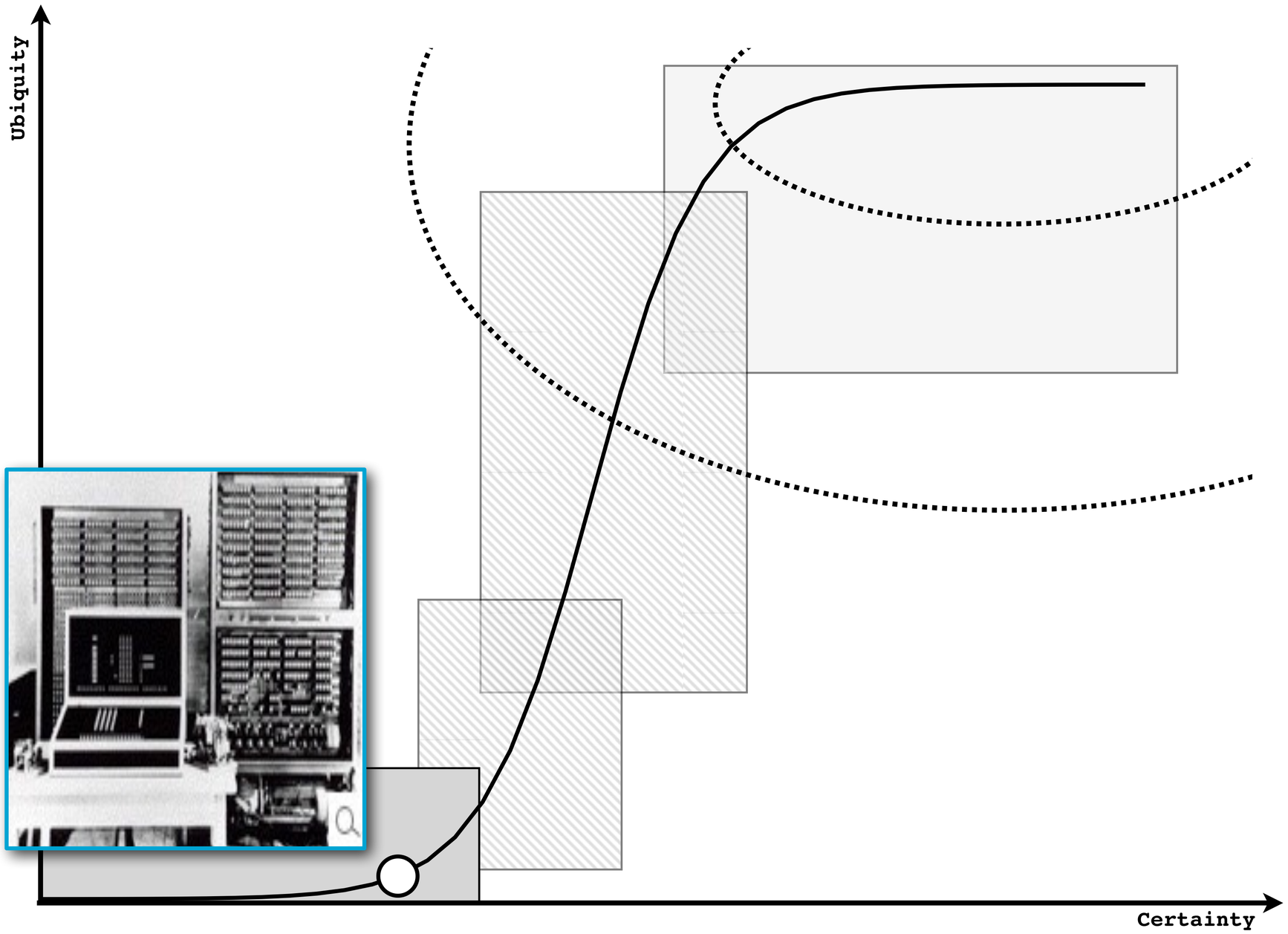
Fig. 33.

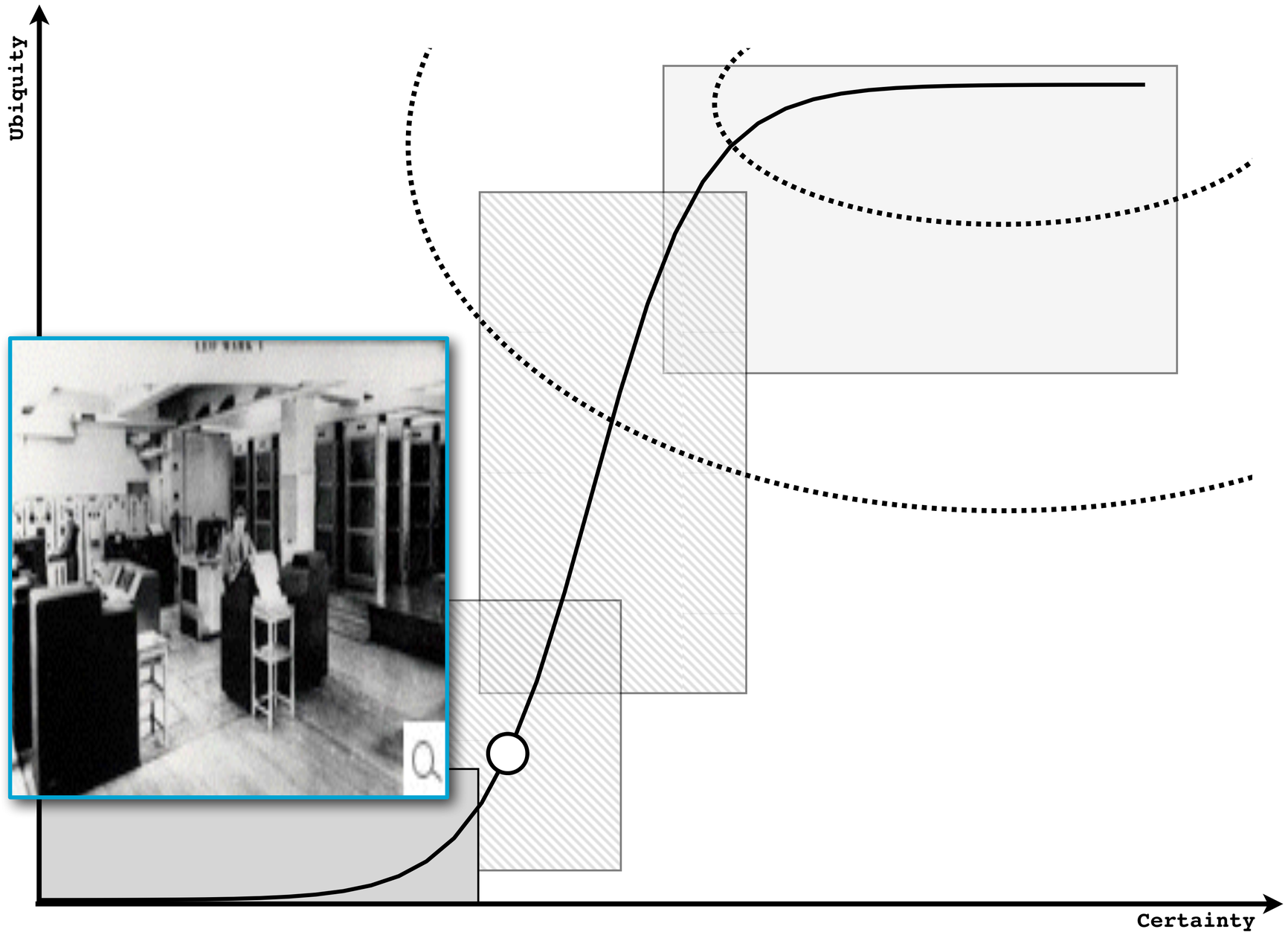
Ubiquity

Certainty


Ubiquity
Certainty


Ubiquity
Certainty


Ubiquity
Certainty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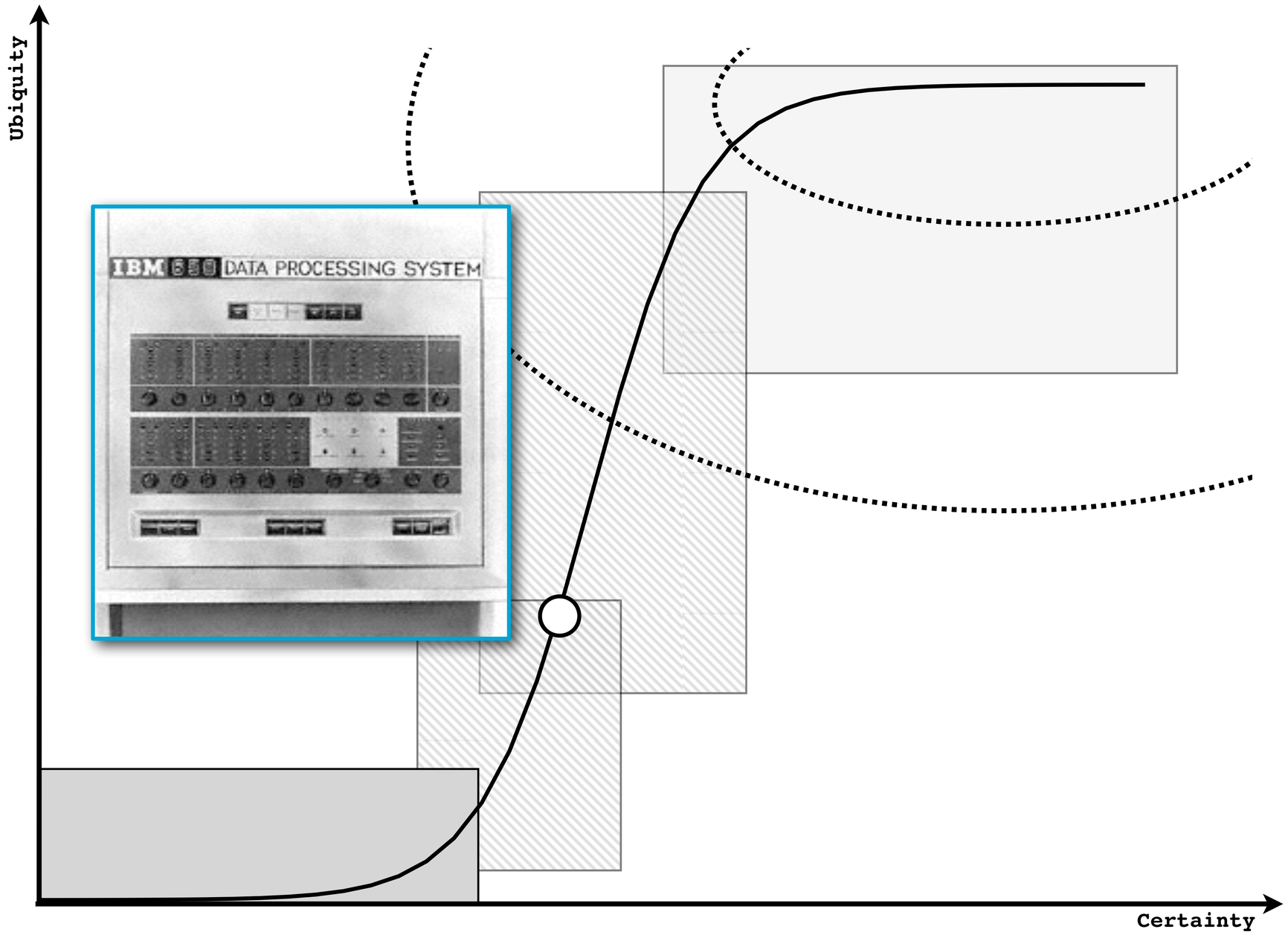
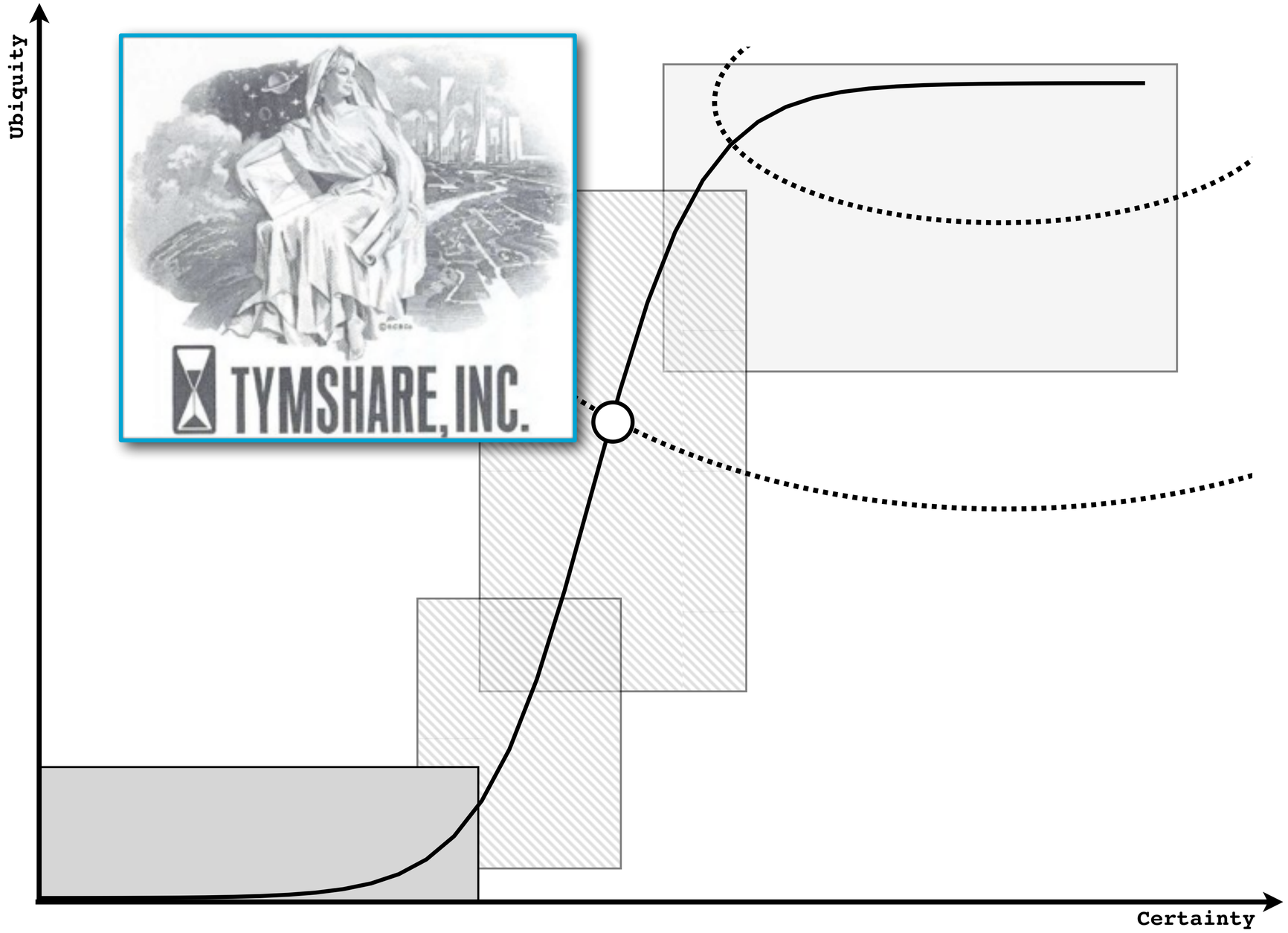
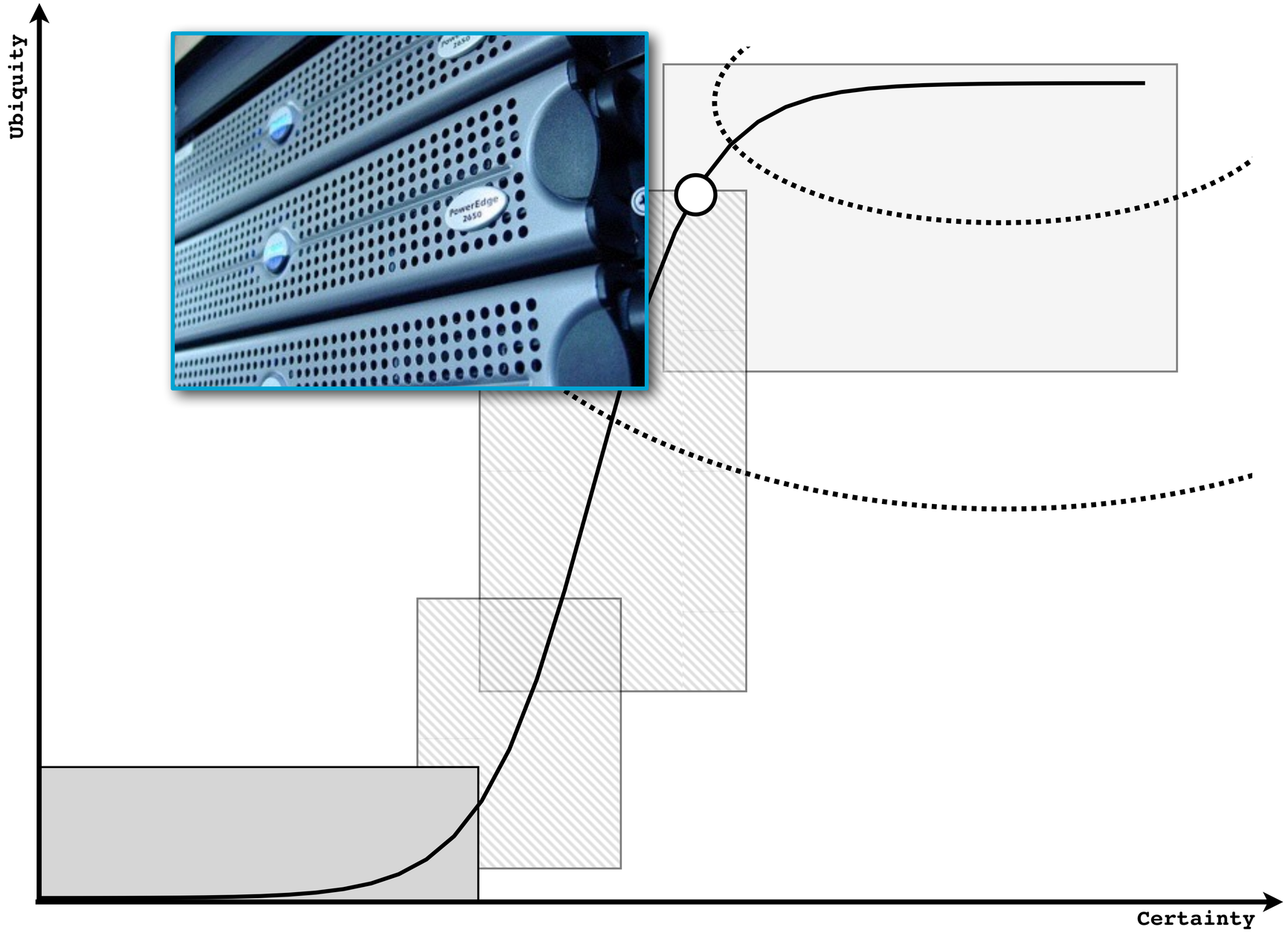
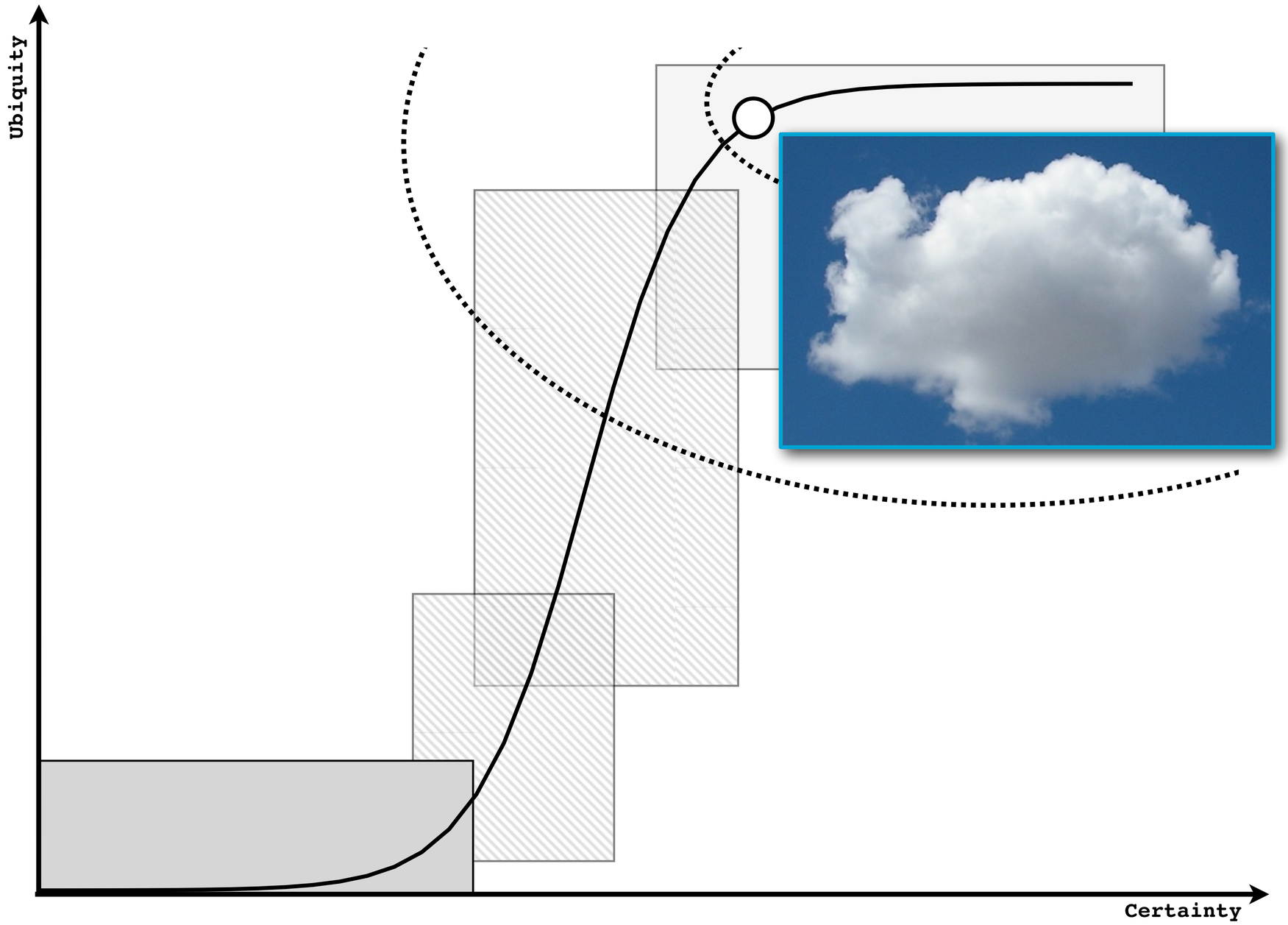
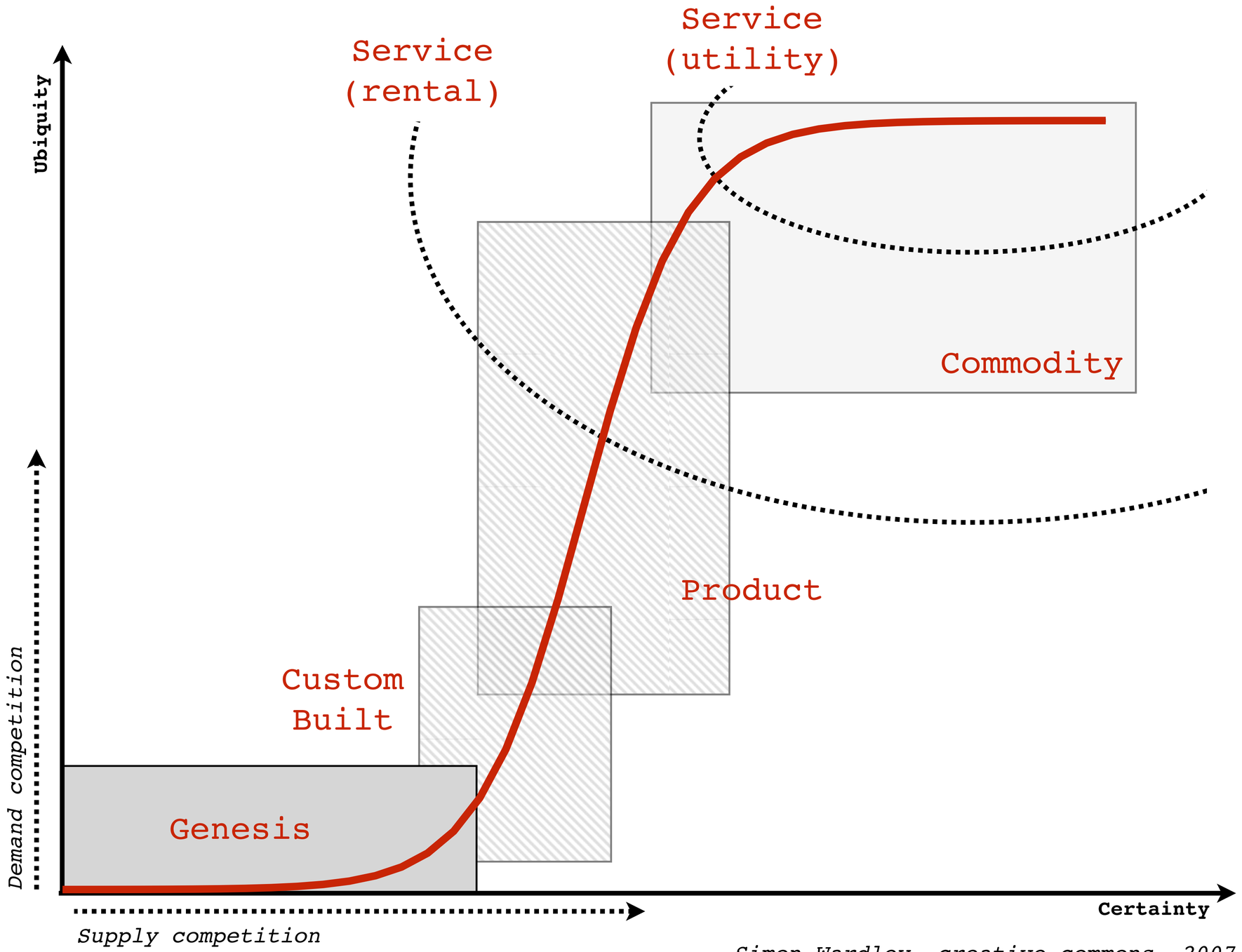
Certainty


Ubiquity
IBM 650 DATA PROCESSING SYSTEM
Certainty


Ubiquity
TYMSHARE, INC.
Certainty

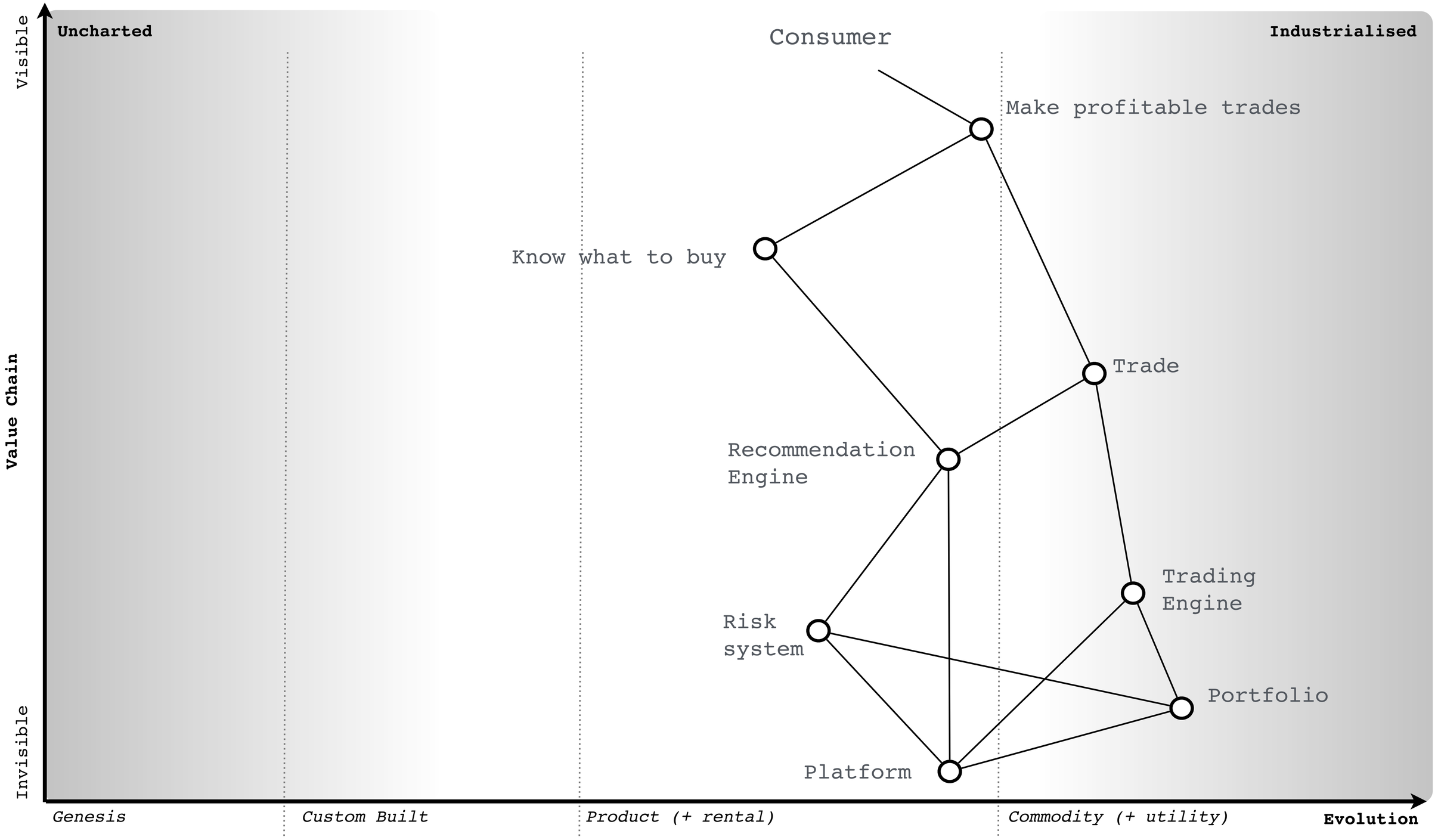

Ubiquity
PowerEdge
2650
Certainty

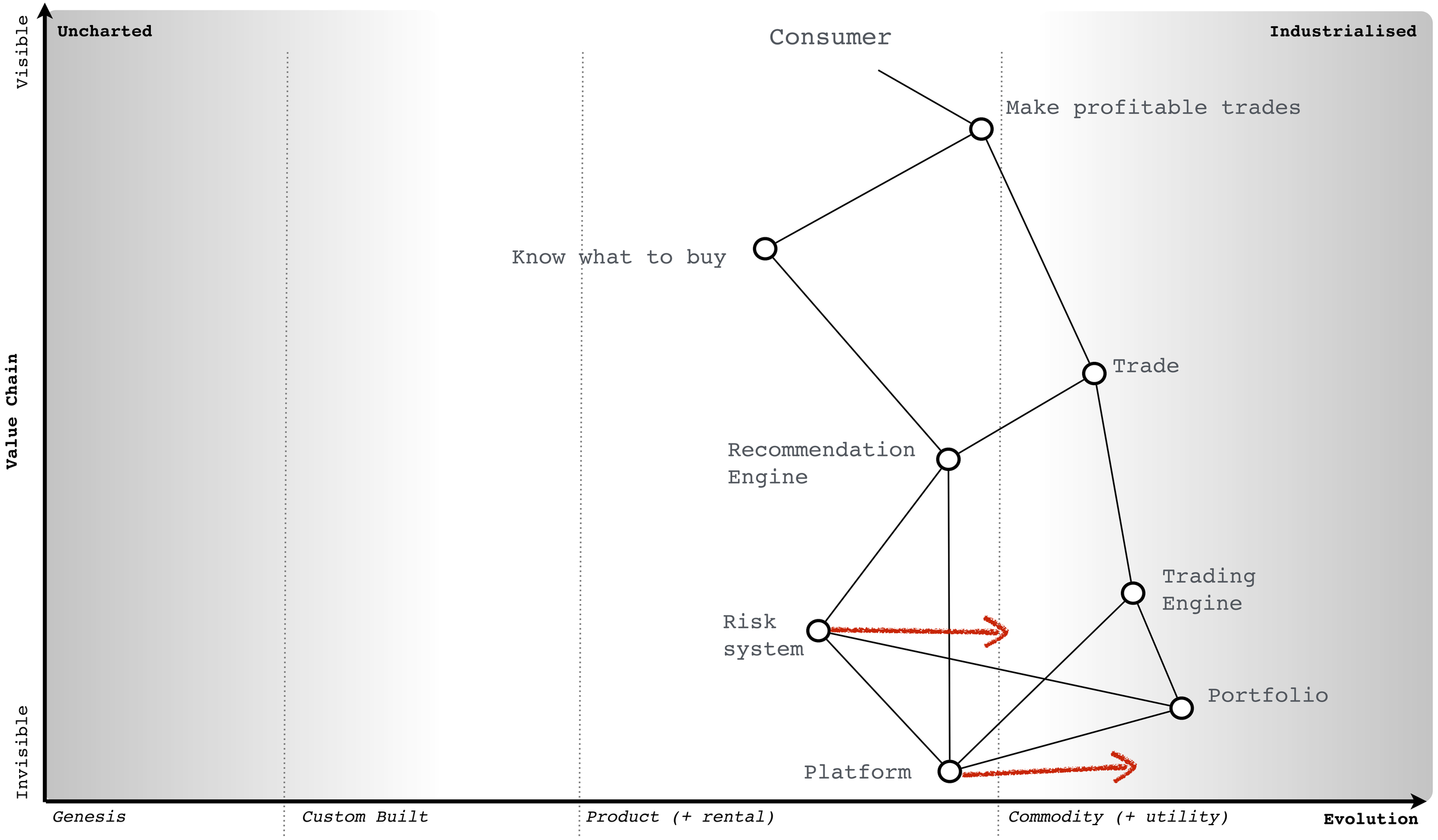

Ubiquity
Certainty




Simon Wardley, creative commons, 2007

Getting Started
Competitor Analysis
Evolution
**Flow**
Weak Signals
Ecosystem
Type
Brexit


Uncharted
Industrialised
Visible
Invisible
Value Chain
Consumer
Make profitable trades
Know what to buy
Trade
Recommendation Engine
Trading Engine
Risk system
Portfolio
Platform
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
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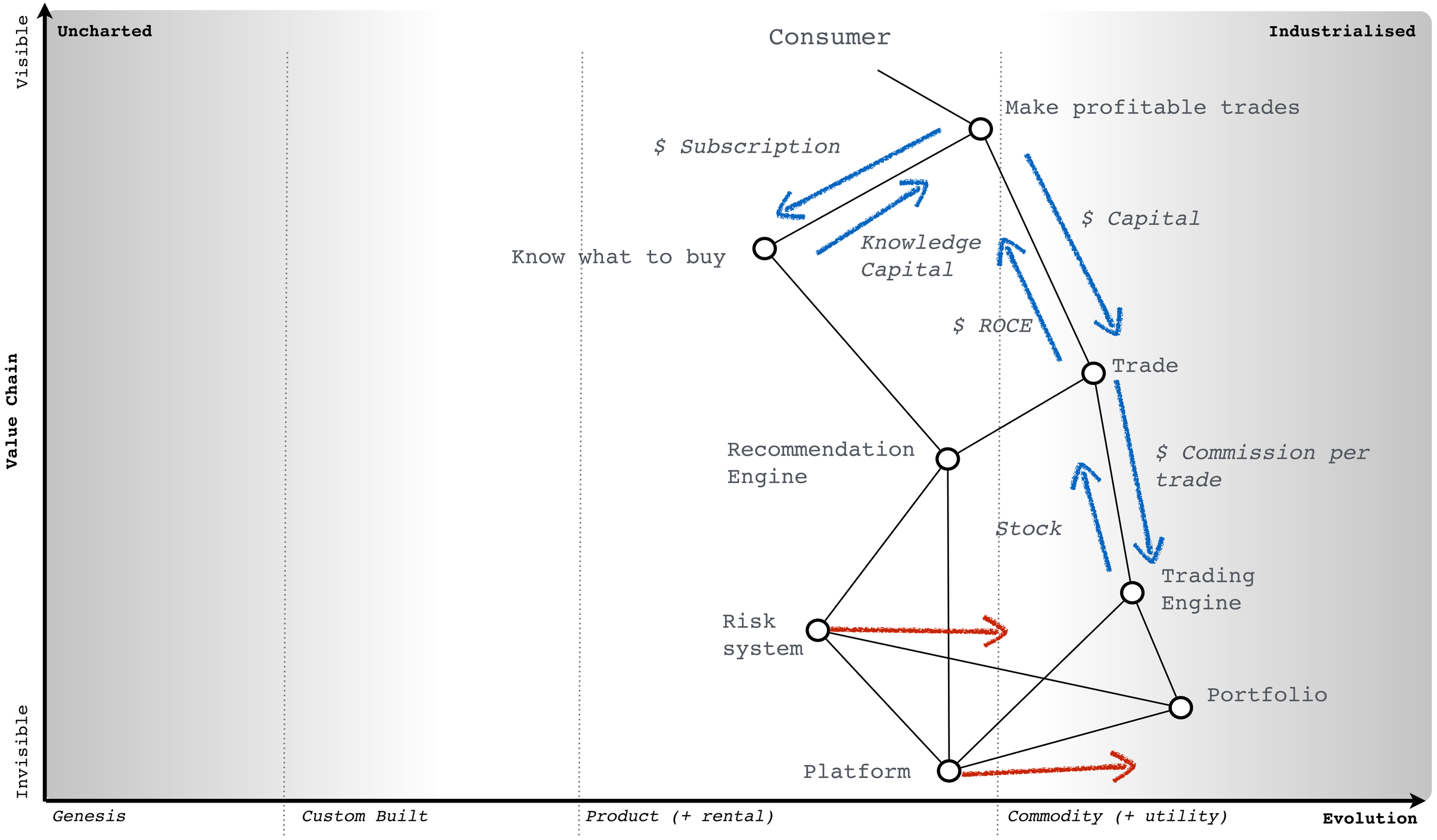
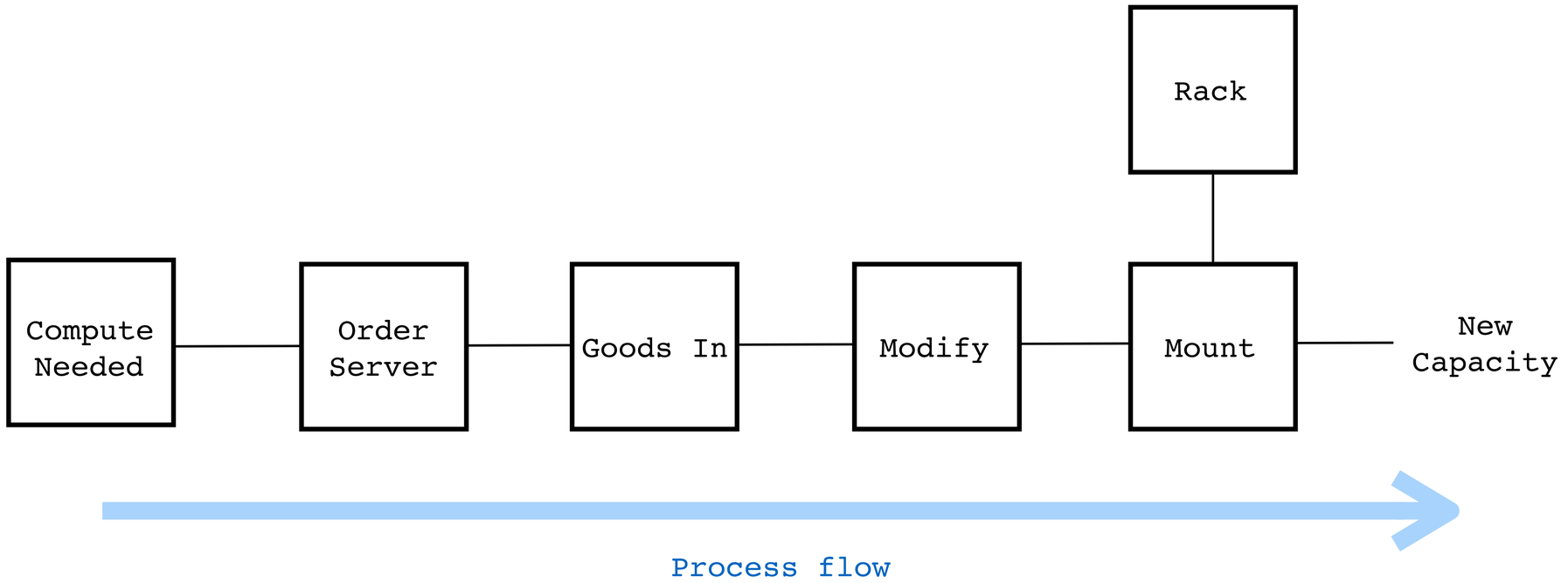
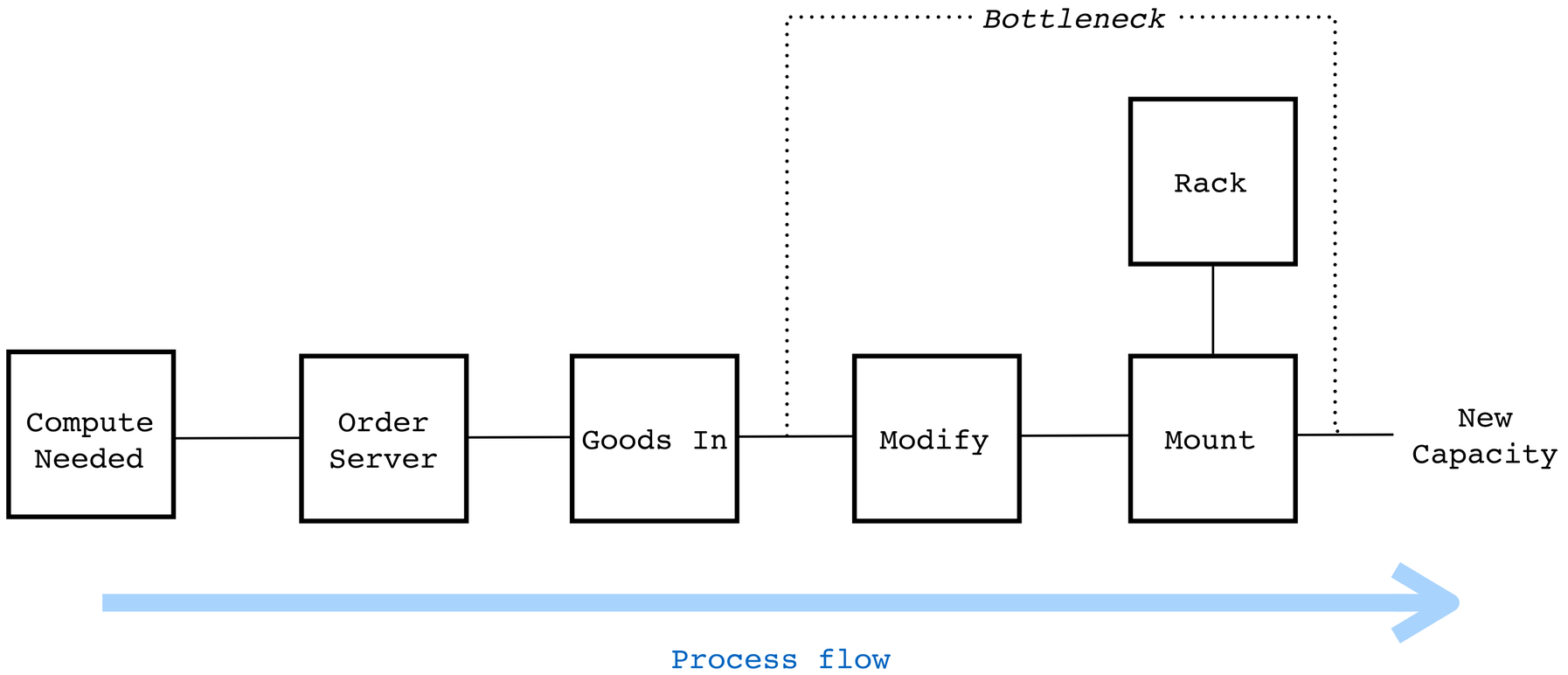

Uncharted
Industrialised
Visible
Invisible
Value Chain
Consumer
Make profitable trades
$ Subscription
Know what to buy
Knowledge Capital
$ Capital
$ ROCE
Trade
Recommendation Engine
$ Commission per trade
Stock
Trading Engine
Risk system
Portfolio
Platform
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

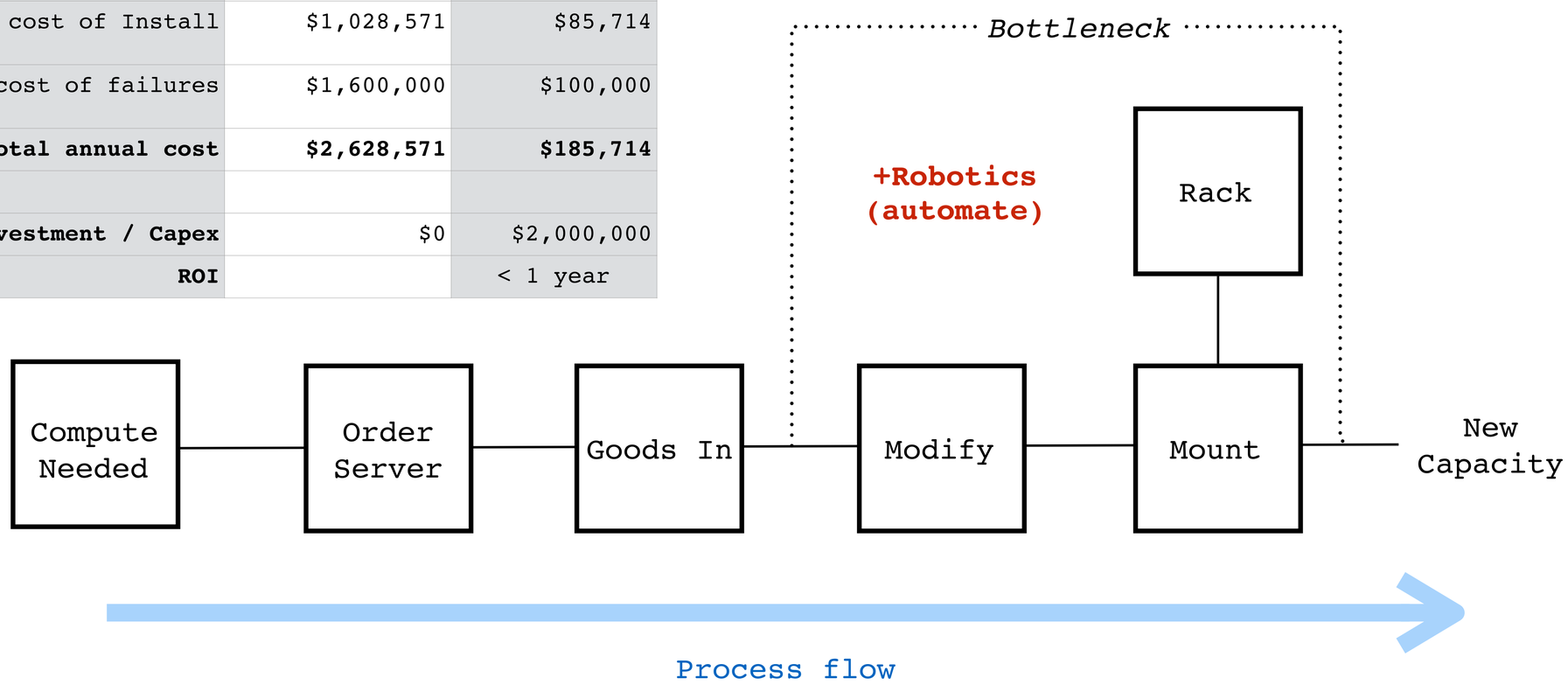
Insurance policy.
rsigned, pursuant to the
the above policy
urance Com

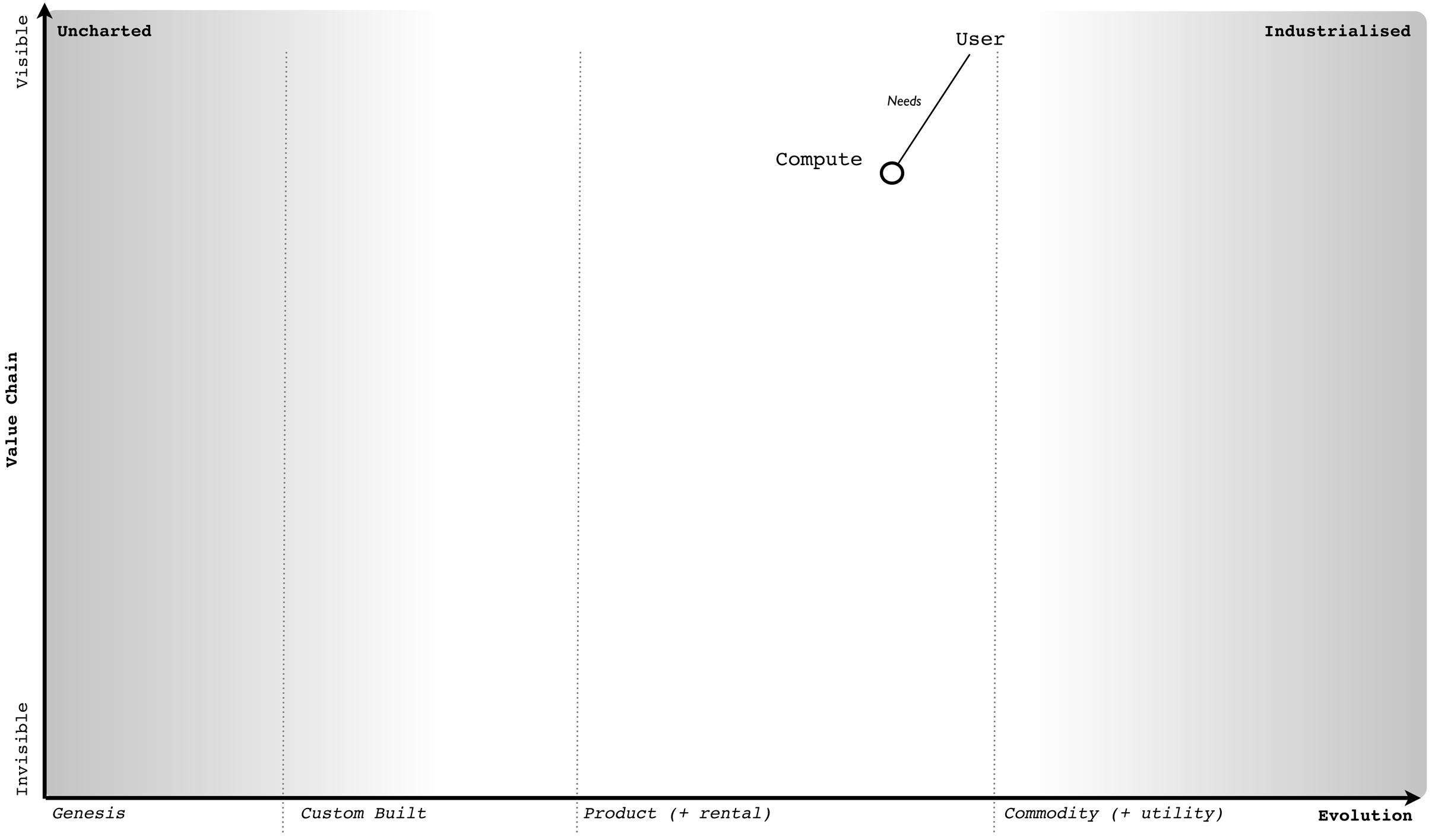

Rack
Compute Needed
Order Server
Goods In
Modify
Mount
New Capacity
Process flow

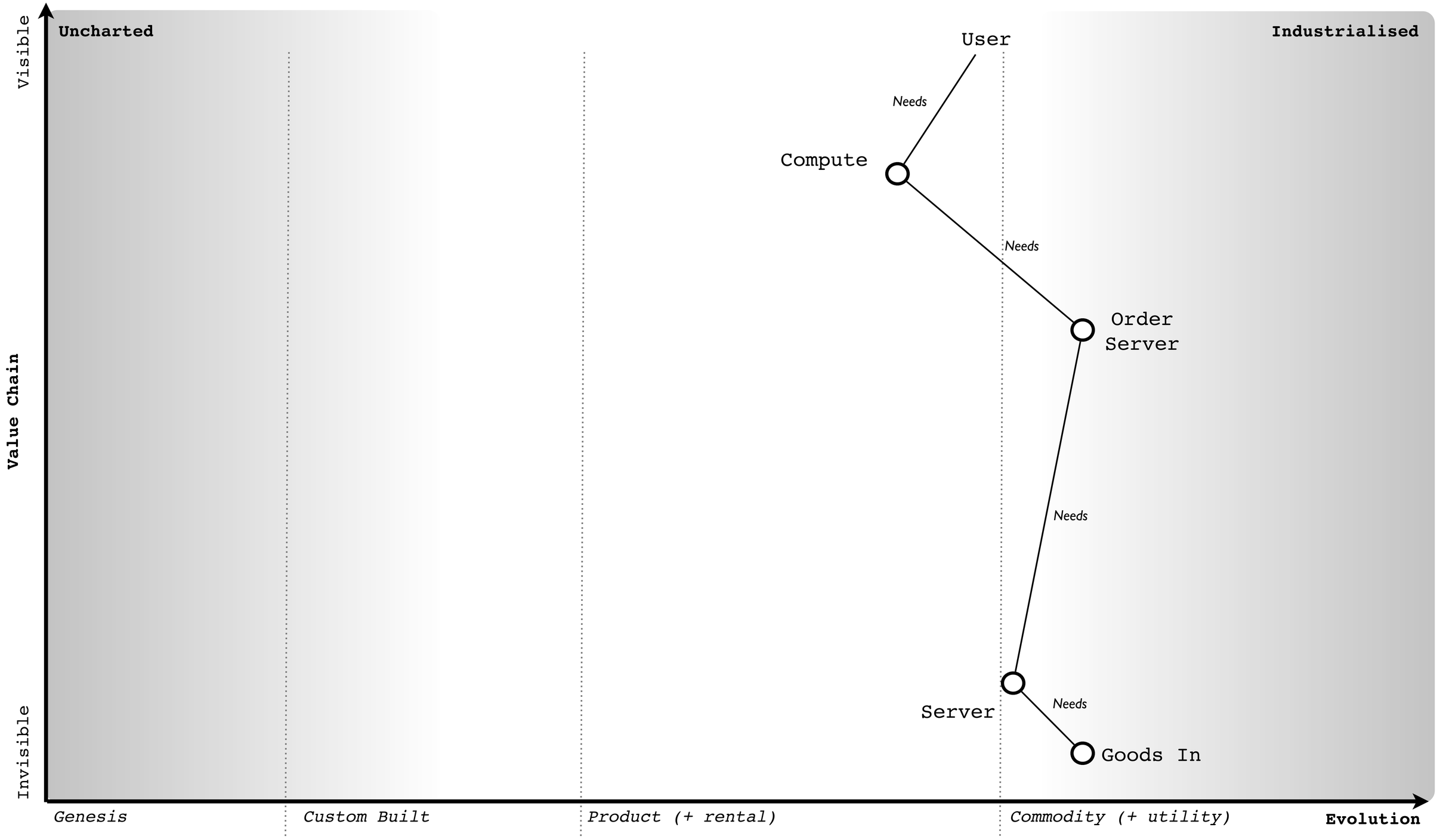

Bottleneck
Rack
Compute Needed
Order Server
Goods In
Modify
Mount
New Capacity
Process flow

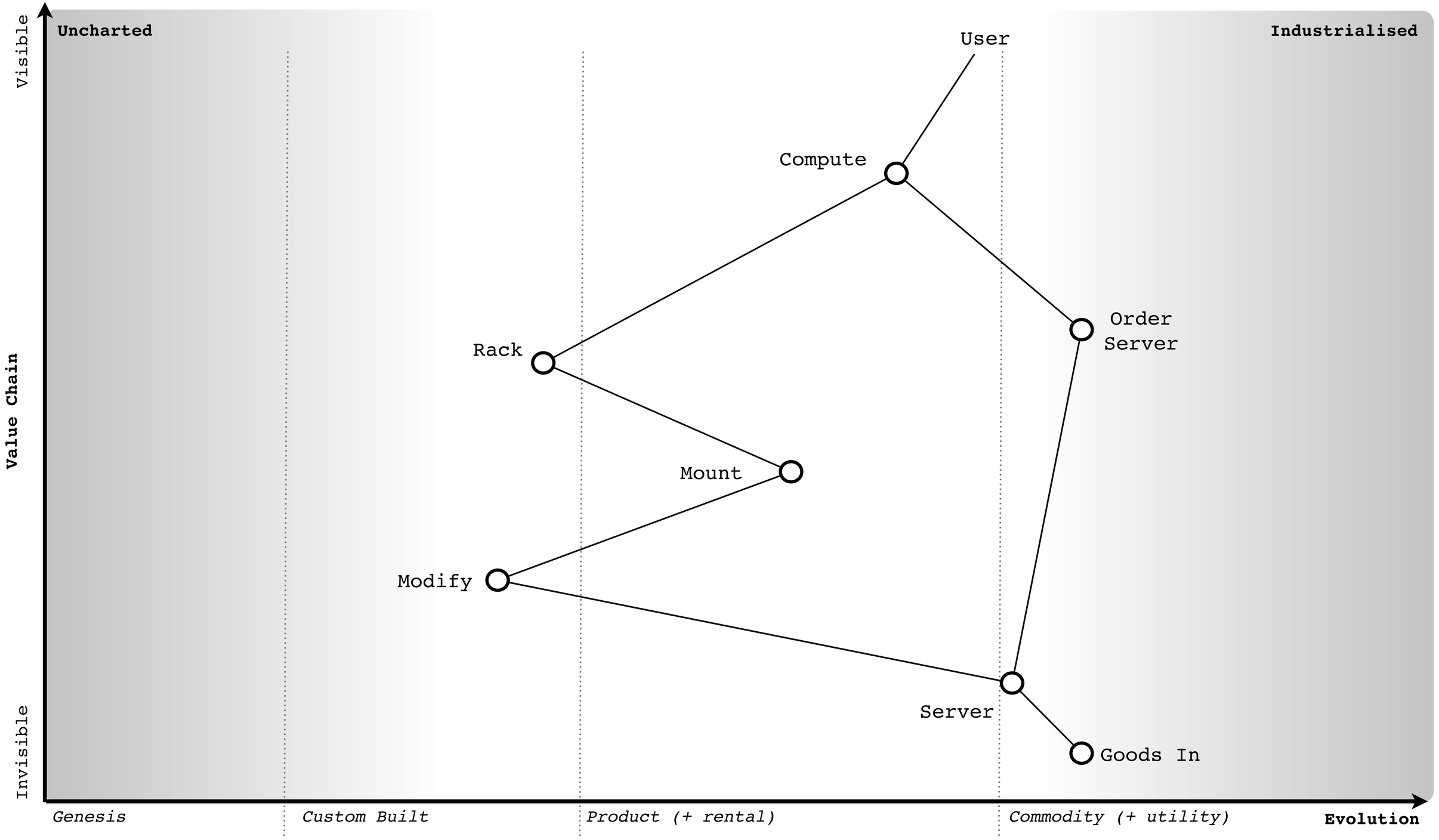
# Question : Would you invest?

| | Current | Robotic |
|---|---|---|
| Cost per install failure | $2,500.00 | $2,500.00 |
| % likelihood of failure | 8.0% | 0.5% |
| Average cost of failure per install | $200 | $13 |
| Time to install (mins) | 120 | 30 |
| Labour cost per install | $129 | $11 |
| Annual number of install | 8,000 | 8,000 |
| | | |
| Total annual cost of Install | $1,028,571 | $85,714 |
| Total annual cost of failures | $1,600,000 | $100,000 |
| **Total annual cost** | **$2,628,571** | **$185,714** |
| | | |
| **Investment / Capex** | $0 | $2,000,000 |
| **ROI** | | < 1 year |




Visible
Uncharted
Industrialised
User
Needs
Compute
Value Chain
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Value Chain
Invisible
User
Needs
Compute
Needs
Order
Server
Needs
Needs
Server
Goods In
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
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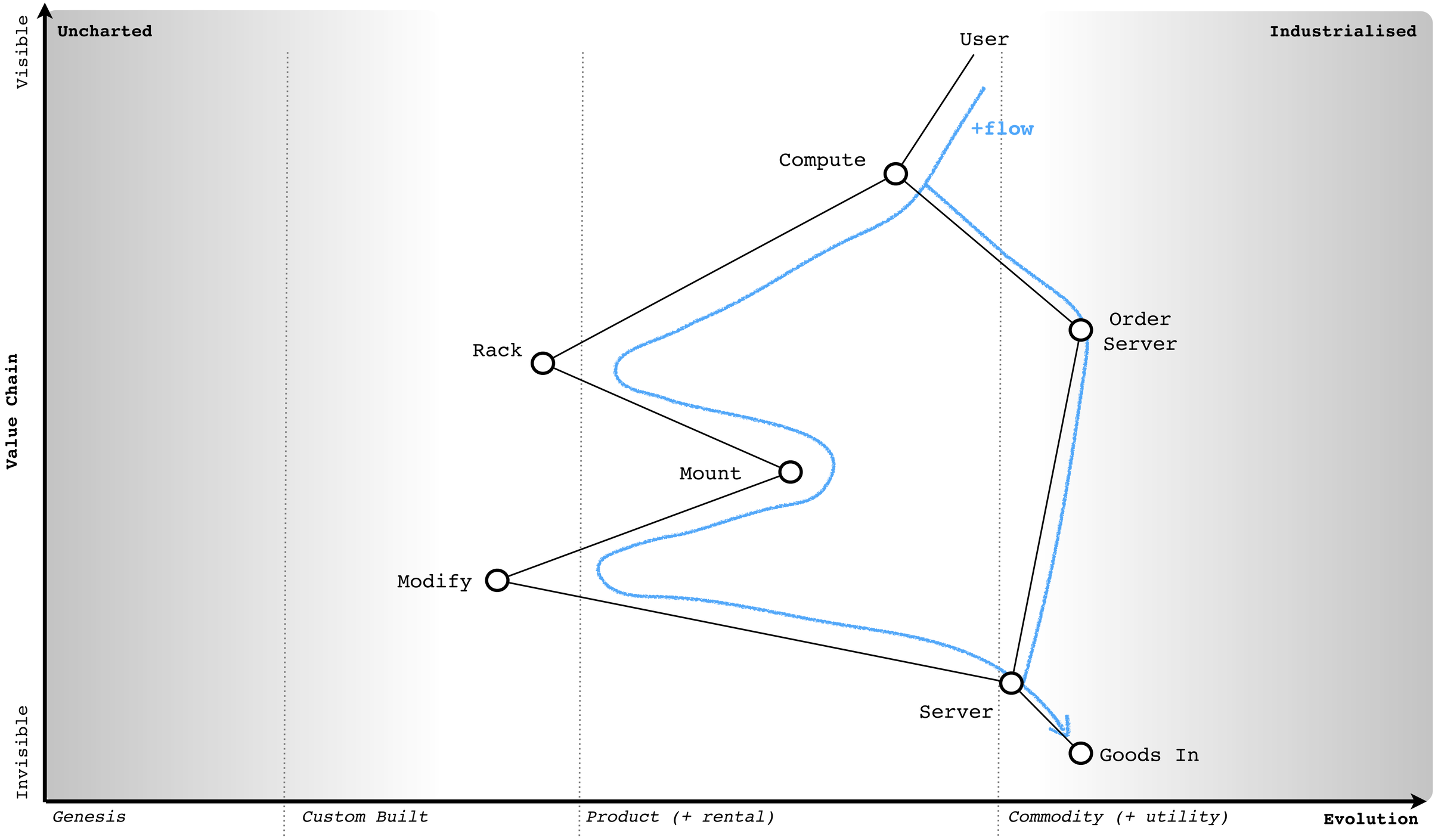
Compute
Order
Server
Rack
Mount
Modify
Server
Goods In
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Invisible
Value Chain
User
+flow
Compute
Rack
Order
Server
Mount
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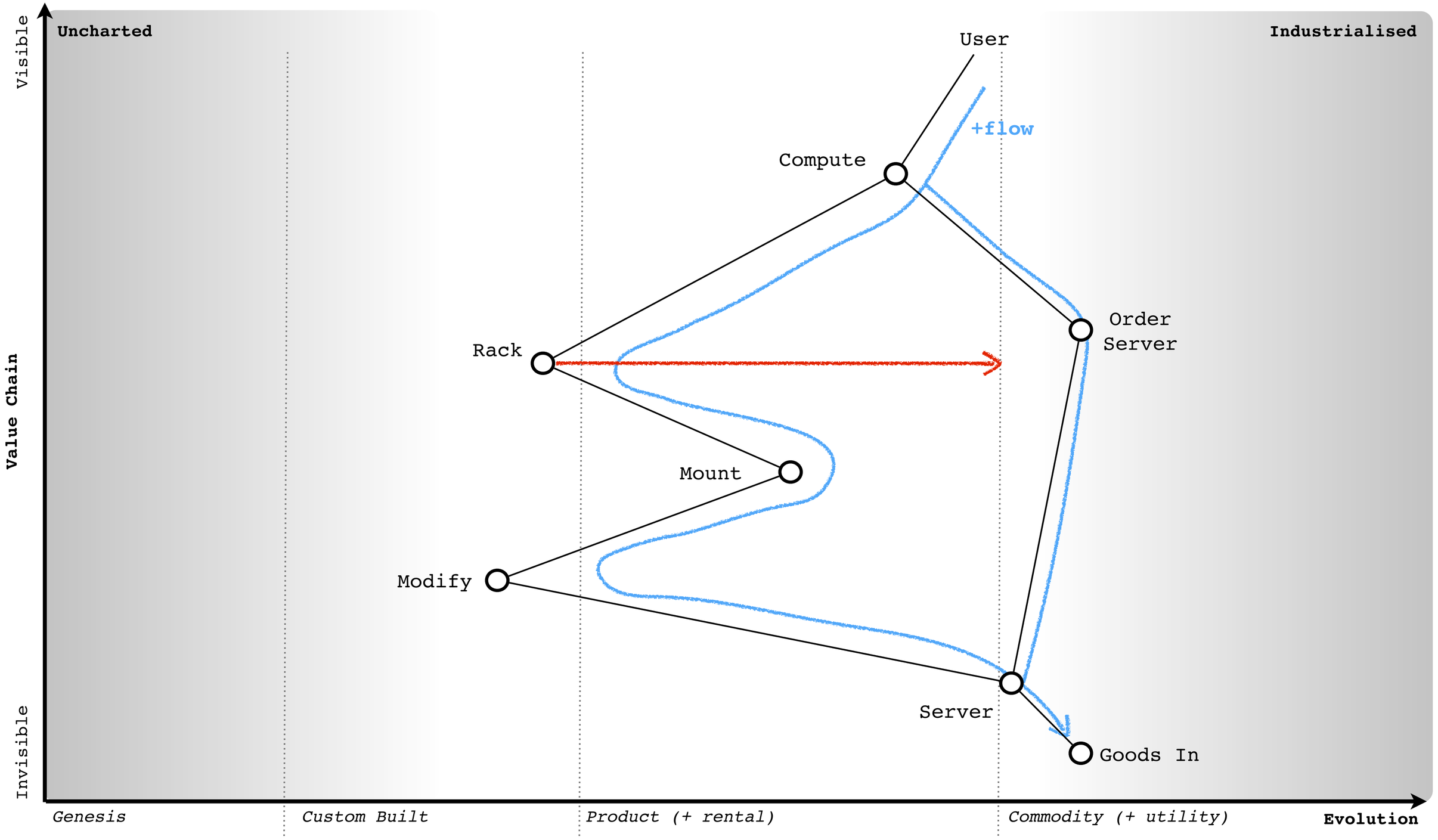
Server
Goods In
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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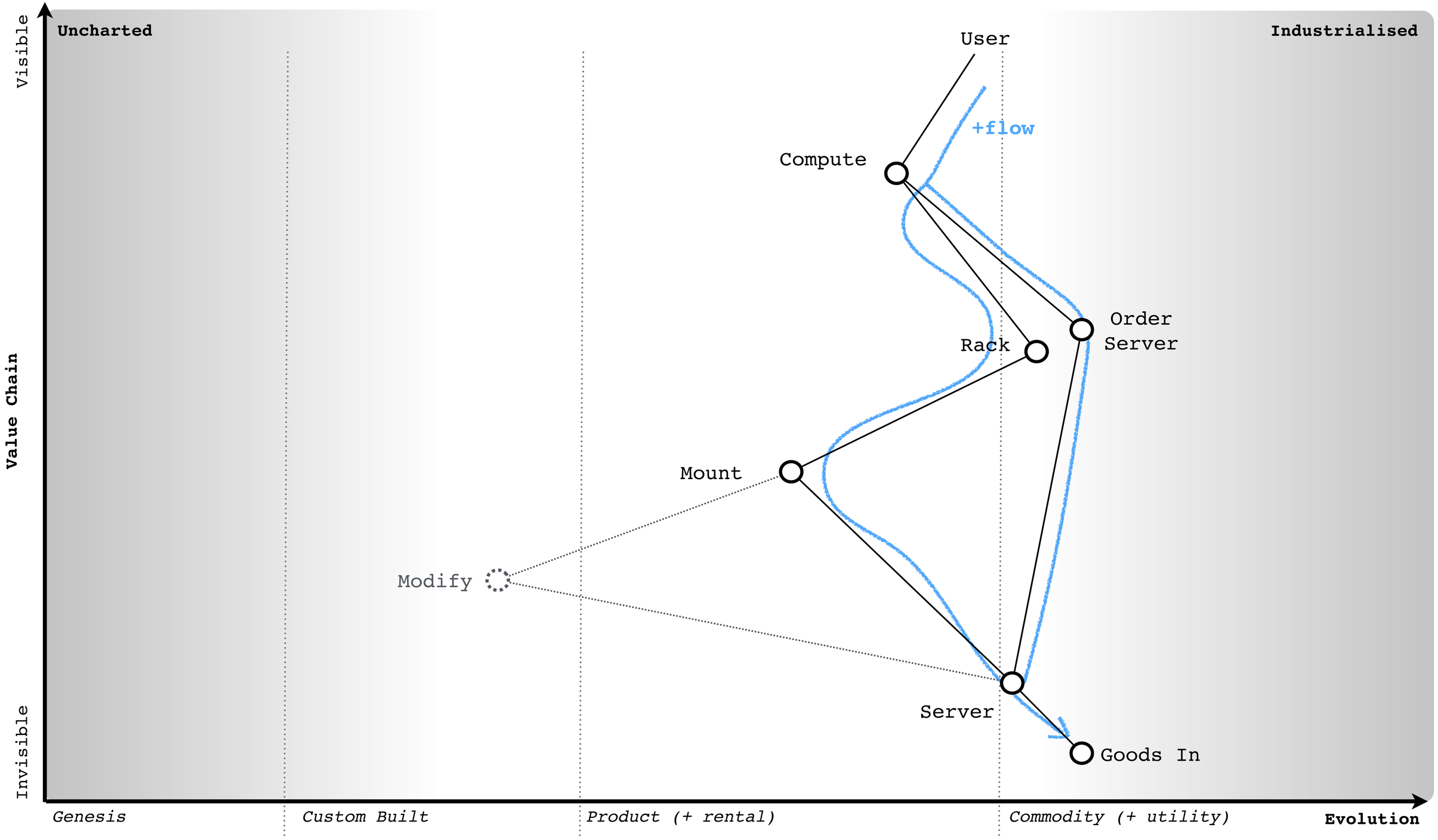
Uncharted
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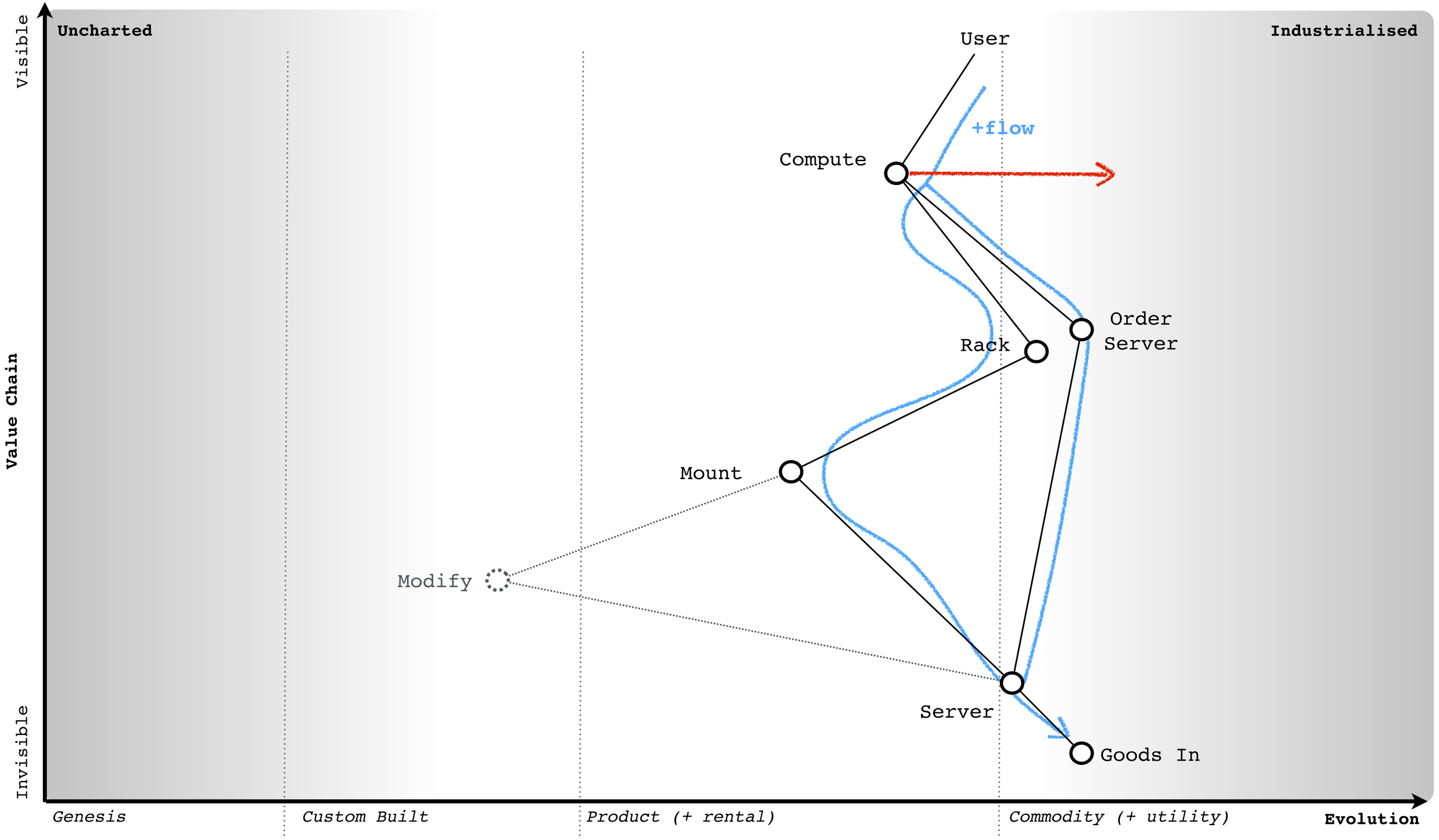
Uncharted
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Server
Goods In
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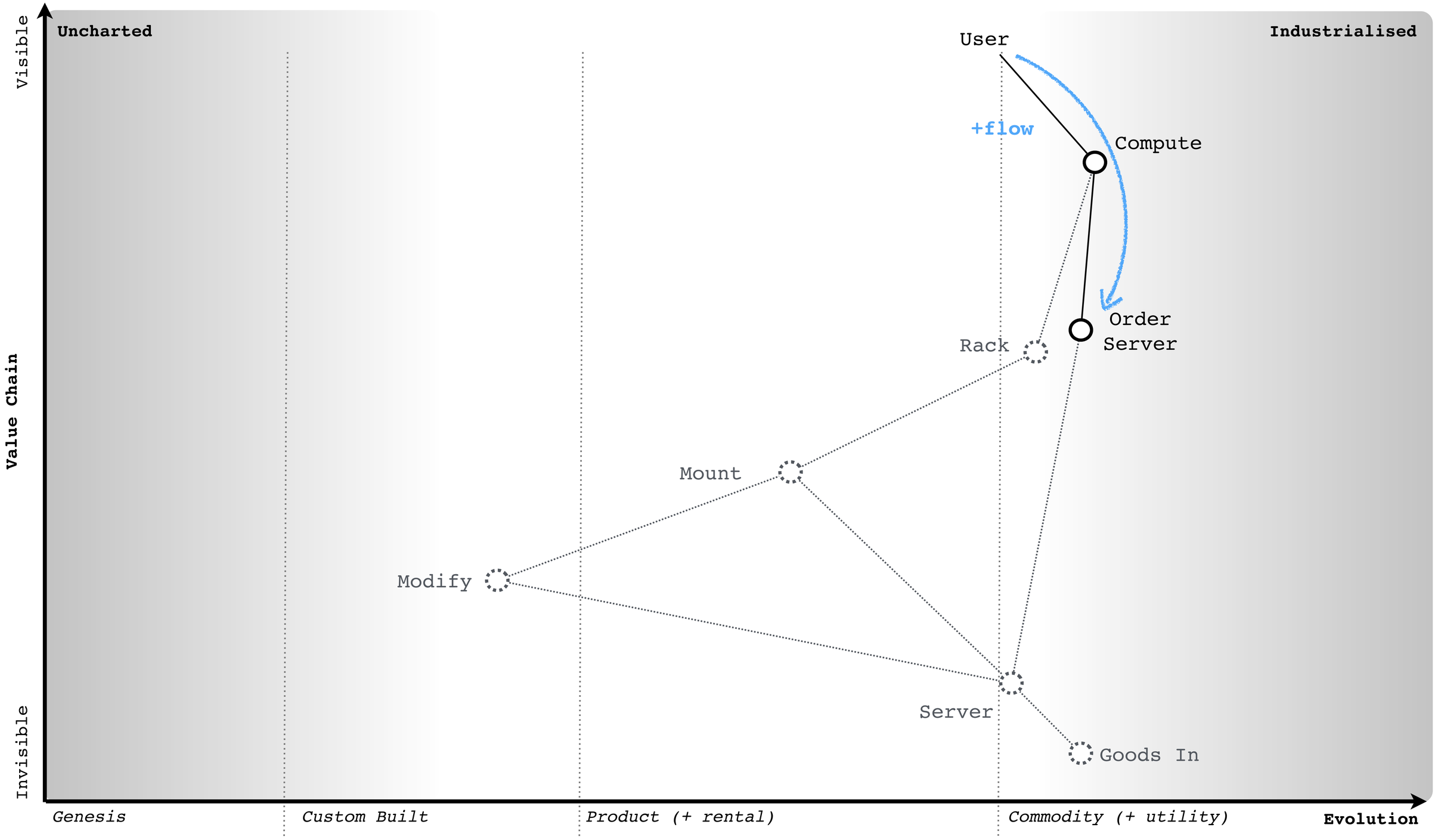
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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Industrialised
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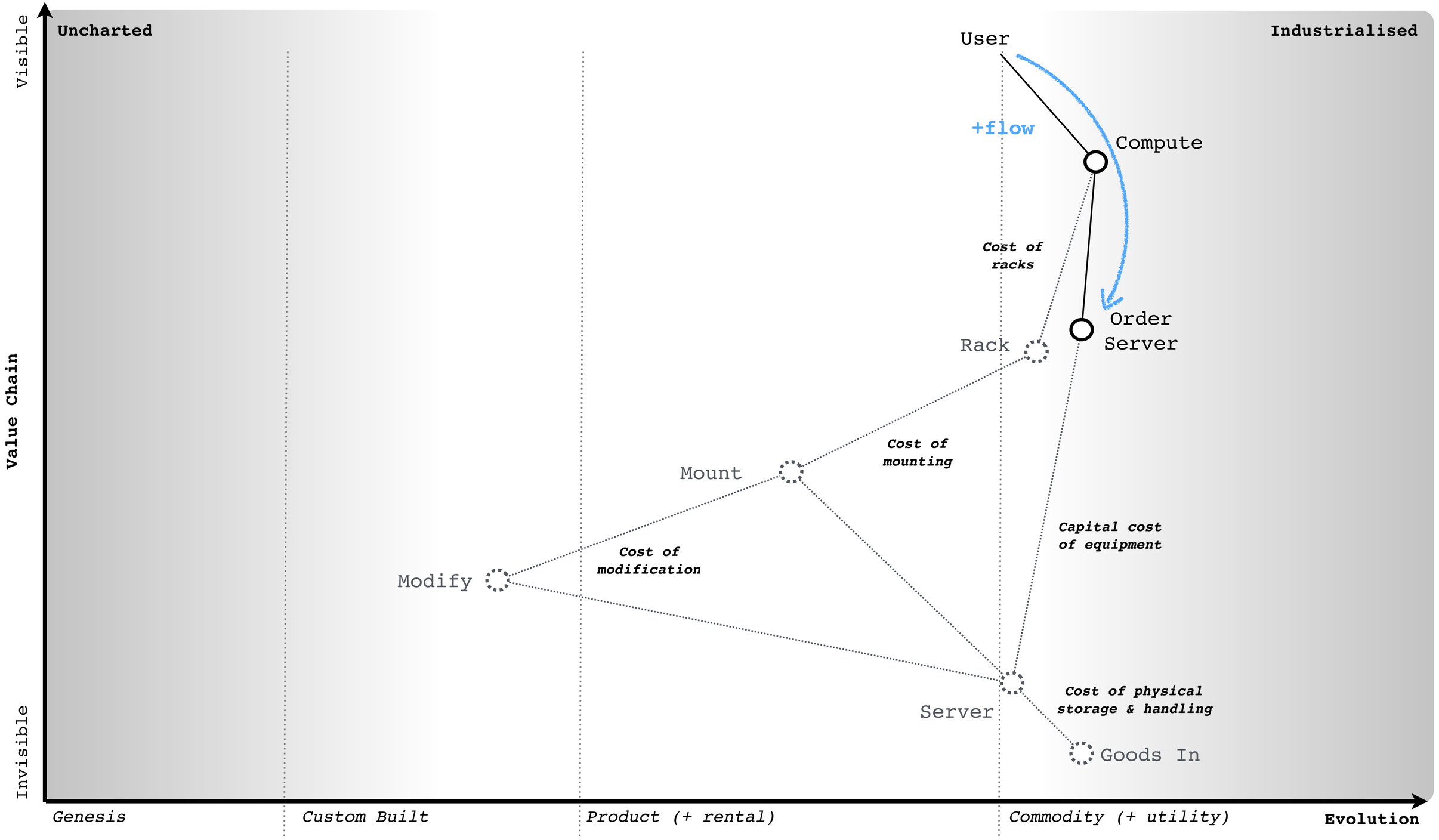
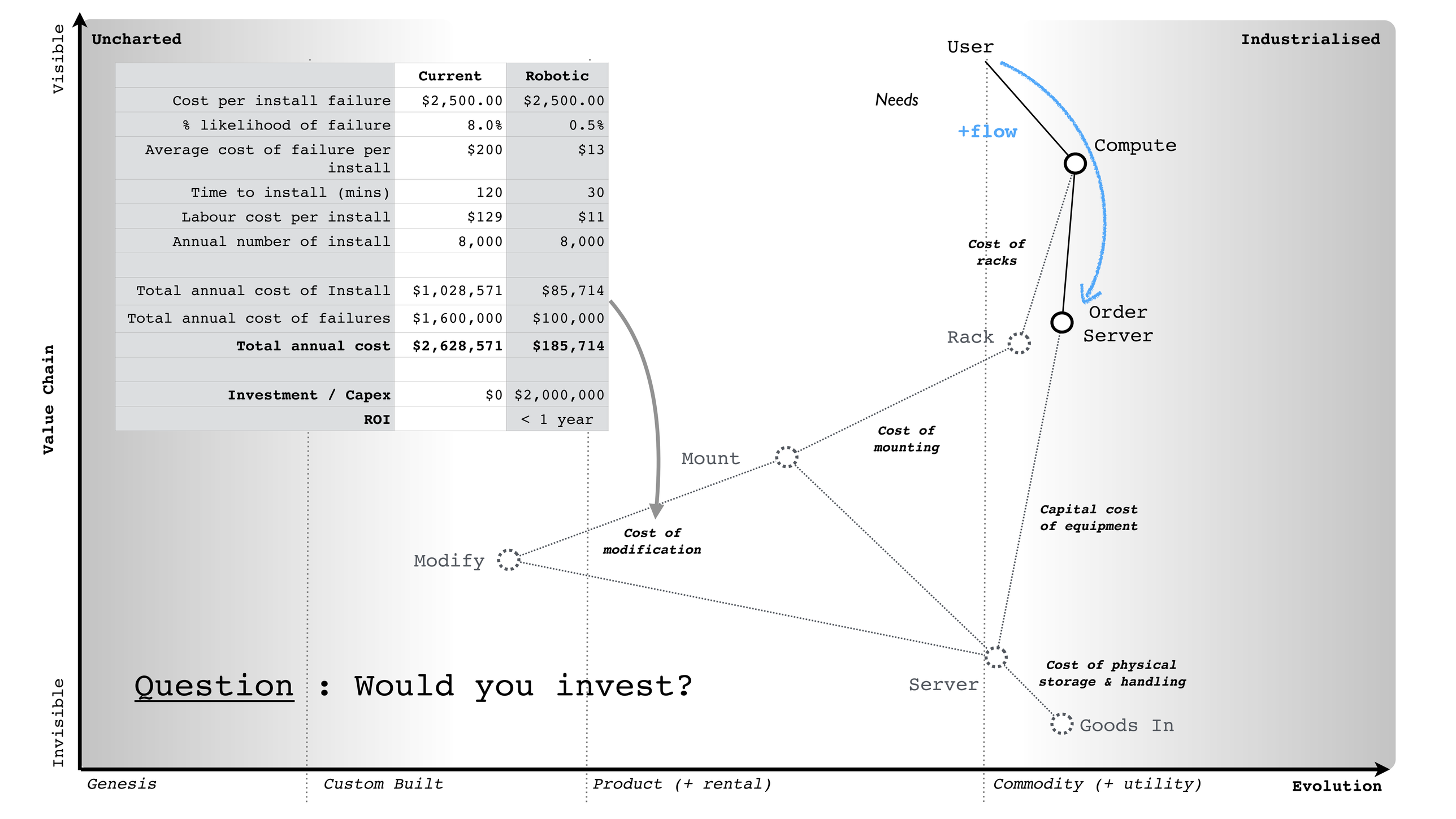
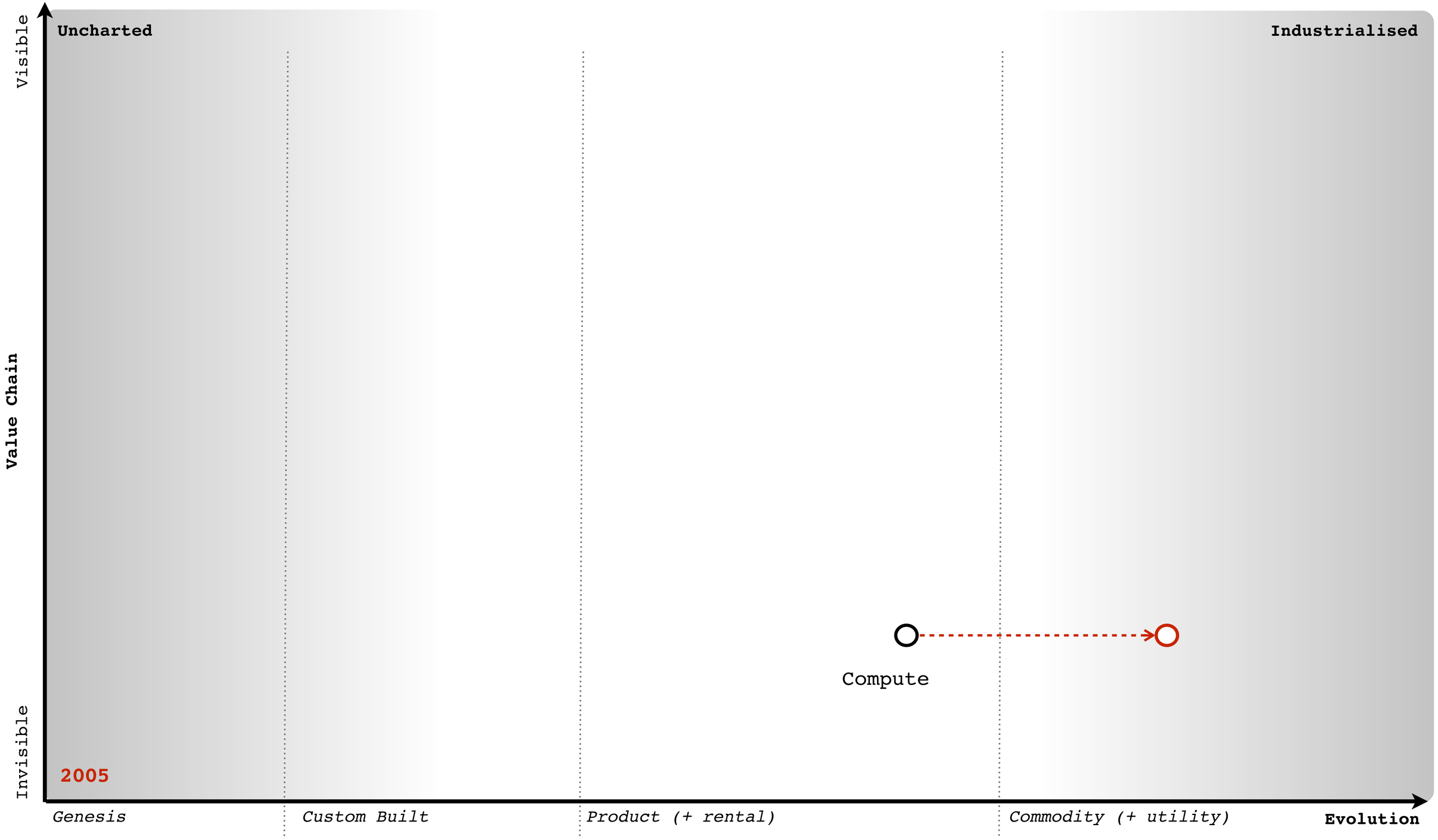
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

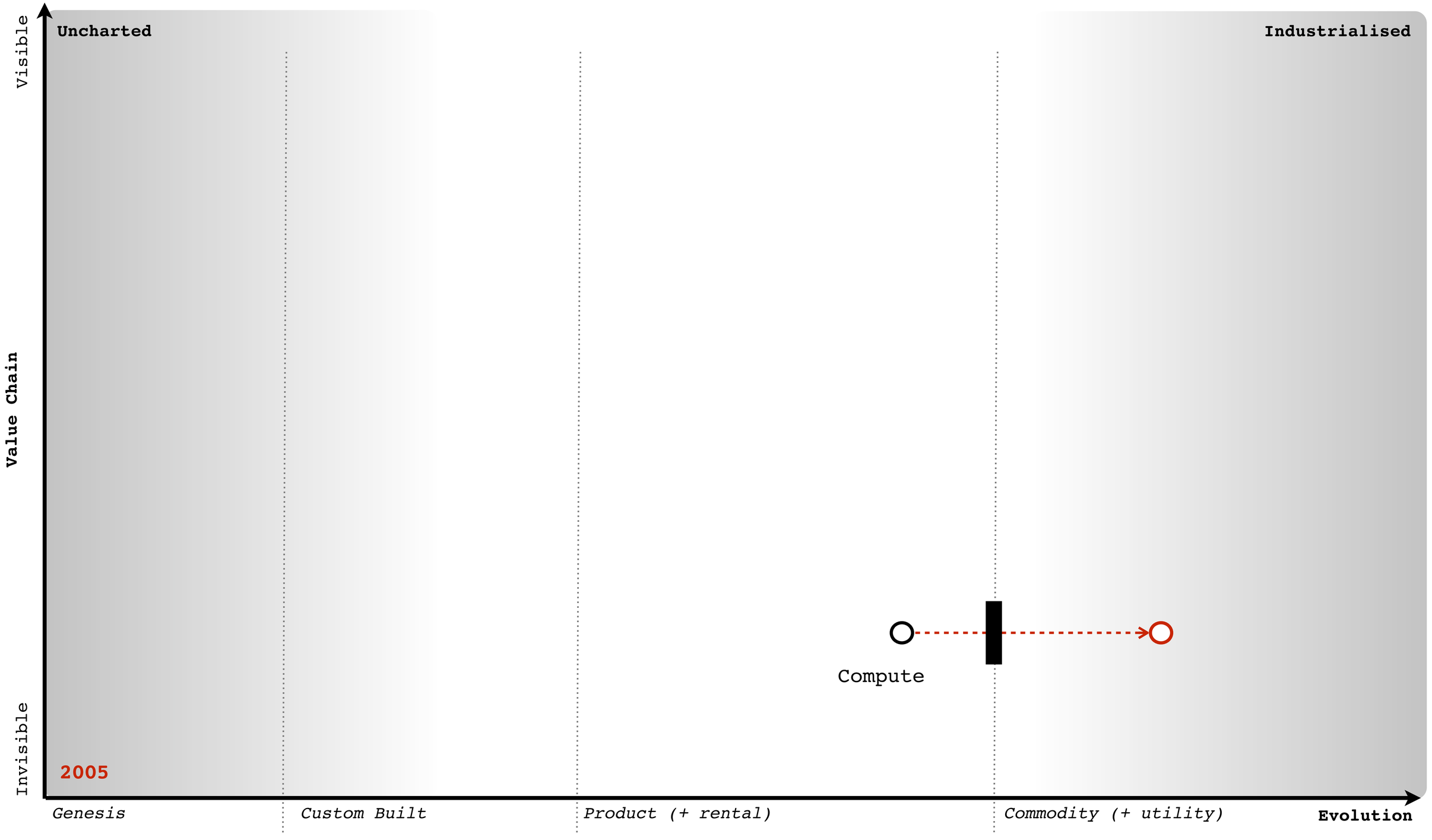

Uncharted
Industrialised
Visible
Invisible
Value Chain
User
+flow
Compute
Cost of racks
Order Server
Rack
Cost of mounting
Mount
Capital cost of equipment
Cost of modification
Modify
Cost of physical storage & handling
Server
Goods In
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

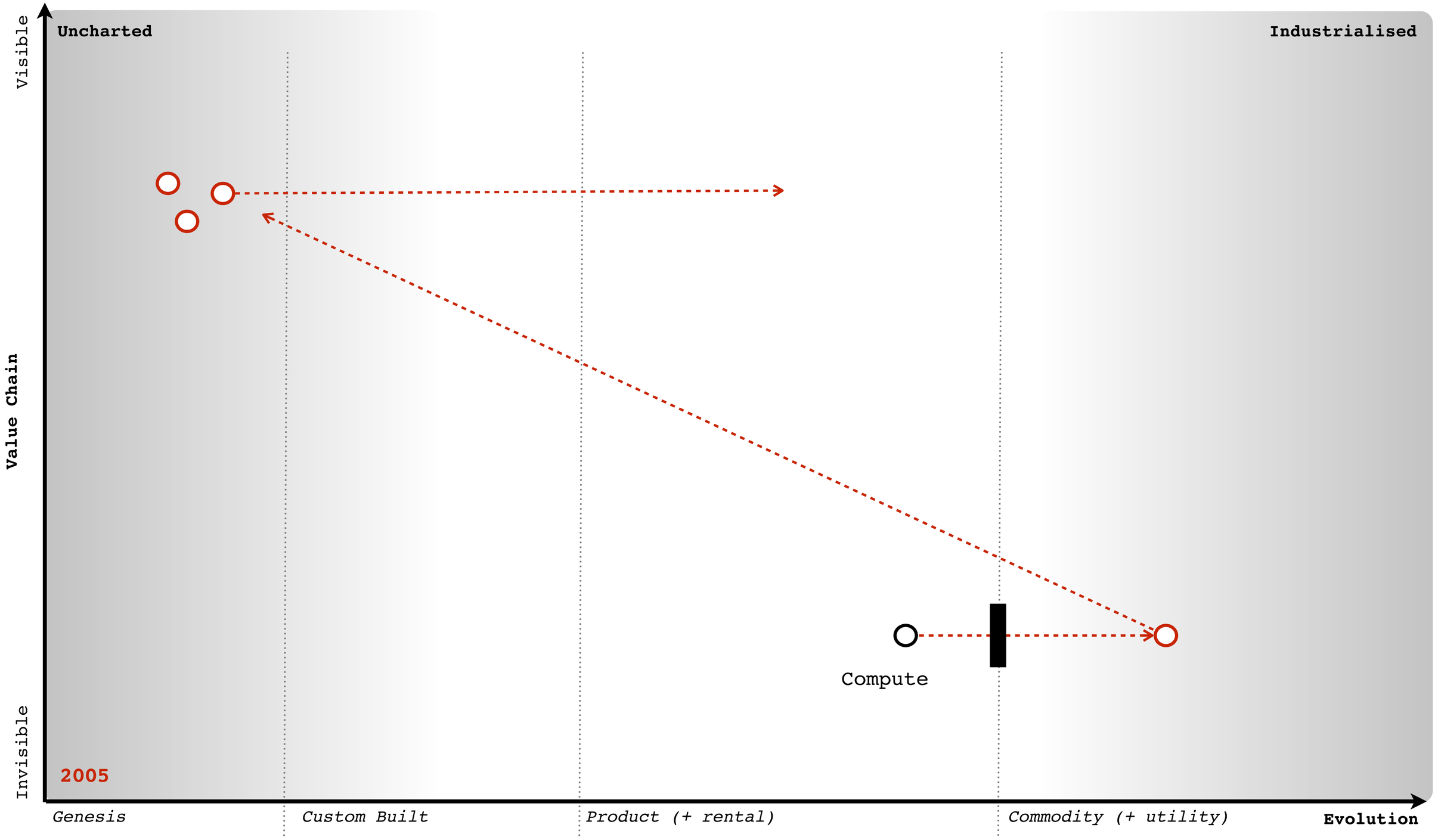



| | Current | Robotic |
|---|---|---|
| Cost per install failure | $2,500.00 | $2,500.00 |
| % likelihood of failure | 8.0% | 0.5% |
| Average cost of failure per install | $200 | $13 |
| Time to install (mins) | 120 | 30 |
| Labour cost per install | $129 | $11 |
| Annual number of install | 8,000 | 8,000 |
| | | |
| Total annual cost of Install | $1,028,571 | $85,714 |
| Total annual cost of failures | $1,600,000 | $100,000 |
| **Total annual cost** | **$2,628,571** | **$185,714** |
| | | |
| **Investment / Capex** | $0 | $2,000,000 |
| **ROI** | | < 1 year |

Getting Started
Competitor Analysis
Evolution
Flow
Weak Signals
Ecosystem
Type
Brexit


Visible
Uncharted
Industrialised
Value Chain
Compute
2005
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Value Chain
Invisible
2005
Compute
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Visible
Uncharted
Industrialised
Value Chain
Compute
2005
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

Visible

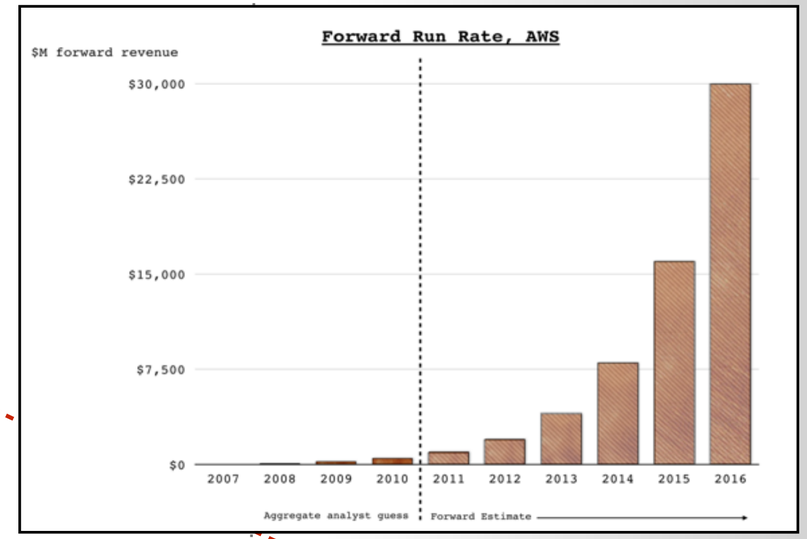
Invisible

Value Chain

Uncharted

Industrialised

Climatic pattern
Punctuated Equilibrium




Compute

2005

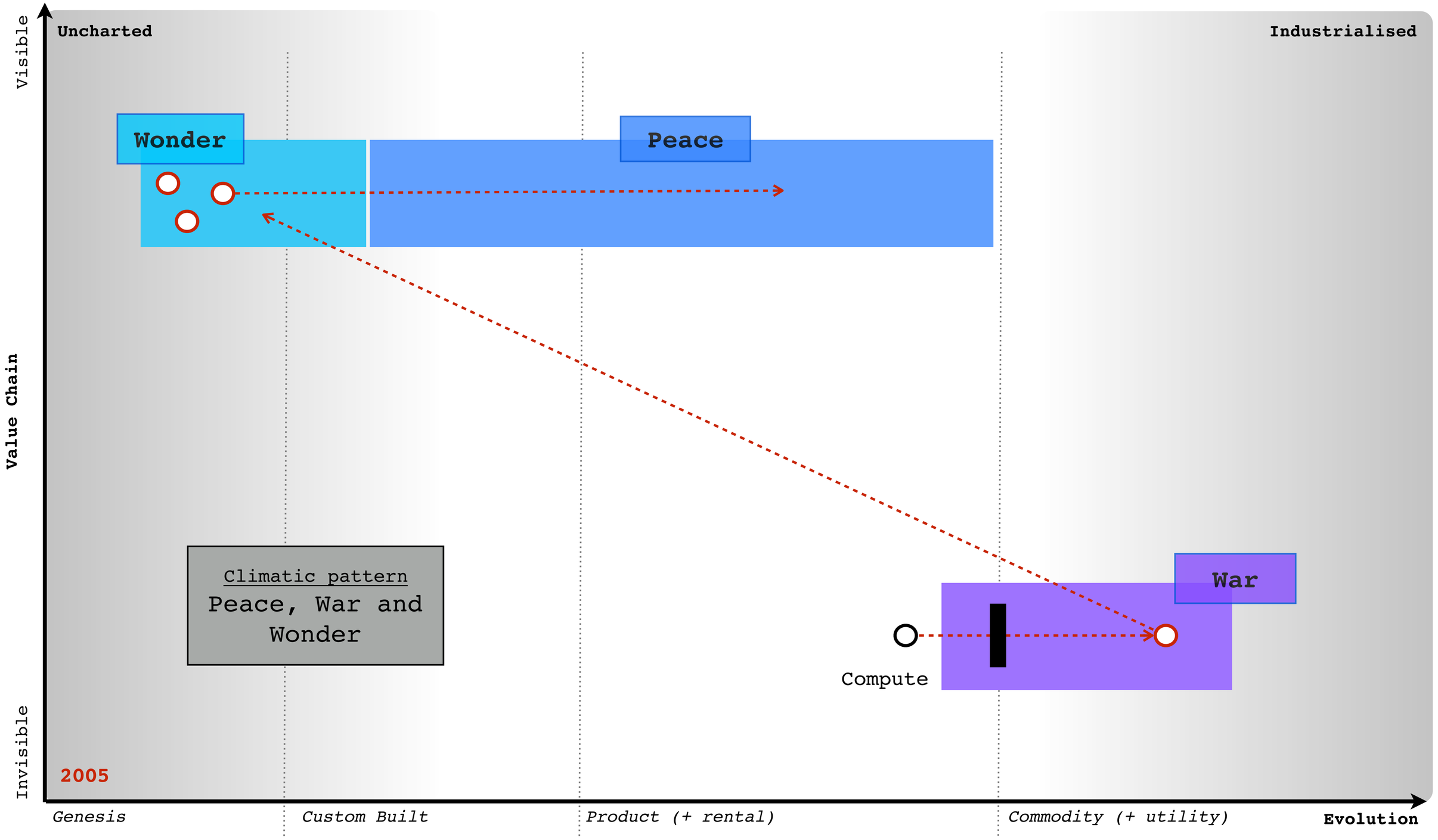
*Genesis*

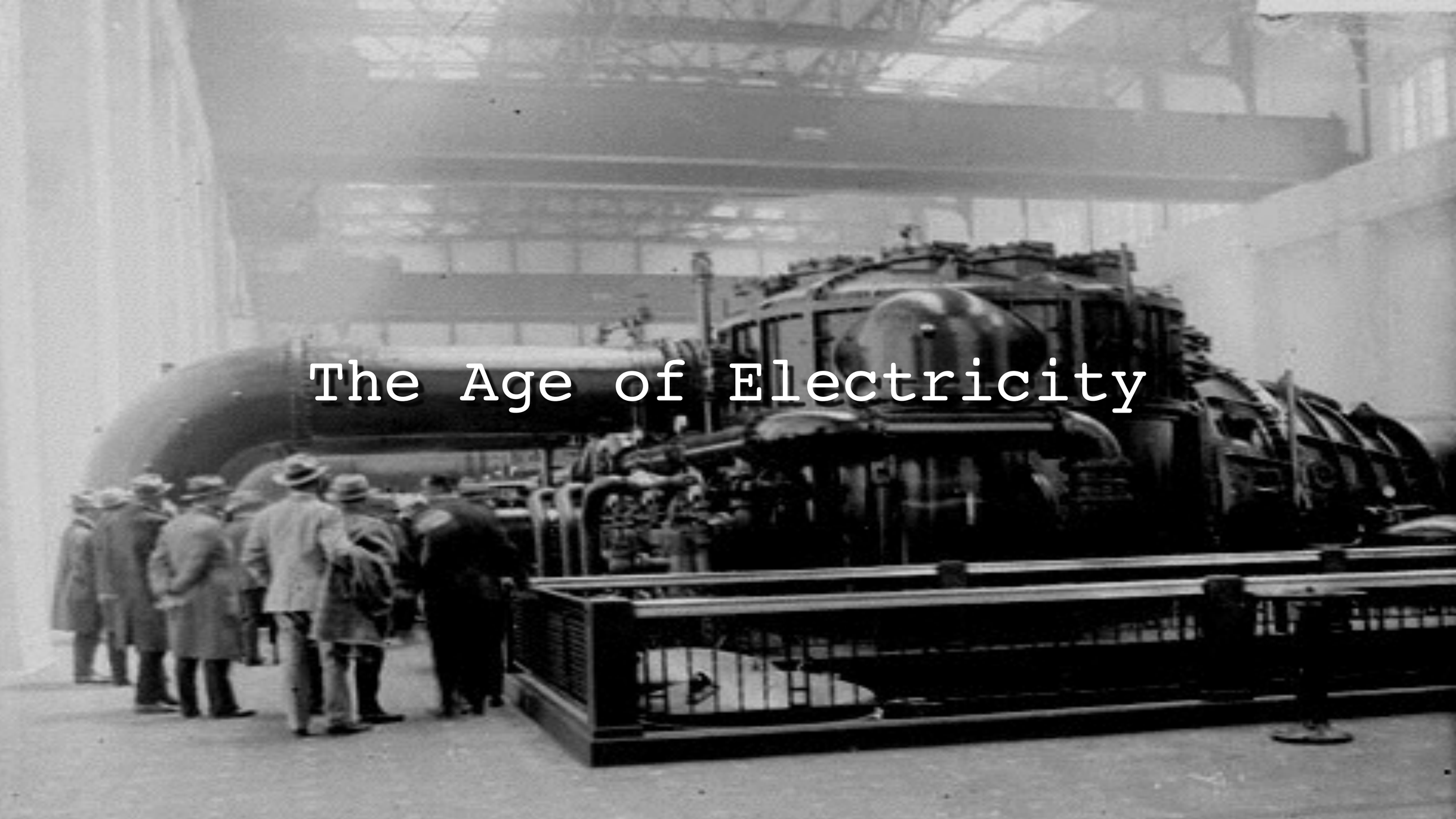
*Custom Built*

*Product (+ rental)*

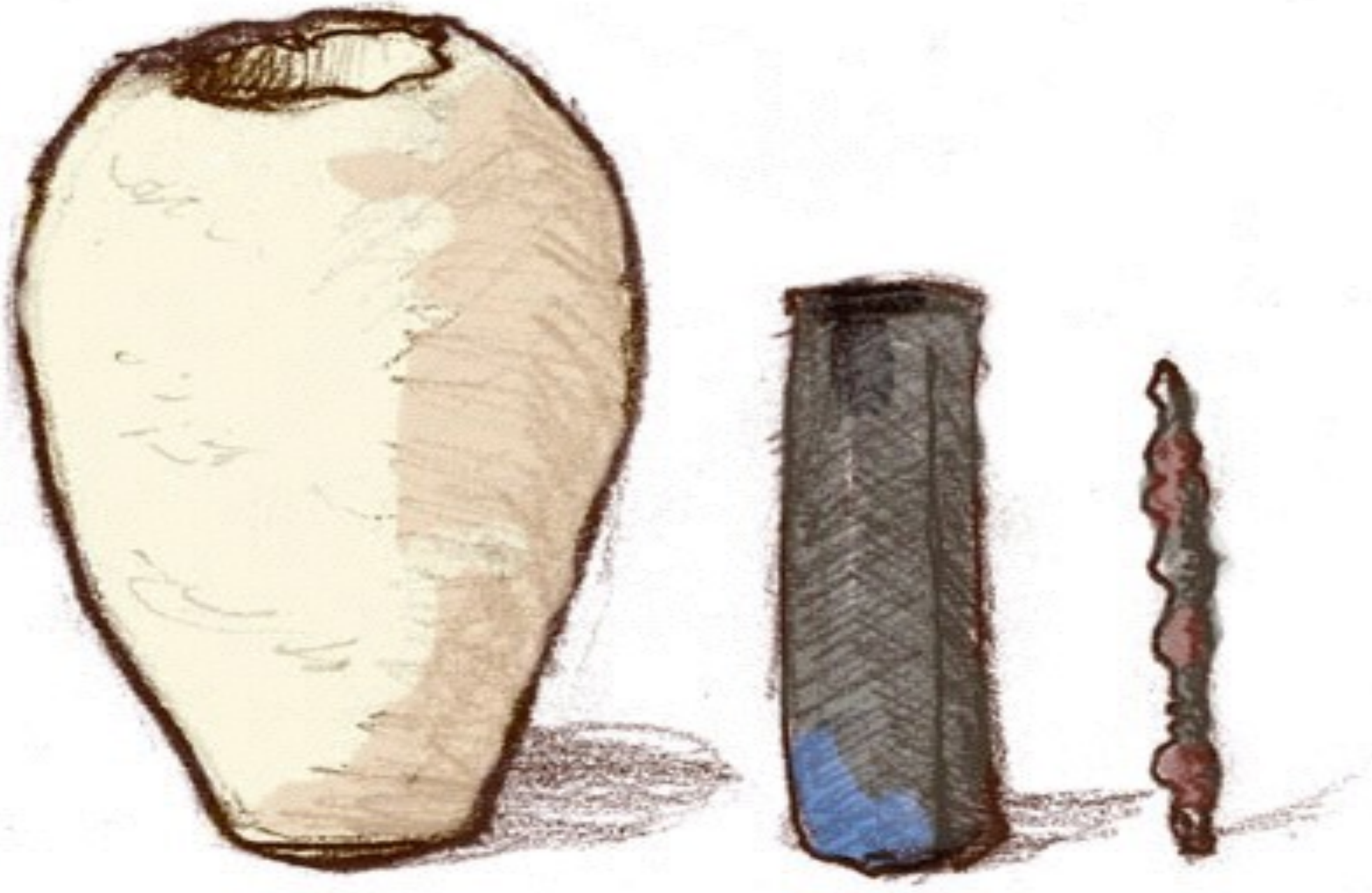
*Commodity (+ utility)*

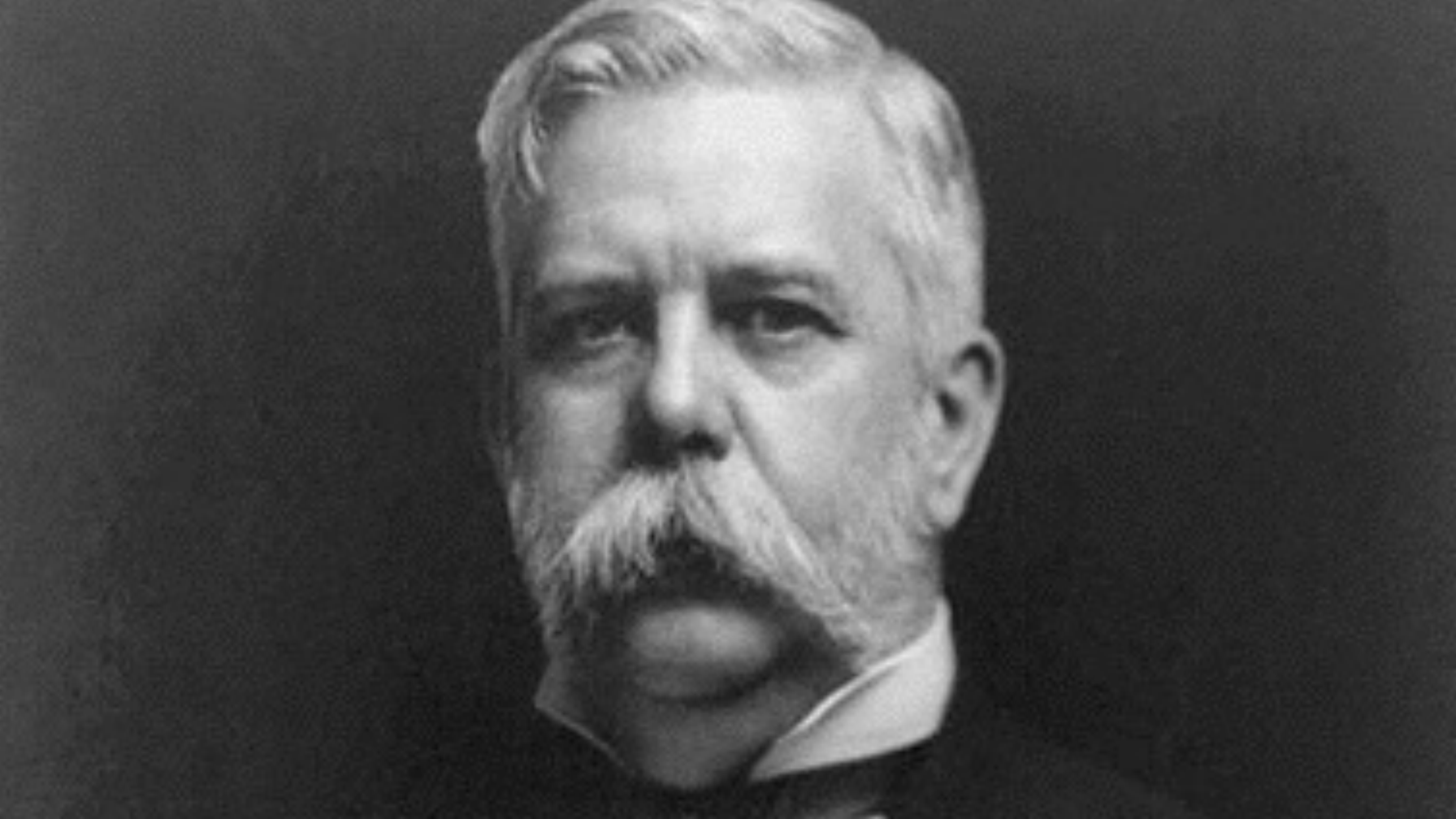
Evolution


Visible
Uncharted
Industrialised
Wonder
Peace
Climatic pattern
Peace, War and Wonder
War
Compute
Invisible
2005
Value Chain
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

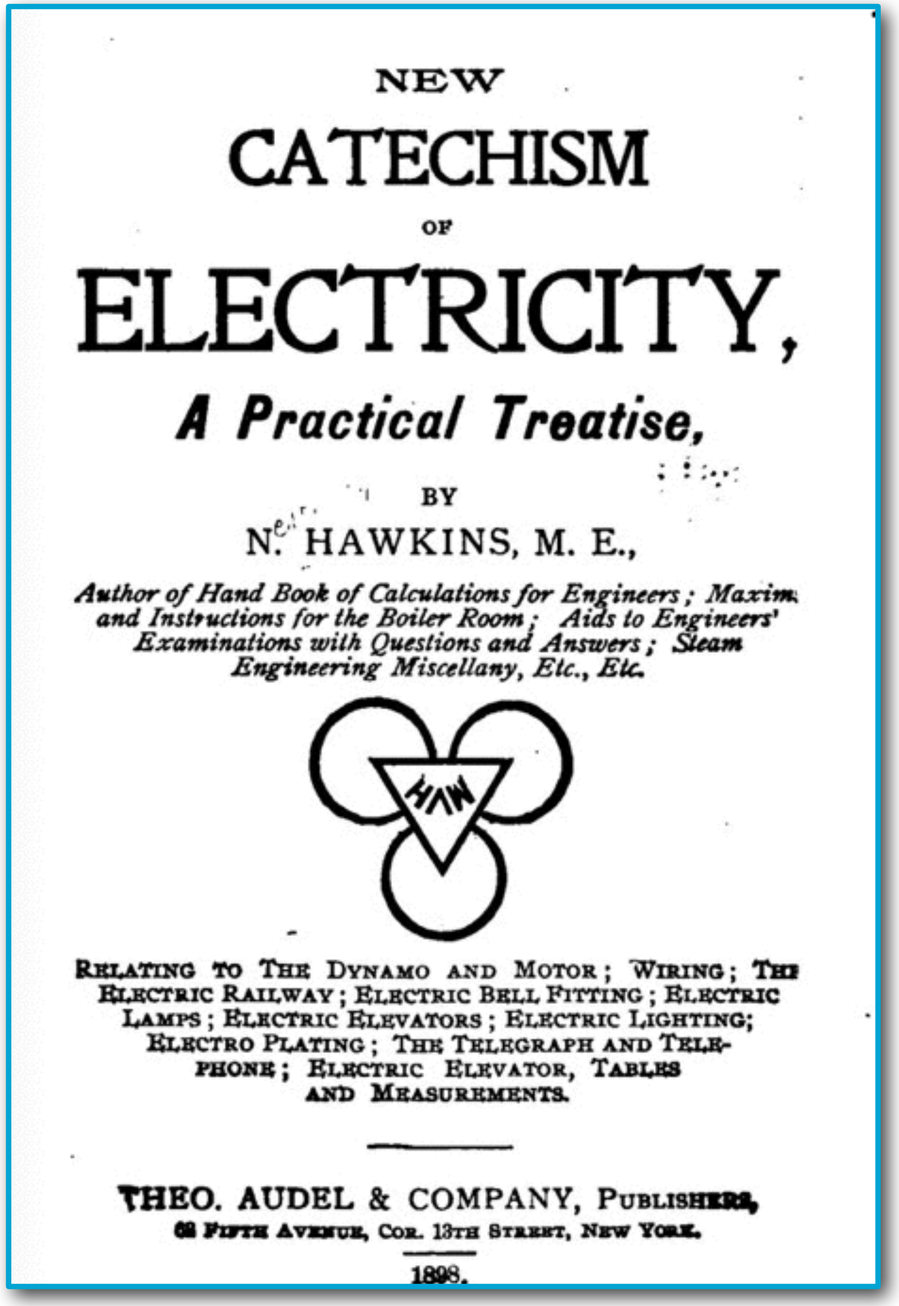


# The Age of Electricity





PETERS



NEW

# CATECHISM

OF

# ELECTRICITY,

## *A Practical Treatise,*

BY

N. HAWKINS, M. E.,

*Author of Hand Book of Calculations for Engineers; Maxims and Instructions for the Boiler Room; Aids to Engineers' Examinations with Questions and Answers; Steam Engineering Miscellany, Etc., Etc.*

RELATING TO THE DYNAMO AND MOTOR; WIRING; THE ELECTRIC RAILWAY; ELECTRIC BELL FITTING; ELECTRIC LAMPS; ELECTRIC ELEVATORS; ELECTRIC LIGHTING; ELECTRO PLATING; THE TELEGRAPH AND TELEPHONE; ELECTRIC ELEVATOR, TABLES AND MEASUREMENTS.

THEO. AUDEL & COMPANY, PUBLISHERS,
63 FIFTH AVENUE, COR. 13TH STREET, NEW YORK.

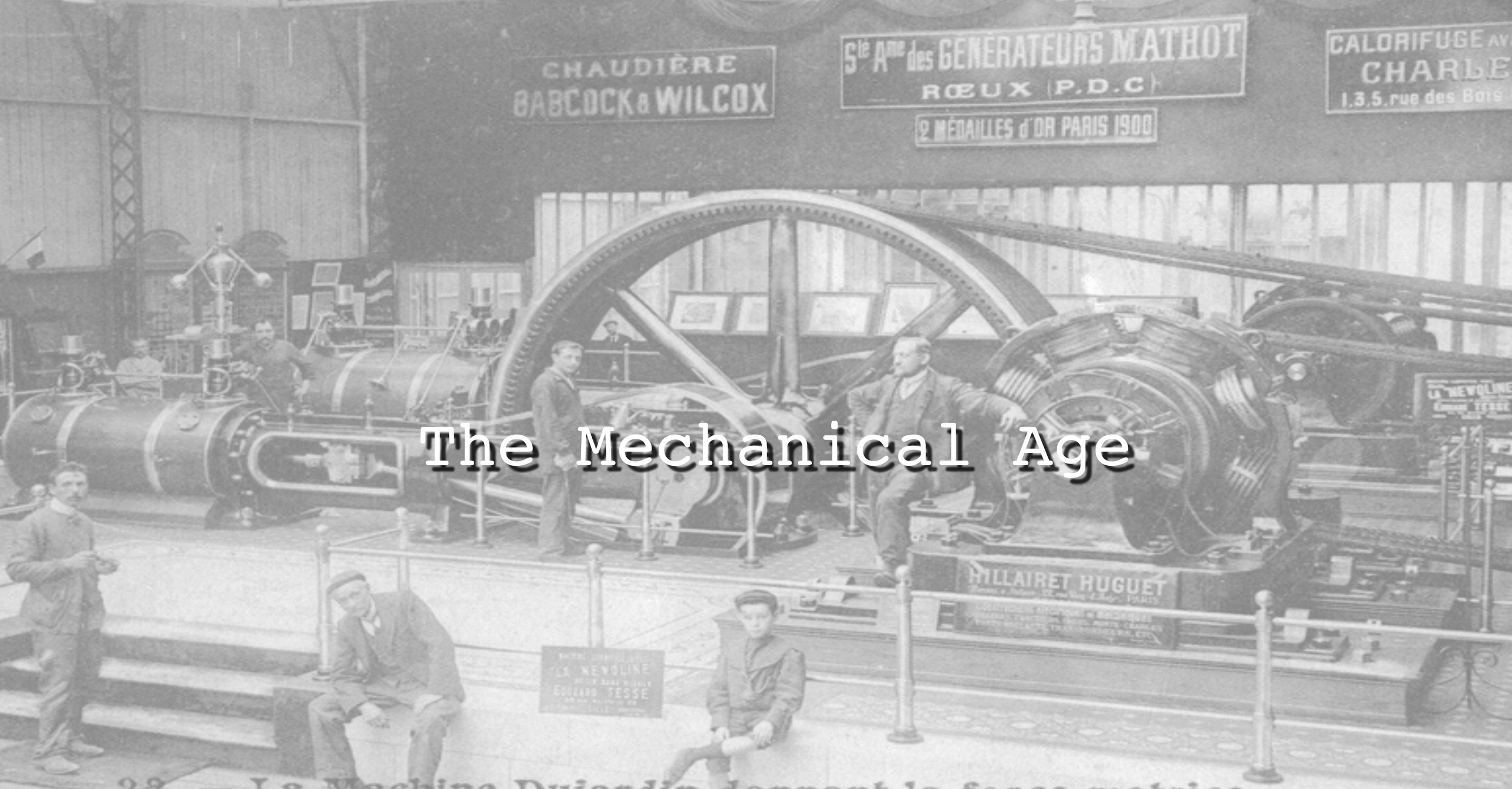
1898.

Dreams of magic, a time of wonder

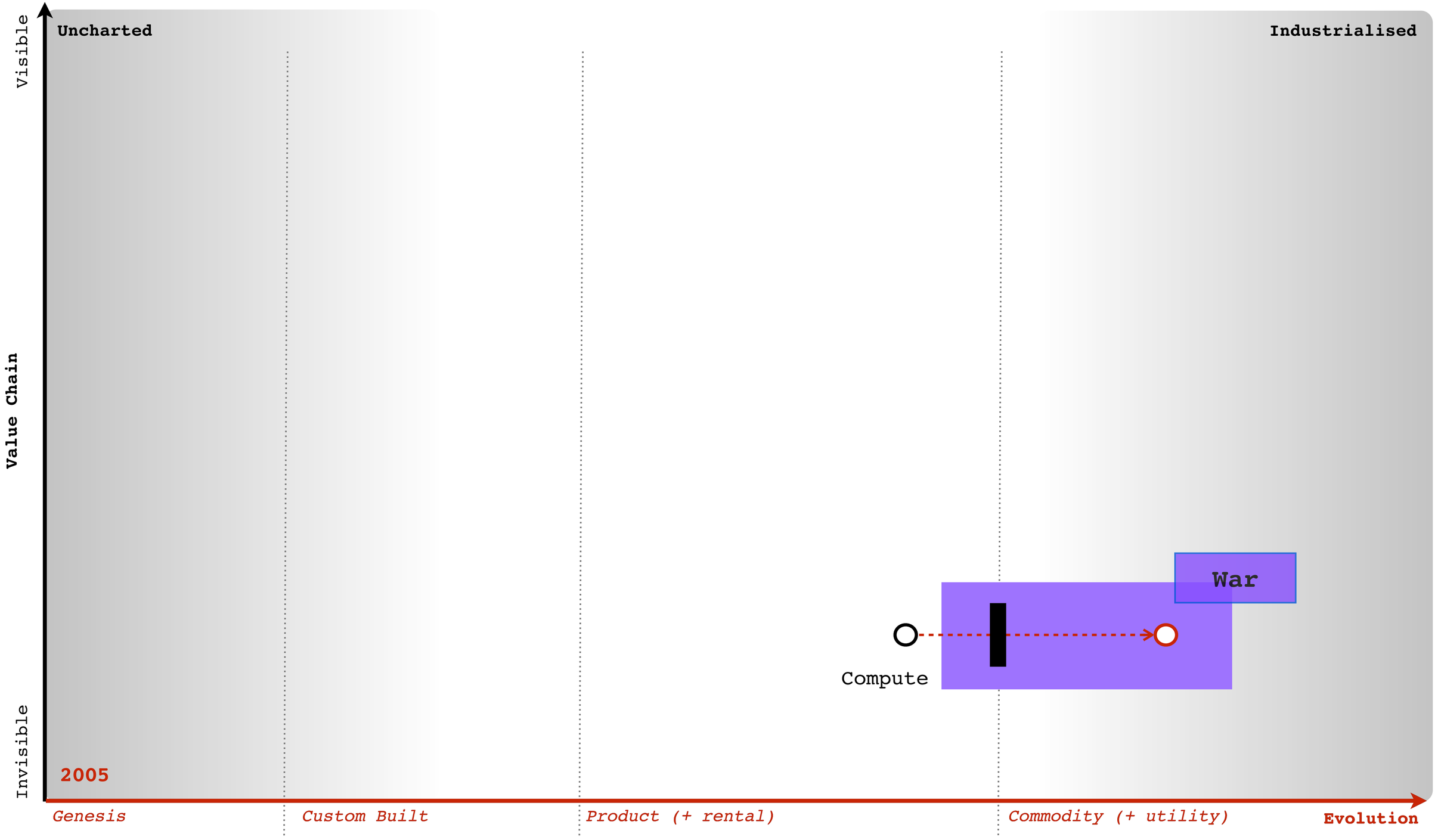
# Electricity is a powerful constitutional tonic

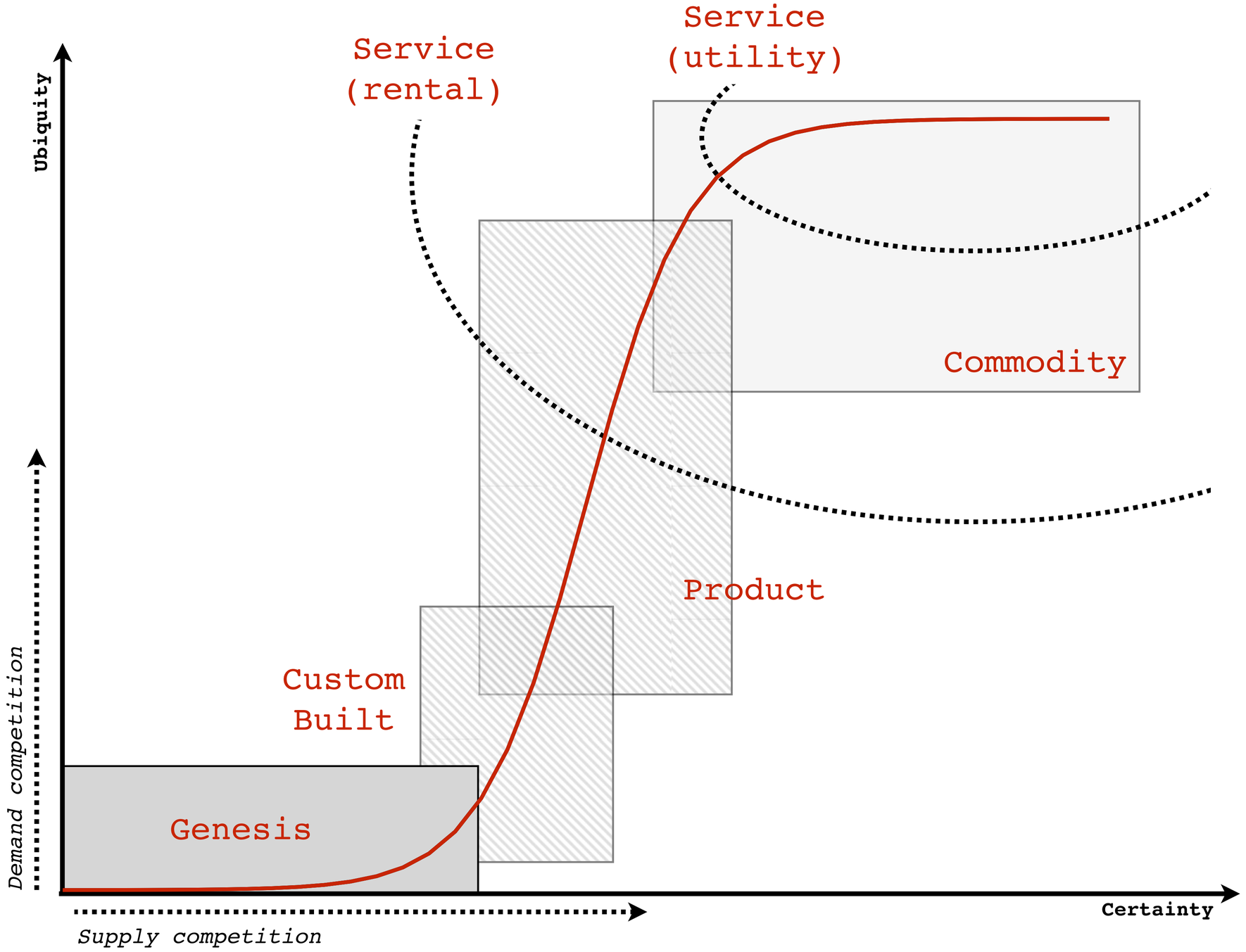
American Electrotherapeutic Association, 1892

# The Mechanical Age

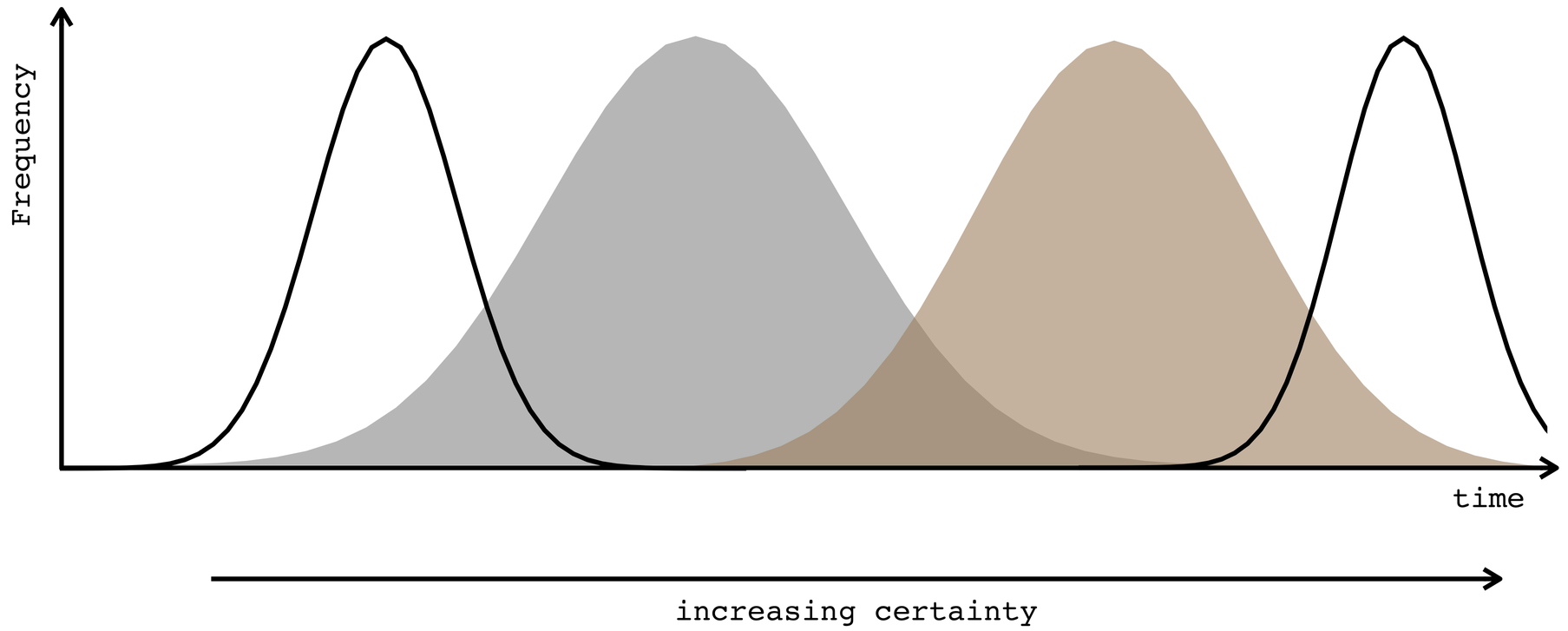



22. — La Machine Dujardin donnant la force motrice.
fiée par la « NEWOLINE » EDOUARD TESSE, huiles. - LILLE-PARIS


Visible
Uncharted
Industrialised
Value Chain
War
Compute
Invisible
2005
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Service
(rental)
Service
(utility)
Commodity
Product
Custom
Built
Genesis
Ubiquity
Demand competition
Supply competition
Certainty

| Stage | I | II (key) | III (key) | IV |
|---|---|---|---|---|
| Publication Type | **Wonder** | **building, construction** and **awareness** | **operation, maintenance** and **feature differences** | **use** |



# THE TELEPHONE
## *and How We Use It*

BELL TELEPHONE SYSTEM

1

## HOW TO TALK ON THE TELEPHONE

When using the telephone, hold the receiver close to your ear. The receiver is the end without the cord.

Talk directly into the mouthpiece.

This way.

Not this way.

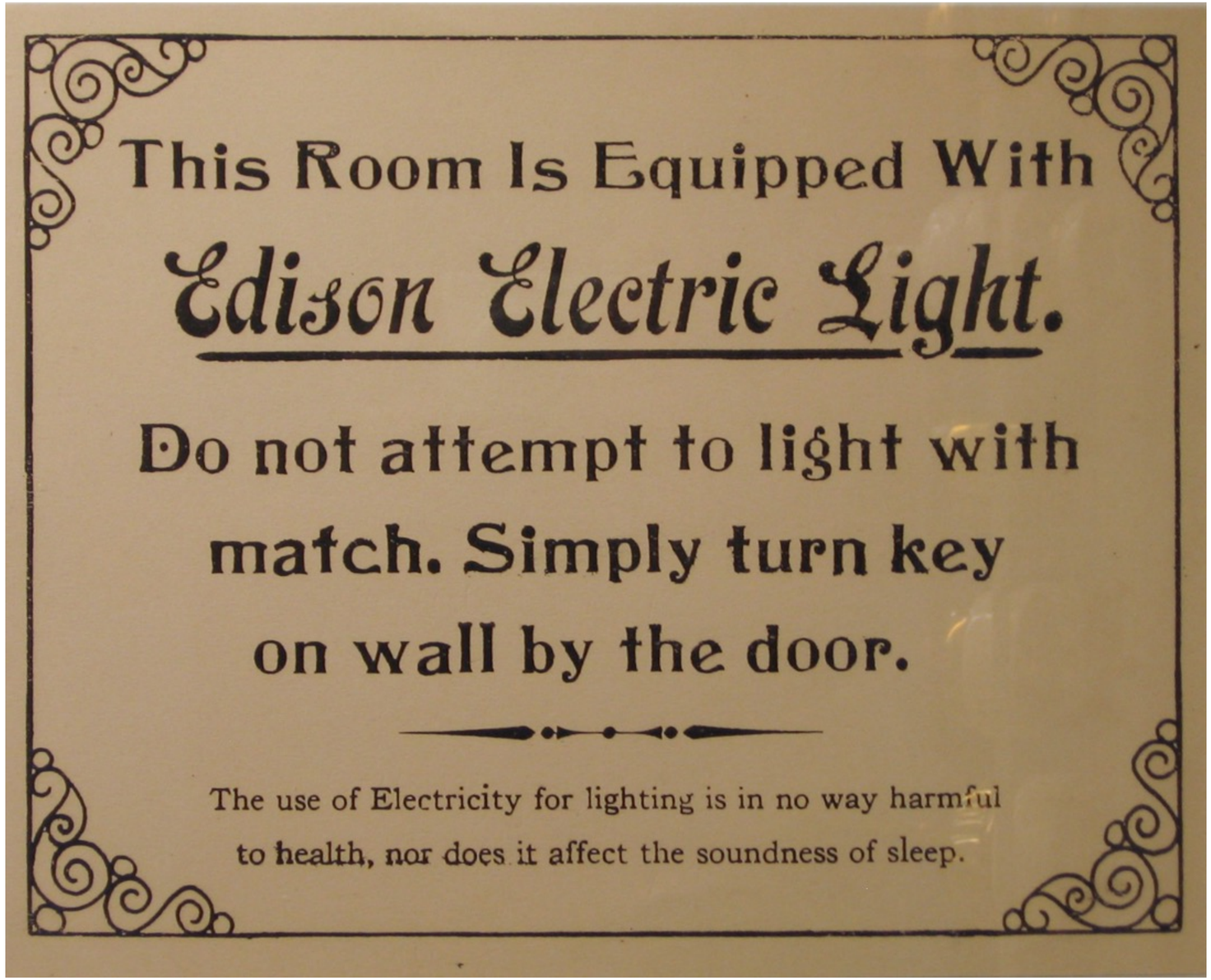
Not this way.

Speak in a natural, clear voice.

You do not have to shout. Speak as though the other person were in the same room.

5

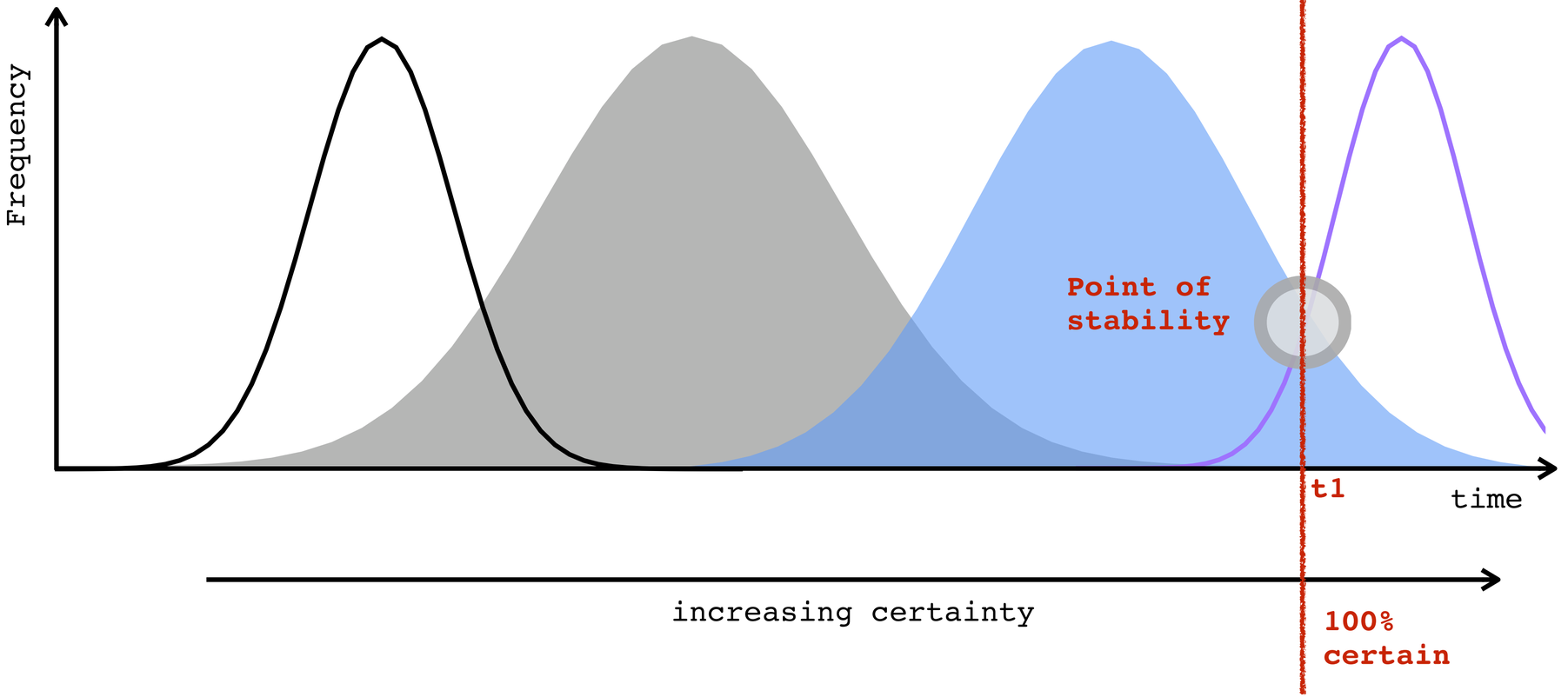
The Telephone and how we use it, (College of Education) Wayne University and Bell Telephone Systems, 1951
http://www.classicrotaryphones.com/the_telephone_and_how_we_use_it.pdf




By Marcin Wichary, SEP 2006, CC by 2.0
https://www.flickr.com/photos/mwichary/2276499672

Peace | War

| Stage | I | II (key) | III (key) | IV |
|---|---|---|---|---|
| Publication Type | **Wonder** | **building, construction** and **awareness** | **operation, maintenance** and **feature differences** | **use** |



| Points of Change | 2014 | 2015-2020 | 2020-2025 | 2025-2030 | 2030-2035 | 2035-2040 | 2040-2045 | 2045-2050 |
|---|---|---|---|---|---|---|---|---|
| | Now | Near | | | Far | | | |
| IaaS | War | | | | | | | |
| PaaS | War | | | | | | | |
| SaaS | War | | | | | | | |
| Big Data | | War | | | | | | |
| Robotics | | | War | | | | | |
| Currency (blockchain) | | | War | | | | | |
| Sensor as a Service | | | War | | | | | |
| IoT | | | | War | | | | |
| Immersive | | | | War | | | | |
| 3D printing | | | | War | | | | |
| Social Change | | | | War | | | | |
| GMO | | | | War | | | | |
| Genetic Engineering | | | | War | | | | |
| Intelligent Agents | | | | | War | | | |
| Printed Electronics | | | | | War | | | |
| Hybrid Printing | | | | | | War | | |
| Bio Manufacturing | | | | | | War | | |
| Epigenetics | | | | | | War | | |
| Materials | | | | | | War | | |

Unpredictable — Predictable

Weak signal analysis, 2014

| Points of Change | 2014 | 2015-2020 | 2020-2025 | 2025-2030 | 2030-2035 | 2035-2040 | 2040-2045 | 2045-2050 |
|---|---|---|---|---|---|---|---|---|
| | Now | Near | | | Far | | | |
| IaaS | War | | | | | | | |
| PaaS | War | | | | | | | |
| SaaS | War | | | | | | | |
| Big Data | | War | | | | | | |
| Robotics | | | War | | | | | |
| Currency (blockchain) | | | War | | | | | |
| Sensor as a Service | | | War | | | | | |
| IoT | | | | War | | | | |
| Immersive | | | | War | | | | |
| 3D printing | | | | War | | | | |
| Social Change | | | | War | | | | |
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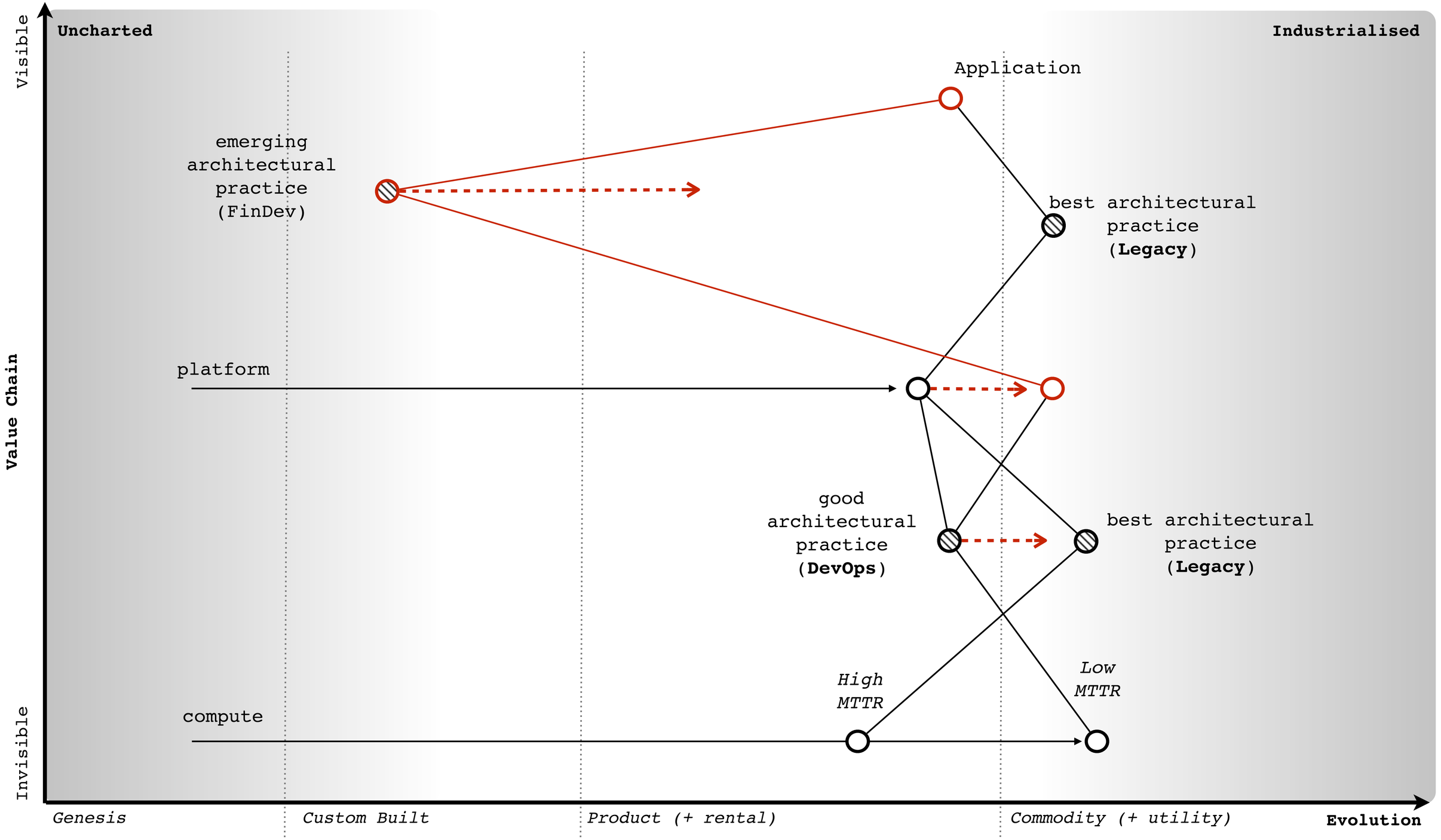
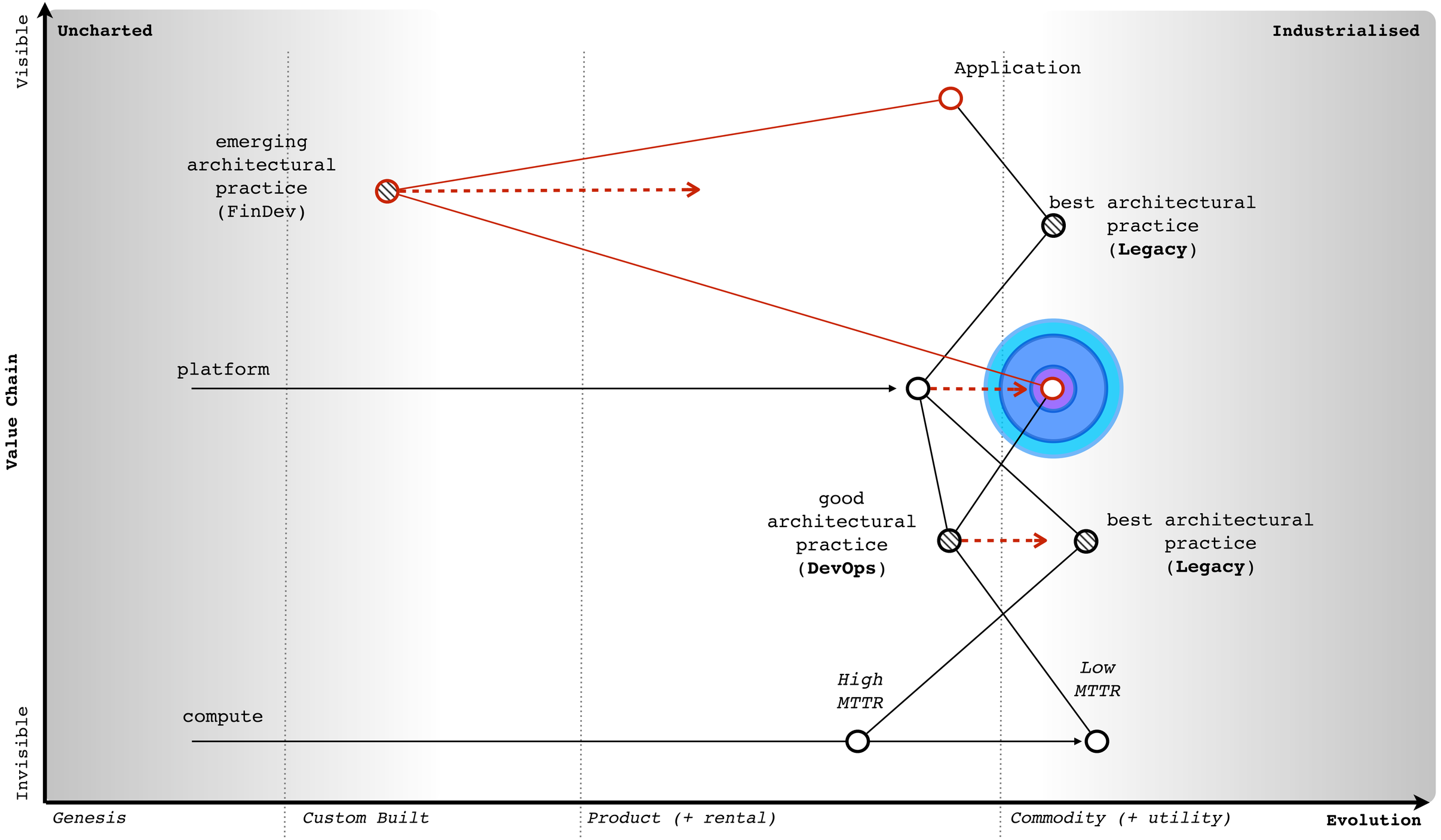
| Hybrid Printing | | | | | | War | | |
| Bio Manufacturing | | | | | | War | | |
| Epigenetics | | | | | | War | | |
| Materials | | | | | | War | | |

Unpredictable — Predictable

Weak signal analysis, 2014

Getting Started
Competitor Analysis
Evolution
Flow
Weak Signals
Ecosystem
Type
Brexit


Uncharted
Industrialised
Visible
Invisible
Value Chain
Application
emerging architectural practice (FinDev)
best architectural practice (Legacy)
platform
good architectural practice (DevOps)
best architectural practice (Legacy)
High MTTR
Low MTTR
compute
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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emerging
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(FinDev)
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(Legacy)
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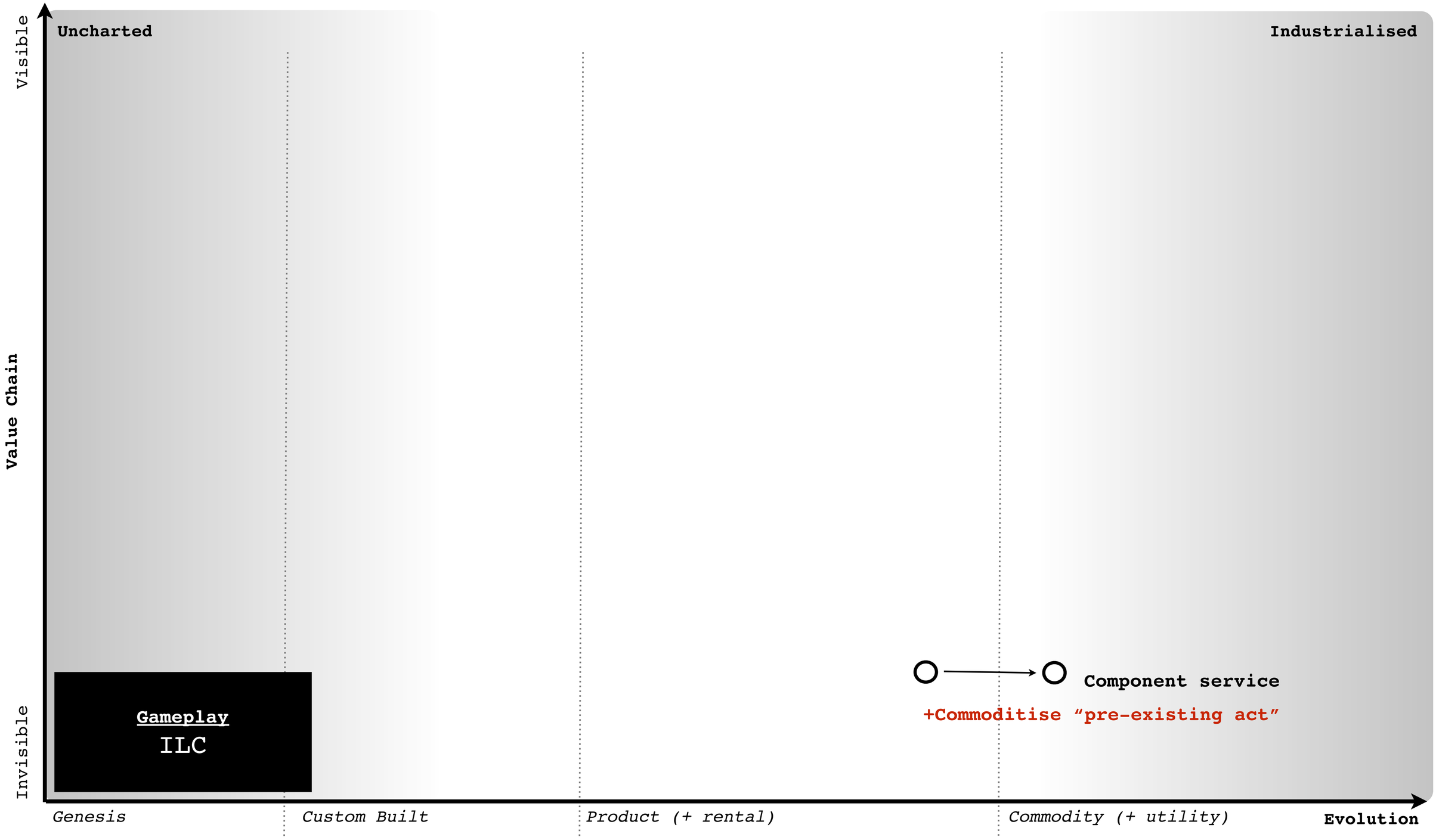
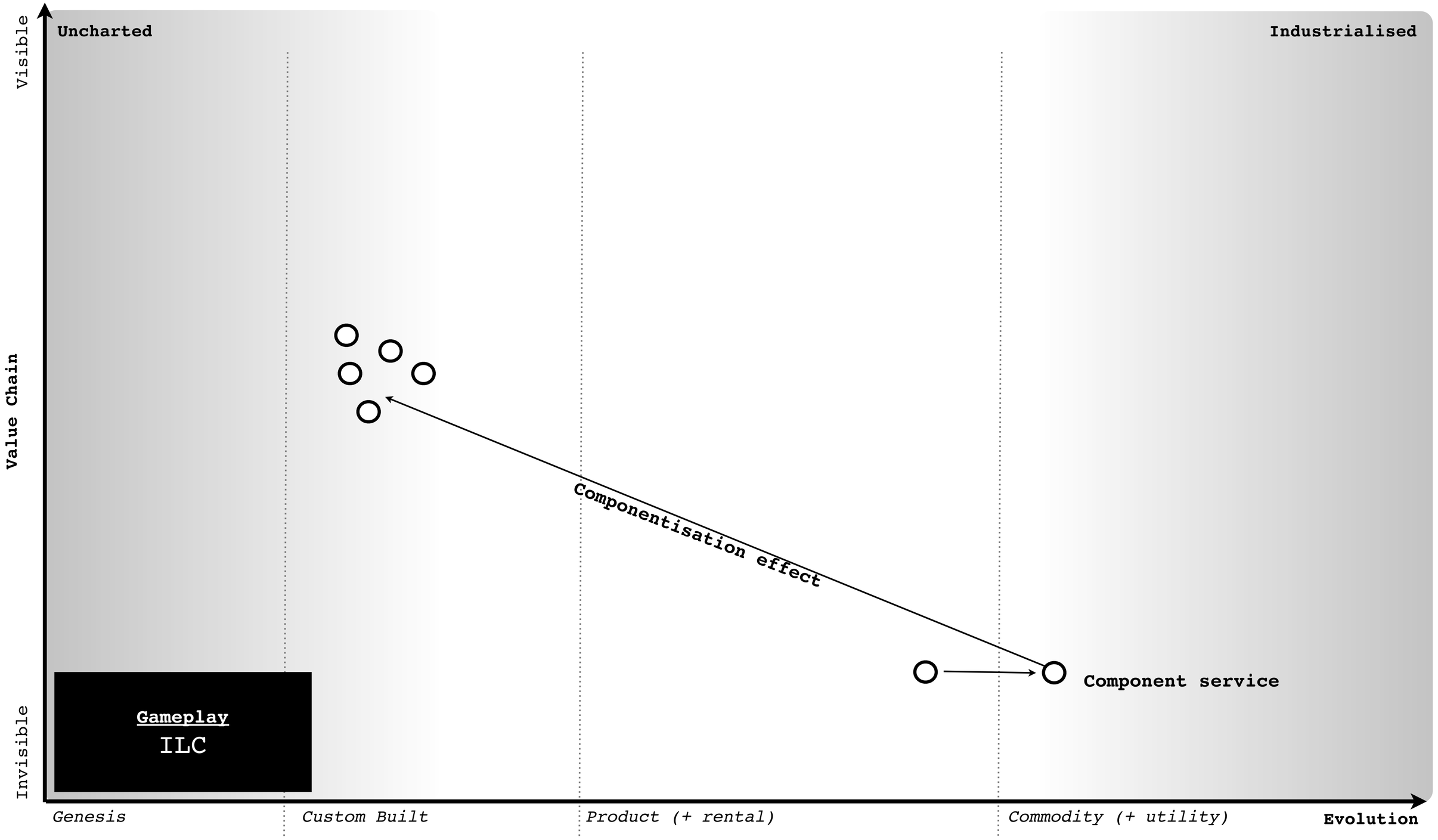
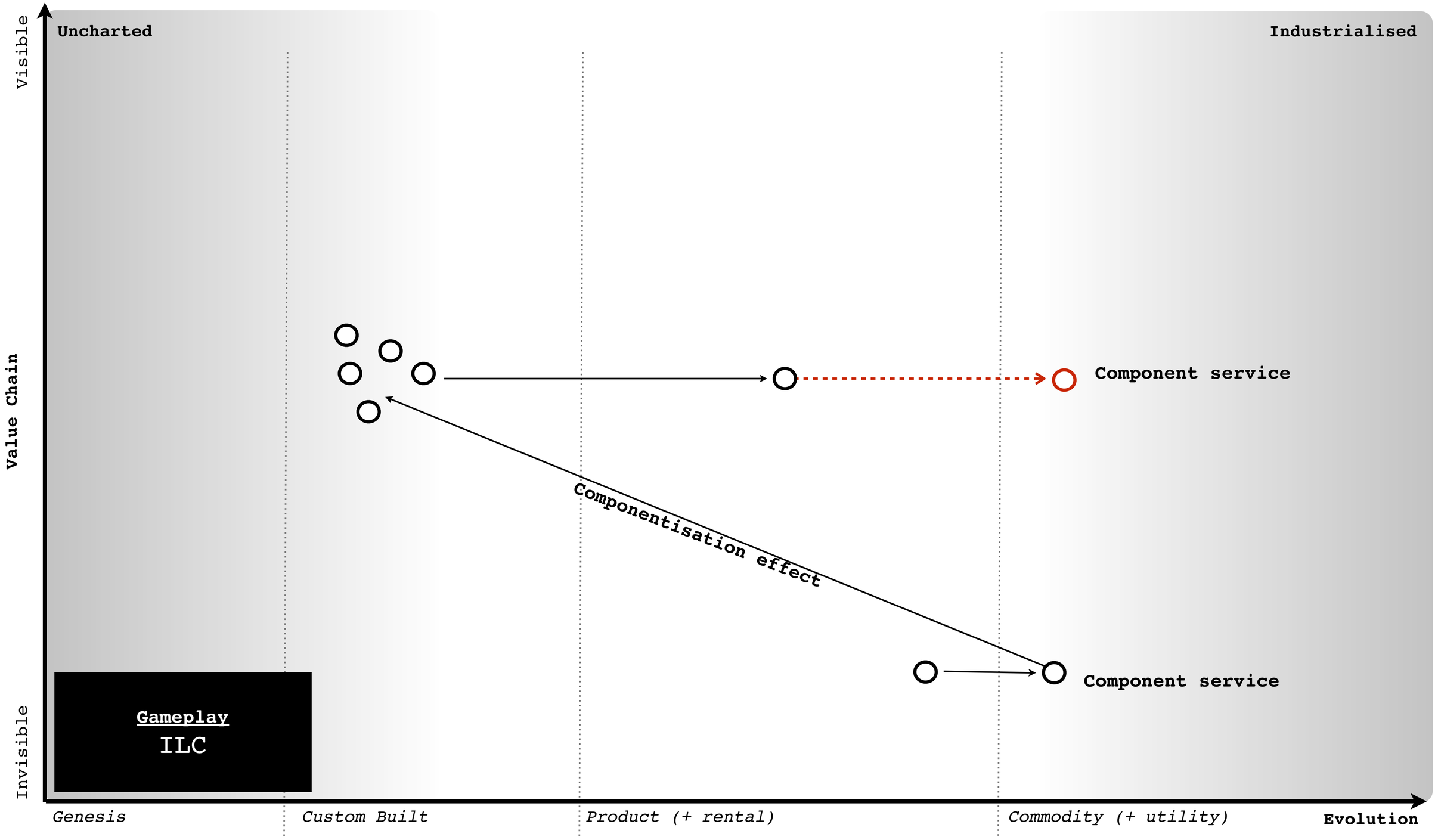

Visible
Uncharted
Industrialised
Value Chain
Gameplay
ILC
Component service
+Commoditise “pre-existing act”
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Value Chain
Componentisation effect
Component service
Gameplay
ILC
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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Component service
Componentisation effect
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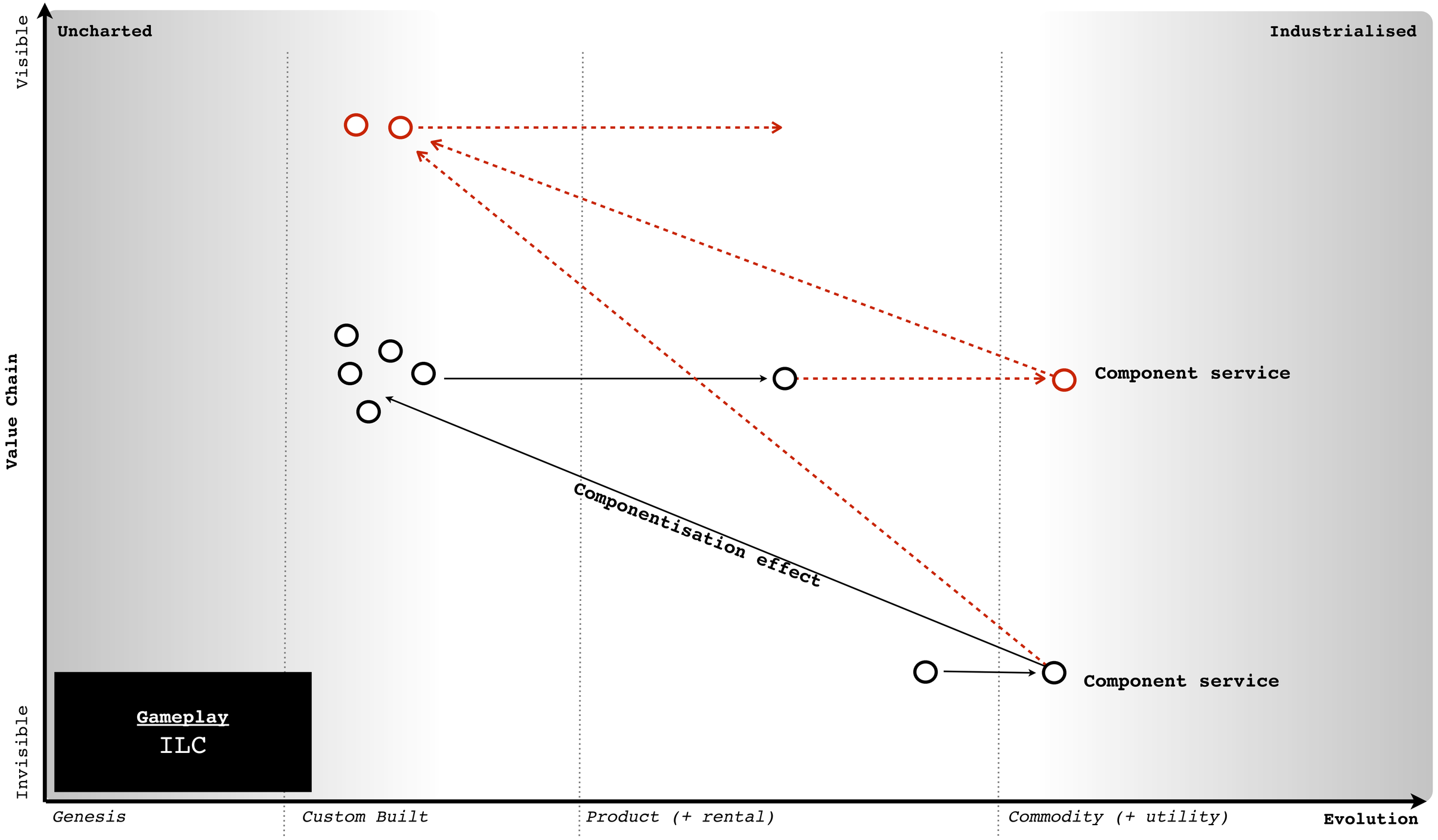
Evolution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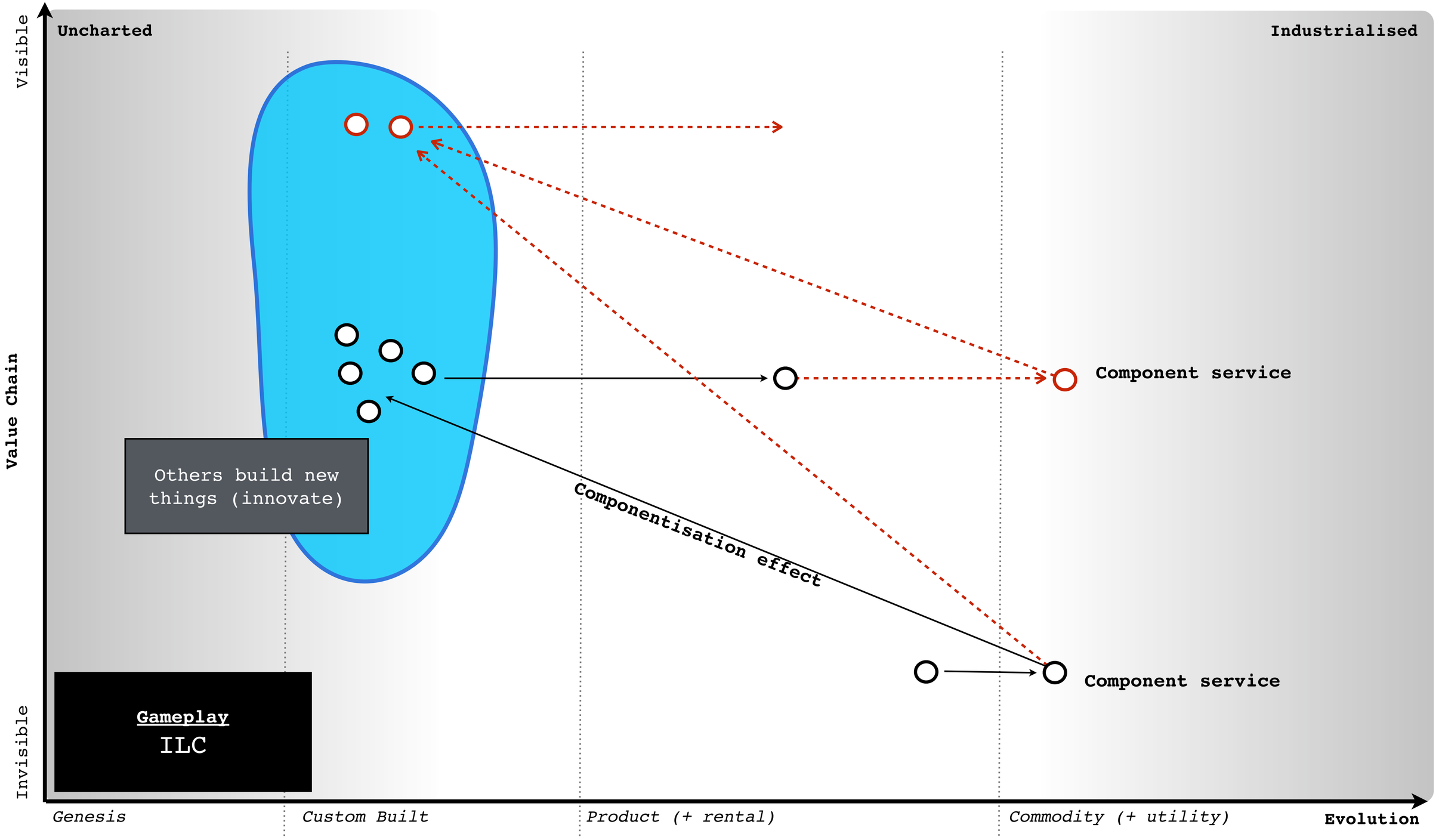
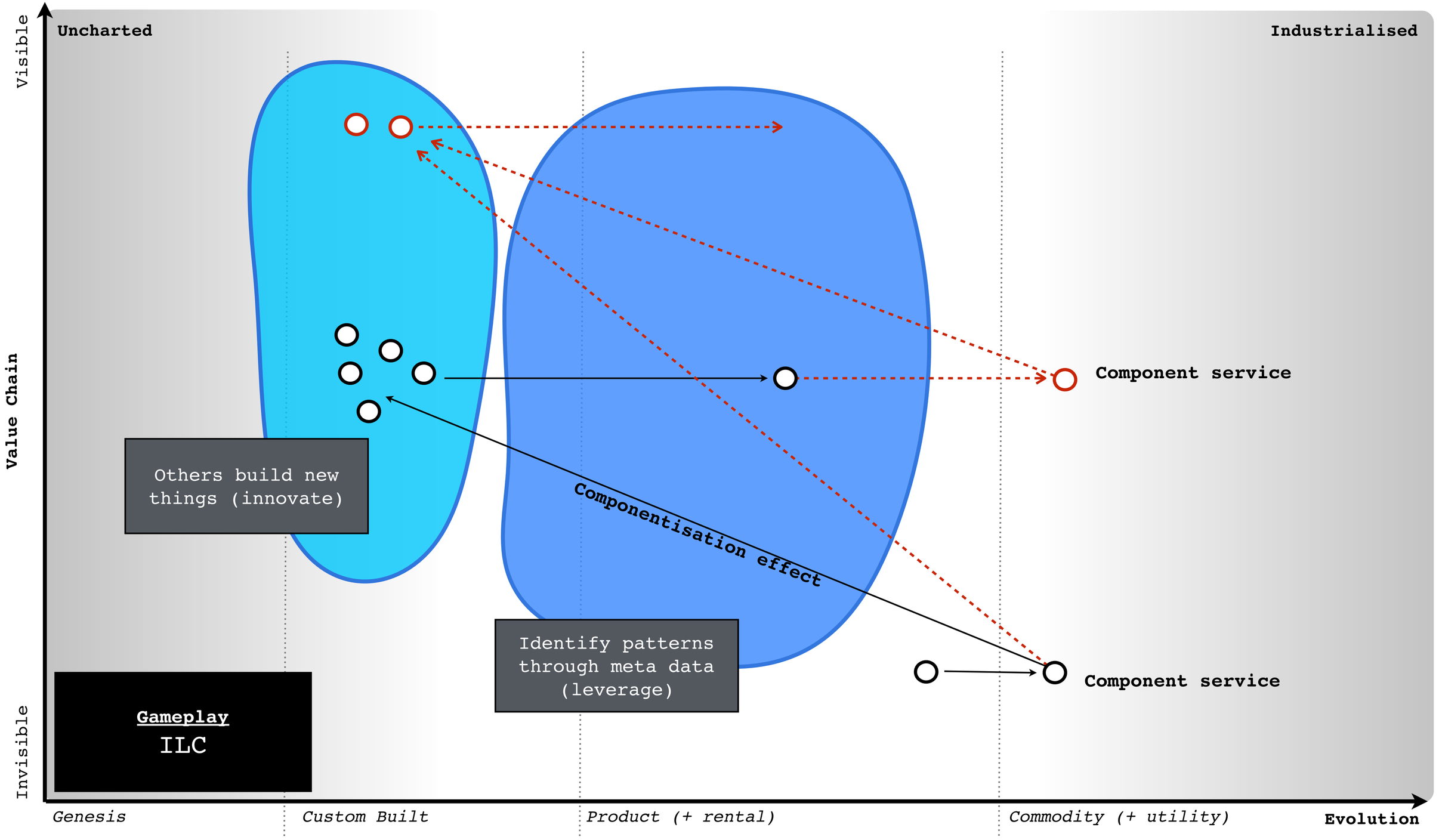
Evolution


Uncharted
Industrialised
Visible
Value Chain
Invisible
Others build new things (innovate)
Componentisation effect
Component service
Component service
Gameplay
ILC
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
Industrialised
Visible
Value Chain
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Component service
Others build new things (innovate)
Componentisation effect
Identify patterns through meta data (leverage)
Component service
Gameplay
ILC
Genesis
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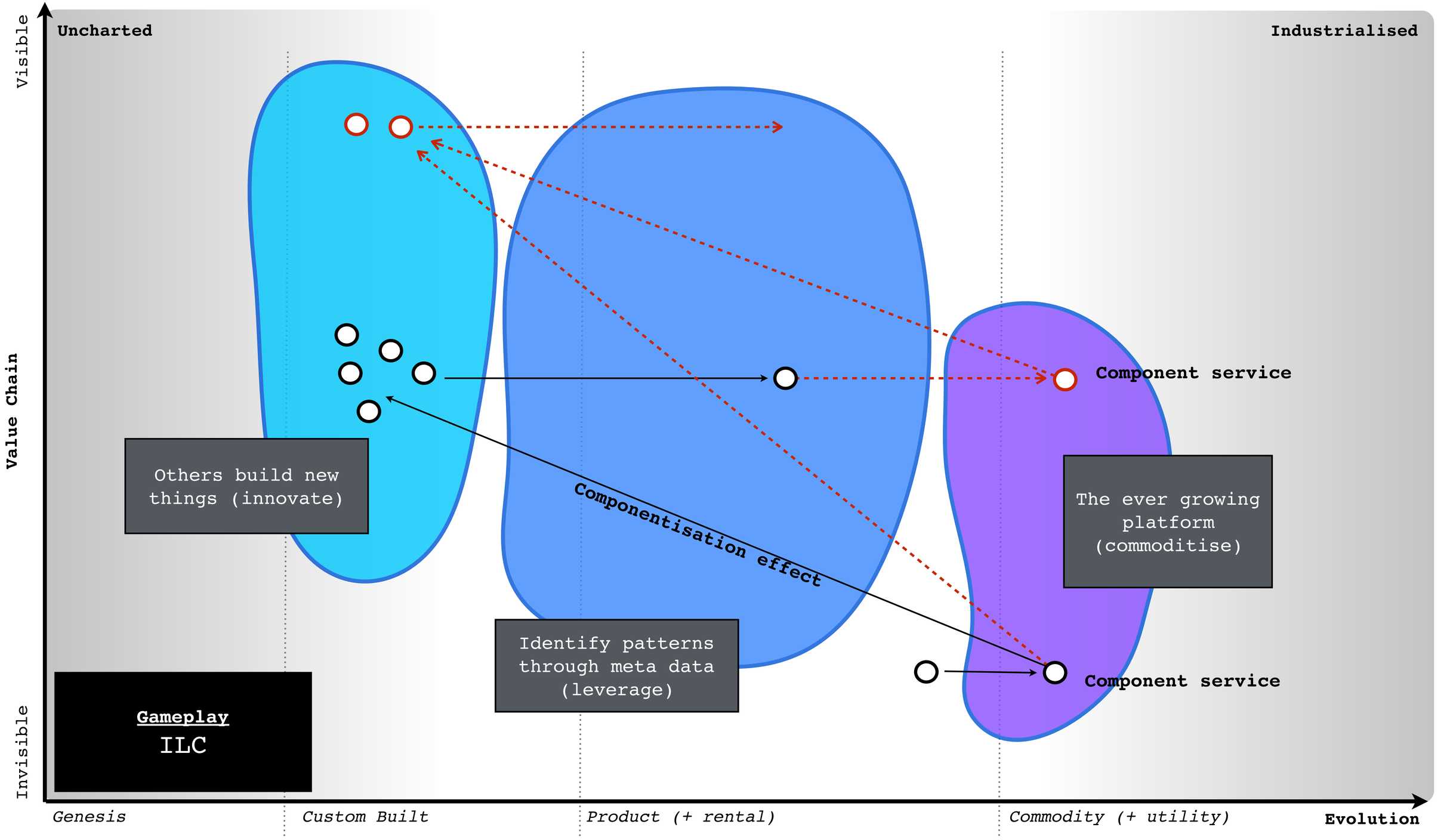
Evolution


Uncharted
Industrialised
Visible
Value Chain
Invisible
Component service
Others build new things (innovate)
Componentisation effect
The ever growing platform (commoditise)
Identify patterns through meta data (leverage)
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Product (+ rental)
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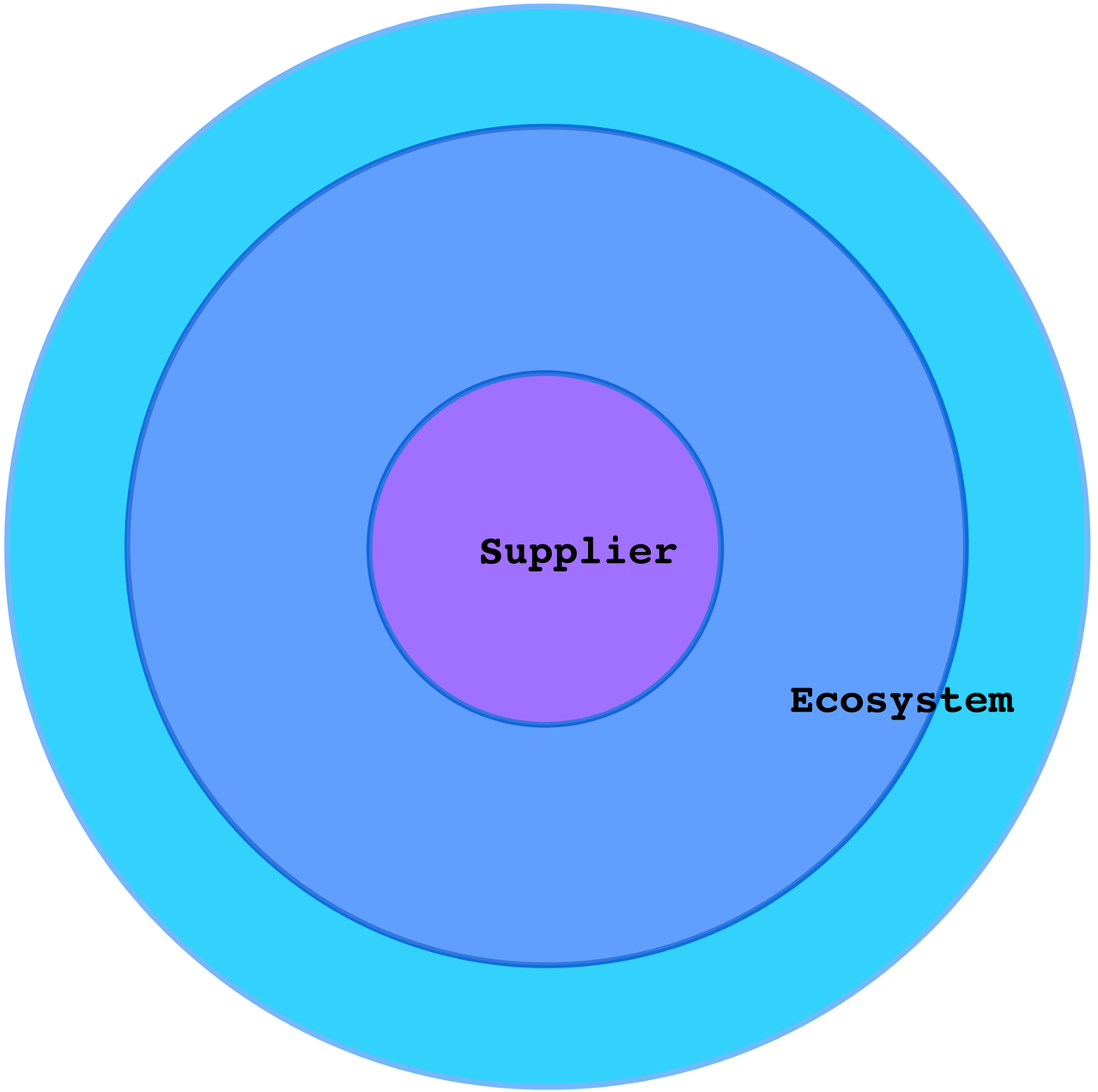
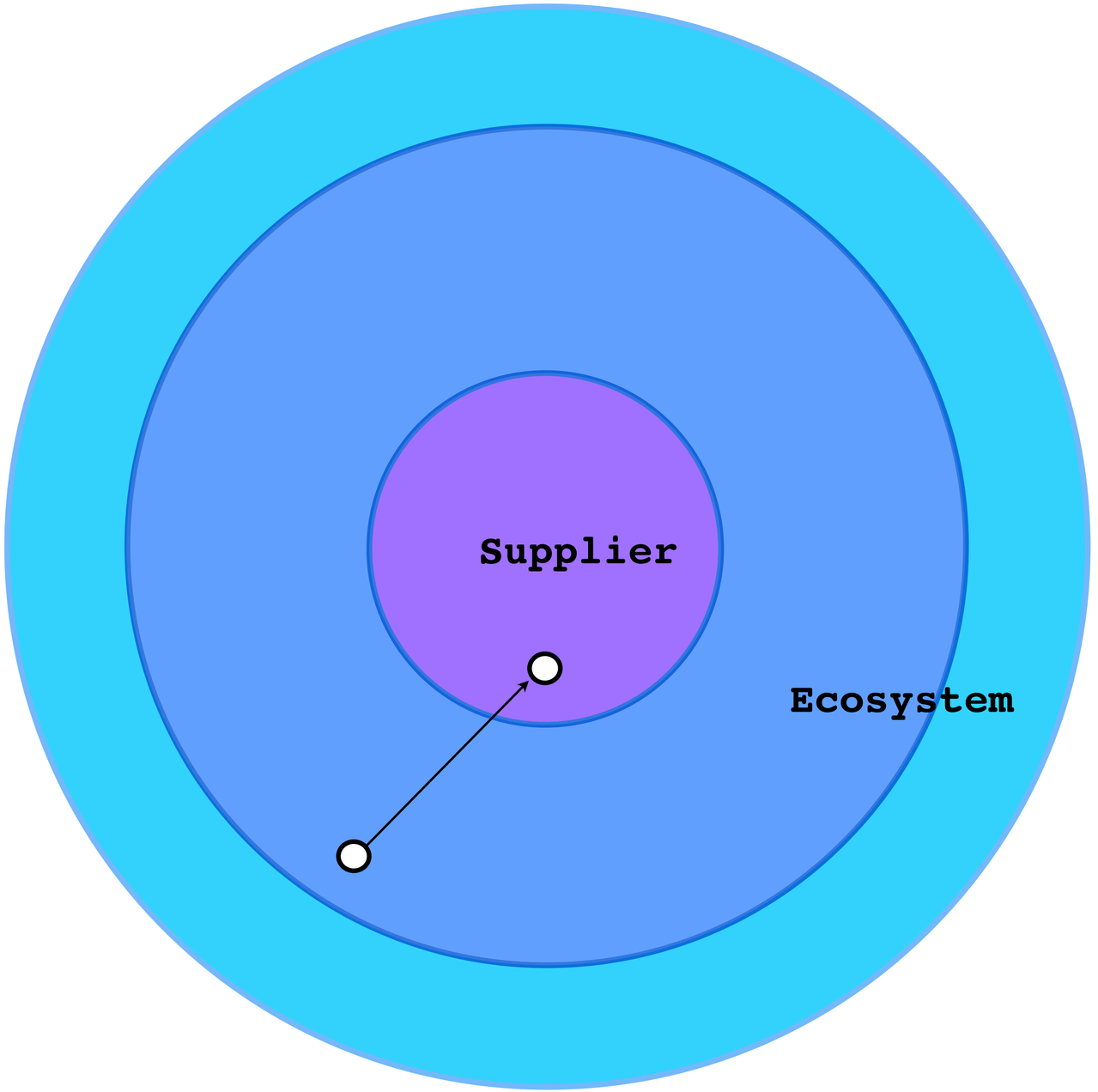
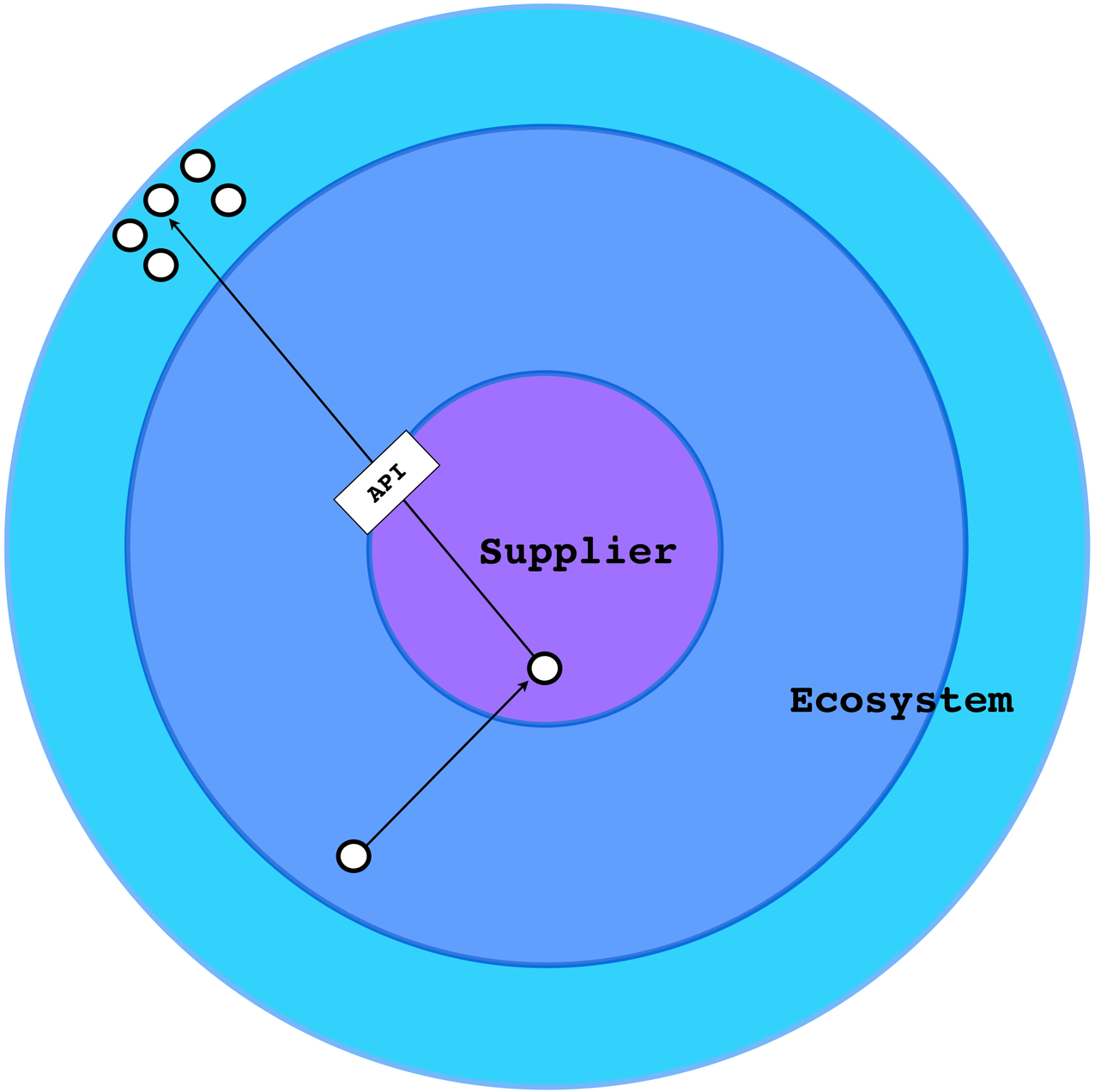
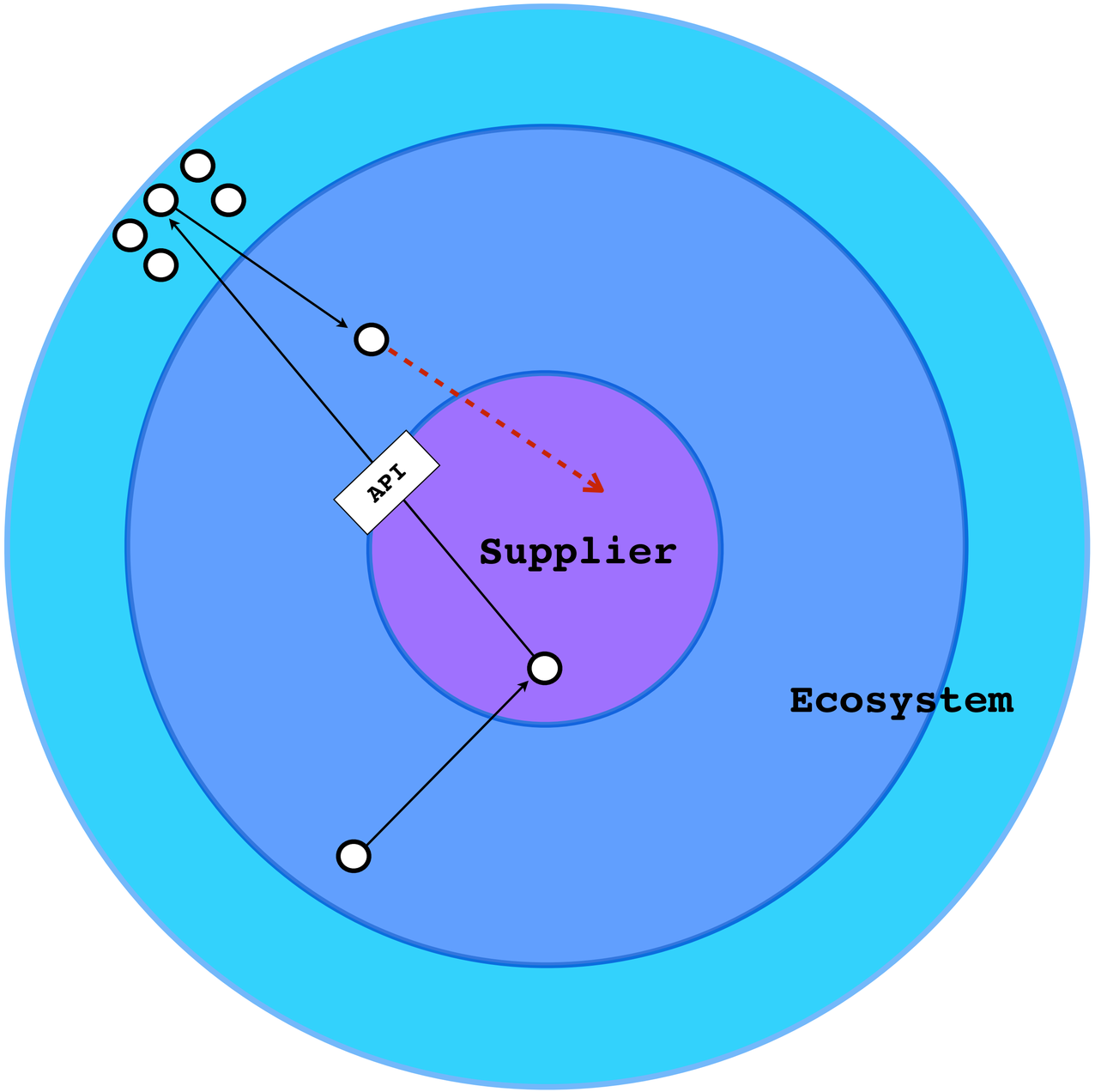
Evolution


Supplier
Ecosystem


Supplier
Ecosystem


API
Supplier
Ecosystem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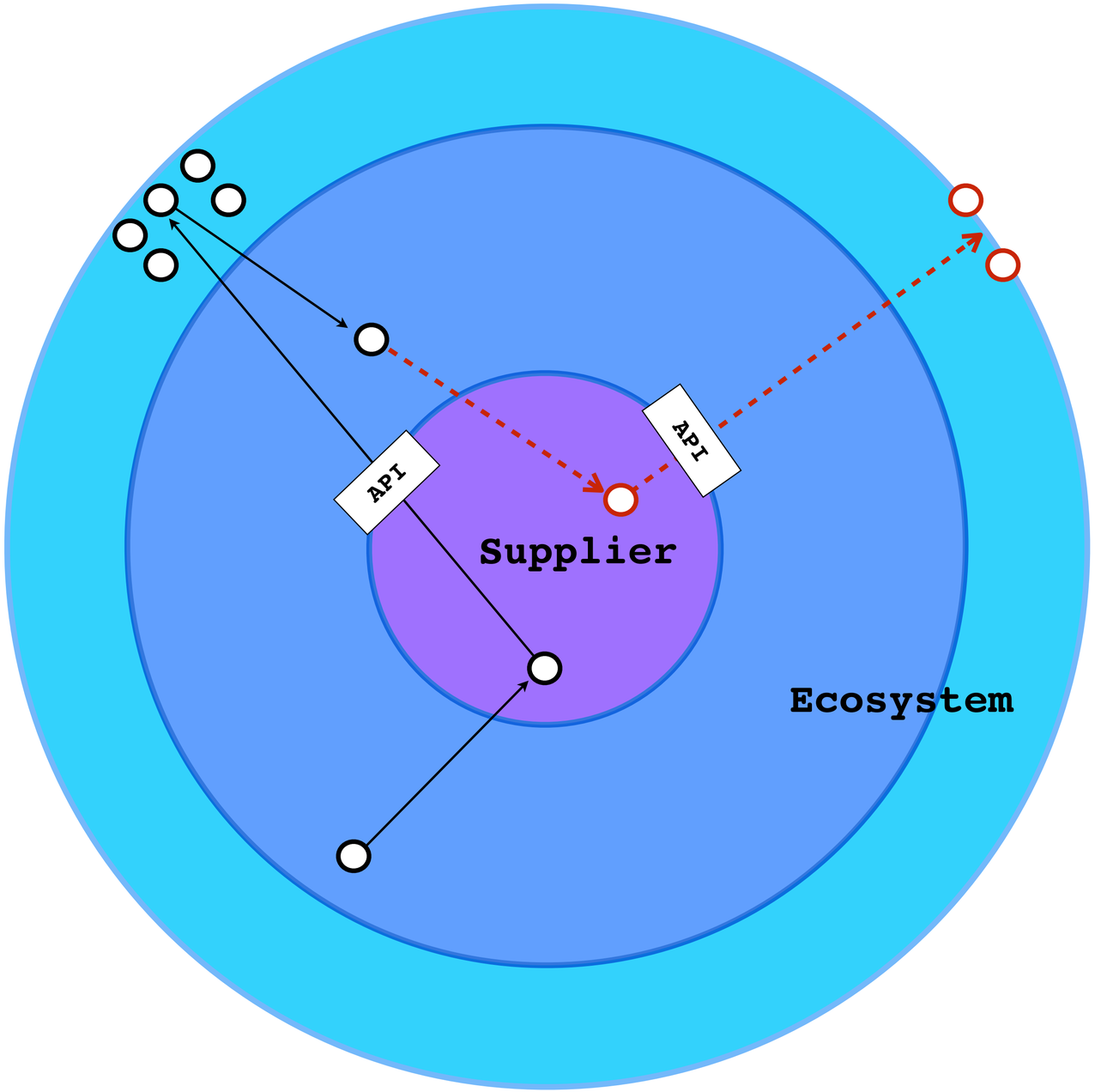
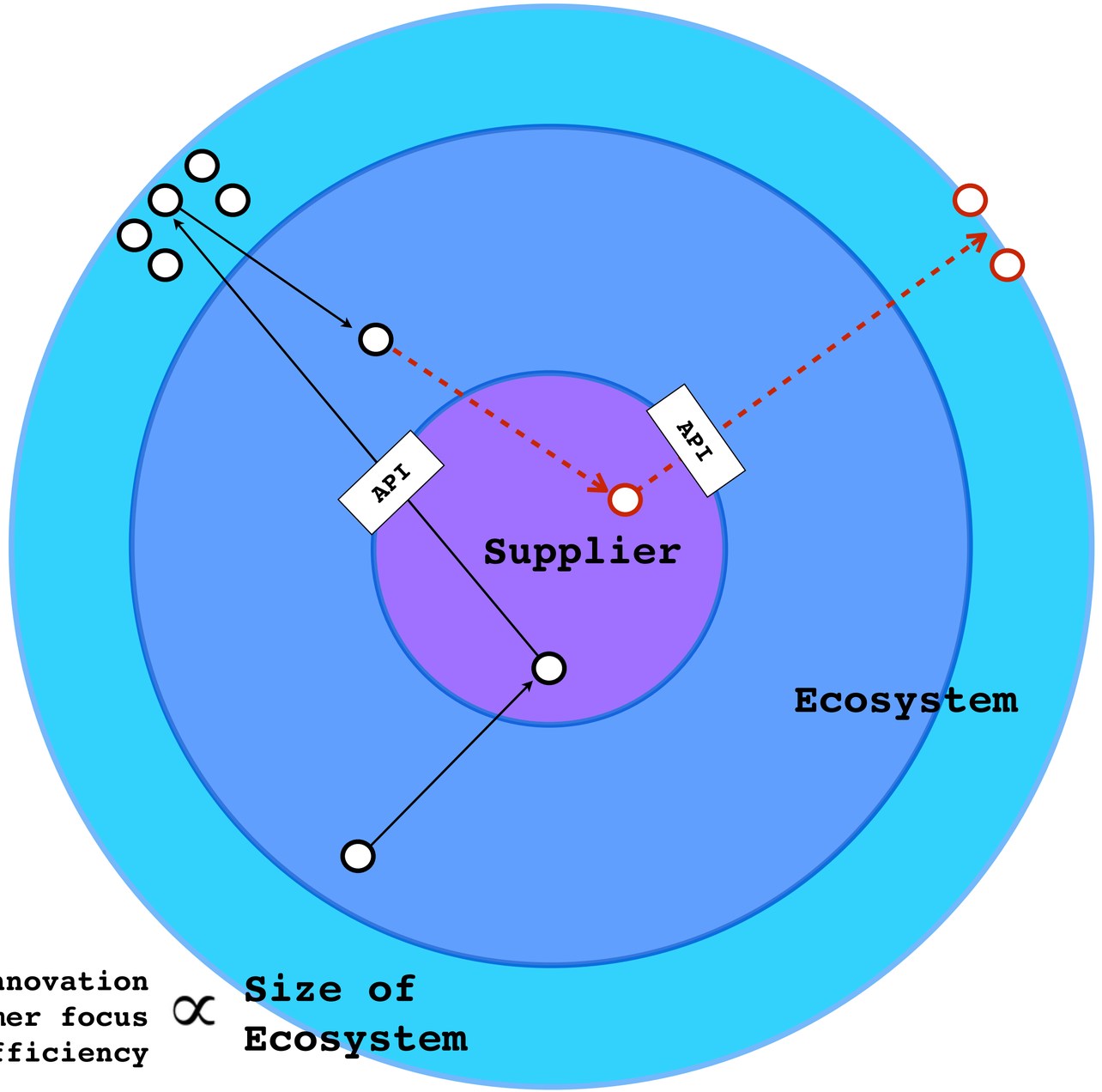
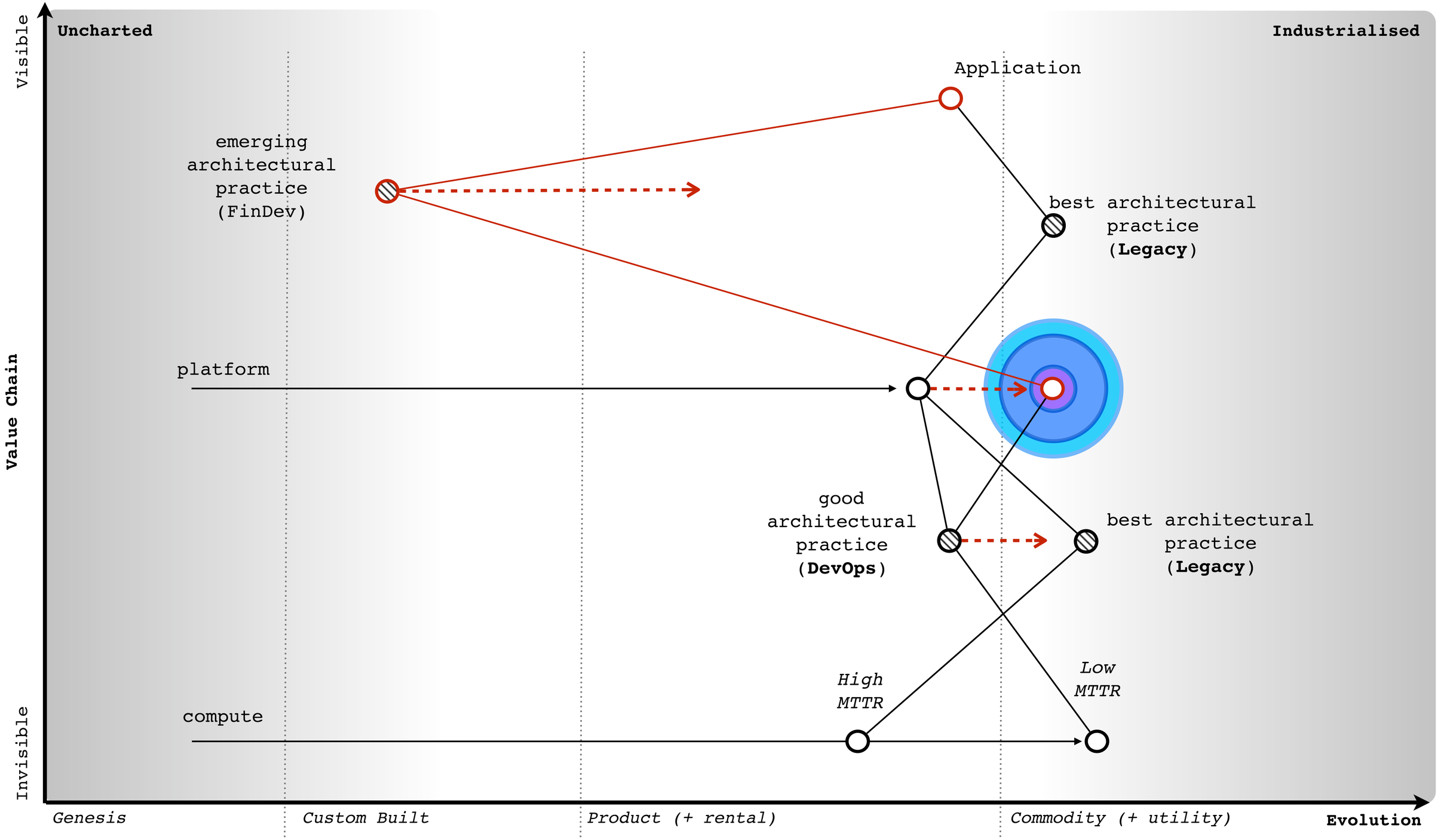
Ecosystem


API
API
Supplier
Ecosystem




(Apparent) rate of innovation
customer focus
efficiency

$\propto$ Size of Ecosystem


Uncharted
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High
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Low
MTTR
compute
Genesis
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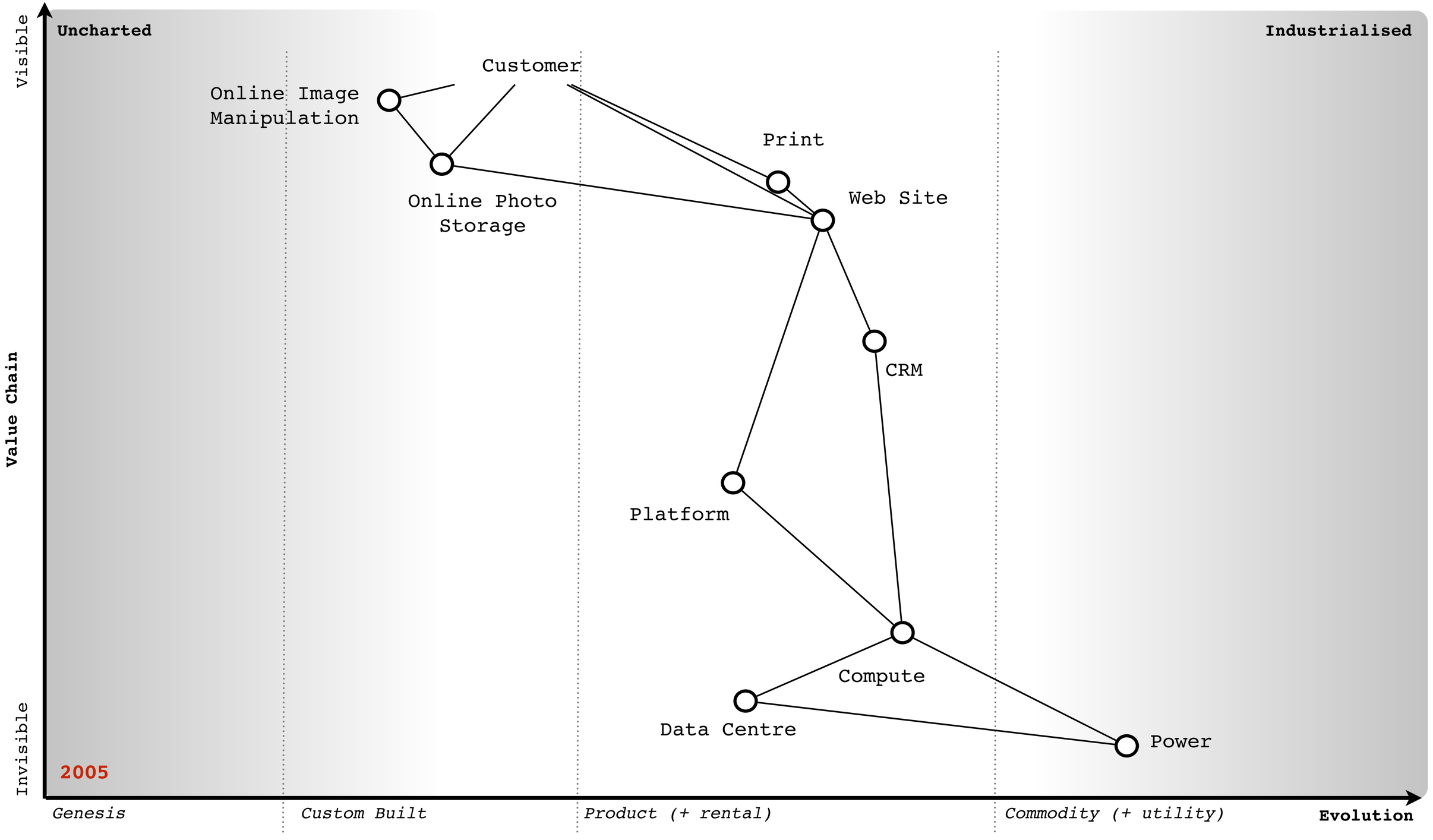
Uncharted
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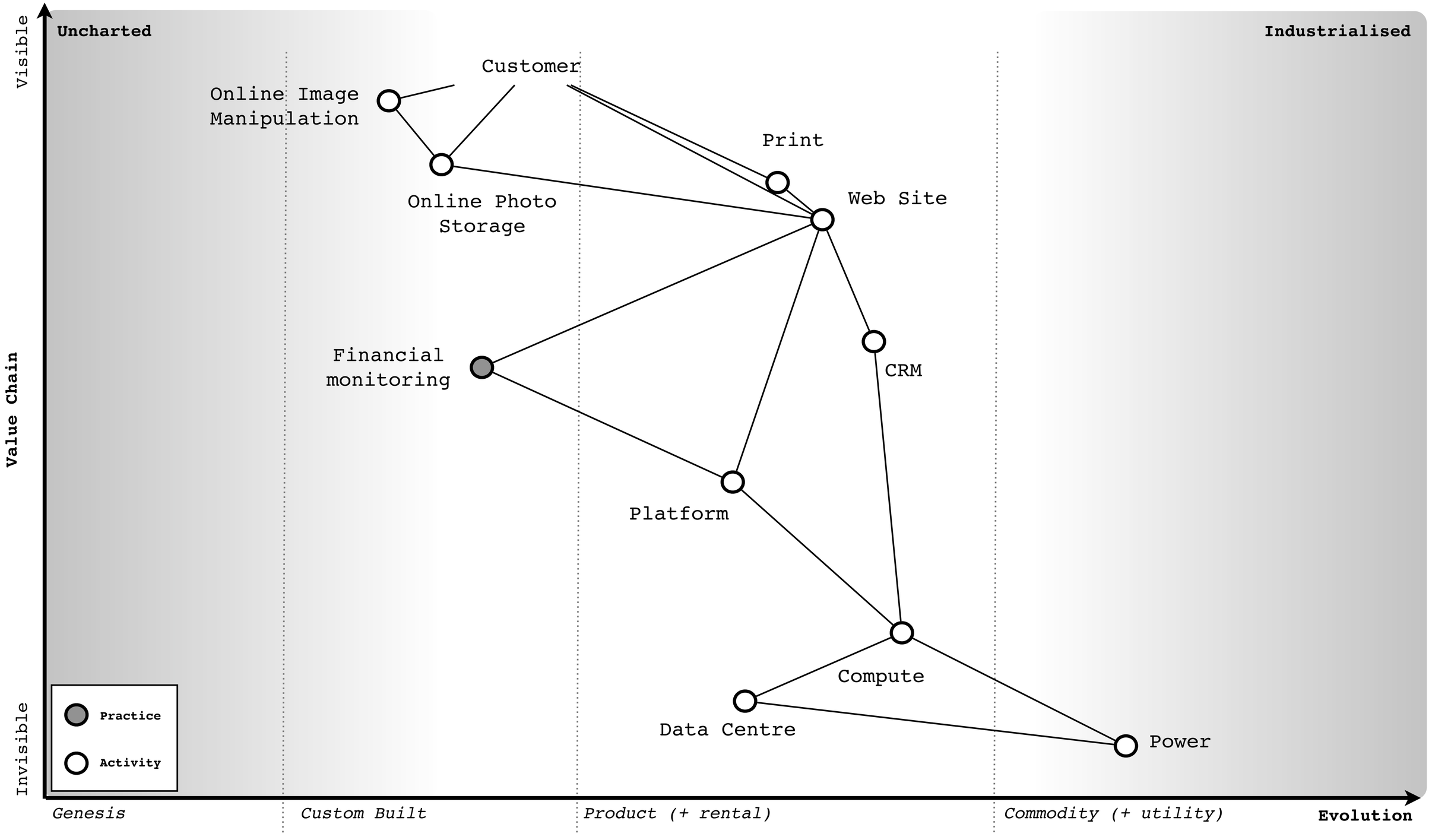
Visible
Value Chain
Invisible
Customer
Online Image Manipulation
Online Photo Storage
Print
Web Site
CRM
Platform
Compute
Data Centre
Power
2005
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

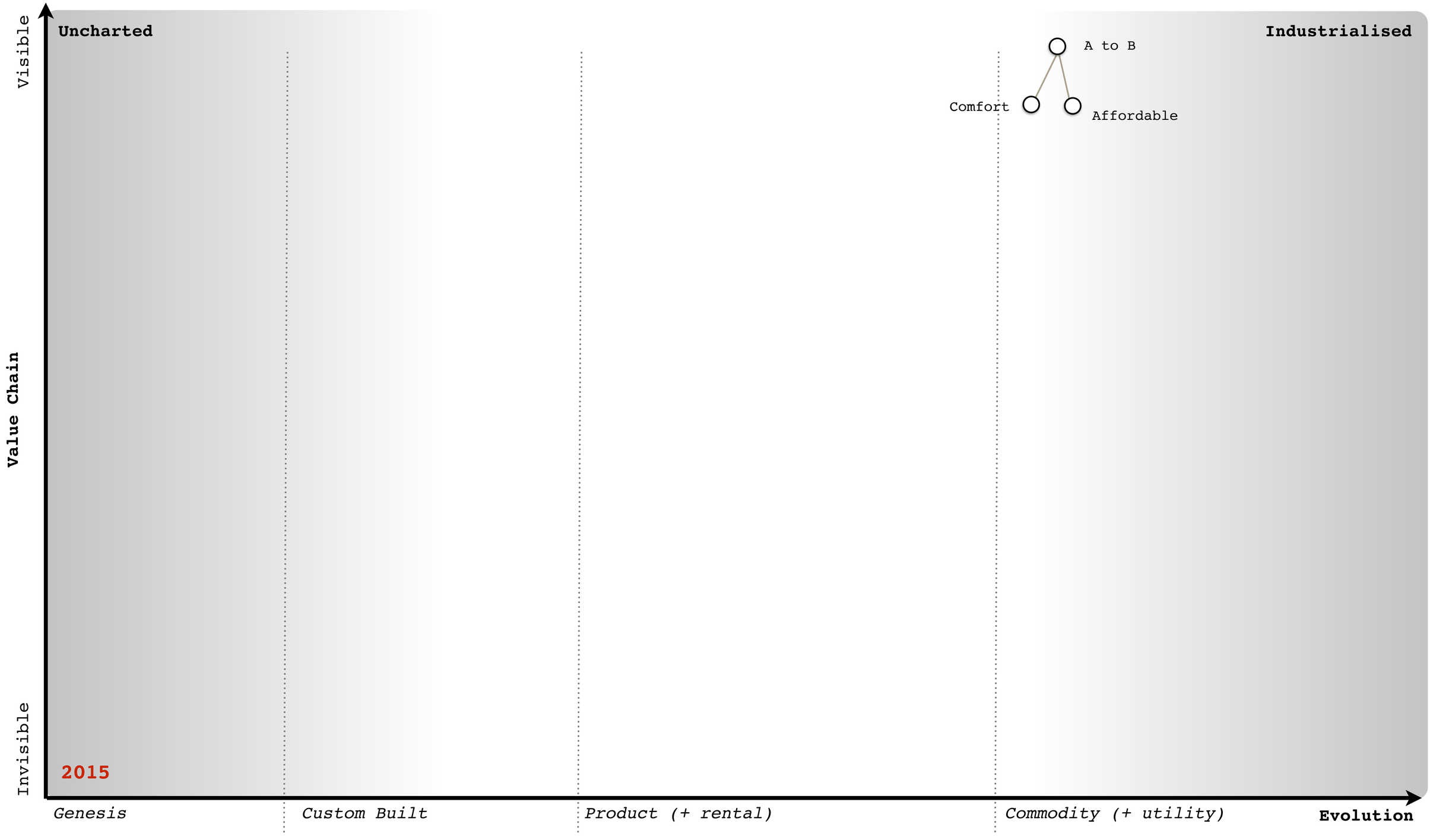
| Stage of Evolution / Type | I | II | III | IV |
|---|---|---|---|---|
| **Activities** | Genesis | Custom | Product<br>+ Rental Services | Commodity<br>+ Utility Services |
| **Practices** | Novel | Emerging | Good | Best |
| **Data** | Unmodelled | Divergent | Convergent | Modelled |
| **Knowledge** | Concept | Hypothesis | Theory | Accepted |

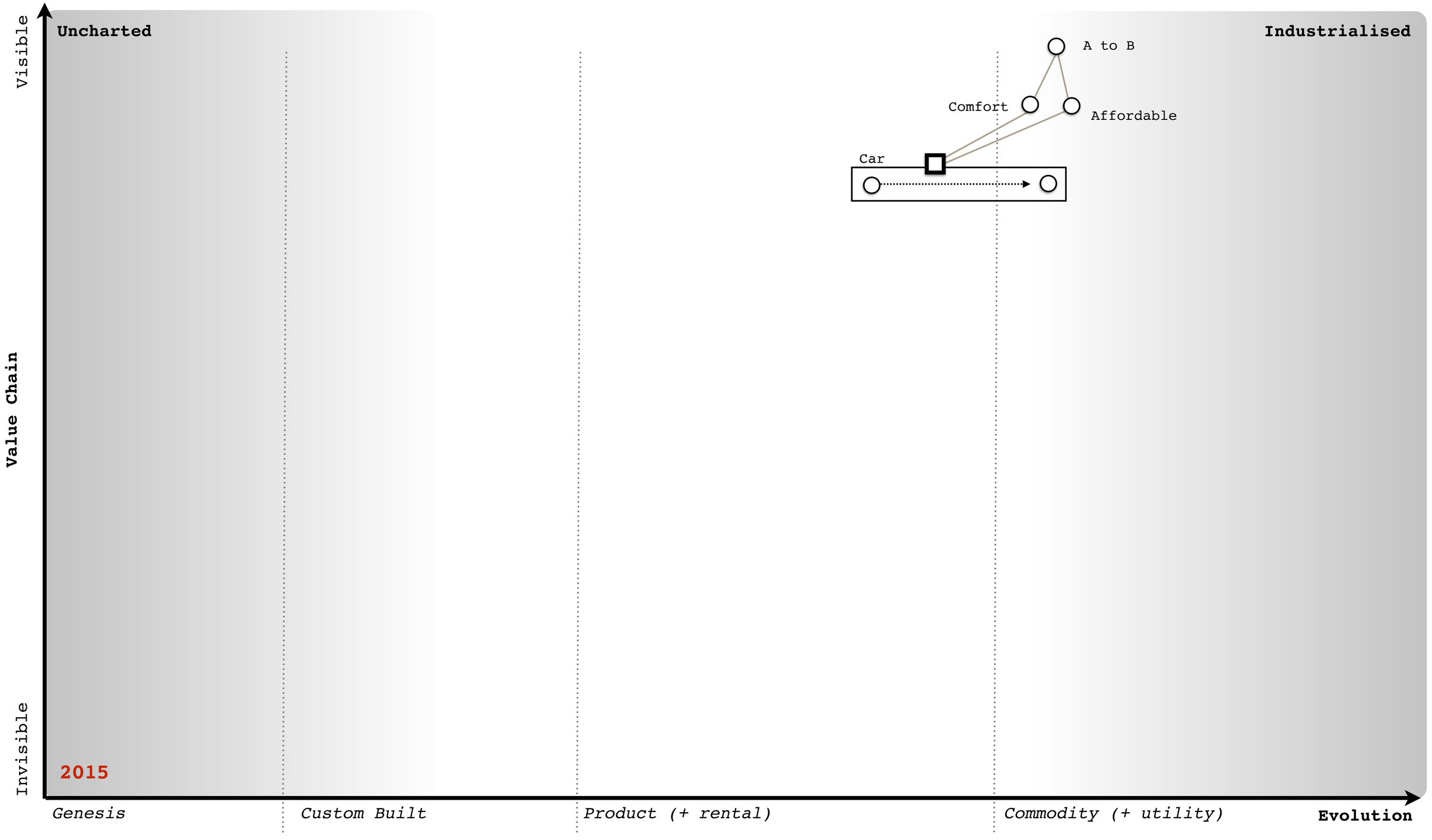

Visible
Uncharted
Industrialised
Customer
Online Image Manipulation
Print
Online Photo Storage
Web Site
Financial monitoring
CRM
Platform
Compute
Data Centre
Power
Practice
Activity
Value Chain
Invisible
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution

| Stage | I | II | III | IV |
|---|---|---|---|---|
| **Activity** | Genesis | Custom | Product (+rental) | Commodity (+utility) |
| **Data** | Unmodelled | Divergent | Convergent | Modelled |
| **Practice** | Novel | Emerging | Good | Best |
| **Knowledge** | Concept | Hypothesis | Theory | Universally Accepted |
| **Characteristics** | | | | |
| ***Ubiquity*** | Rare | Slowly increasing | Rapidly increasing | Widespread in the applicable market / ecosystem |
| ***Certainty*** | Poorly understood / exploring the unknown | Rapid increases in learning / discovery becomes refining | Rapid increases in use / increasing fit for purpose | Commonly understood (in terms of use) |
| ***Publication Types*** | Describe the wonder of the thing / the discovery of some marvel / a new land / an unknown frontier | Focused on build / construct / awareness and learning / many models of explanation / no accepted forms / a wild west. | Maintenance / operations / installation / comparison between competing forms / feature analysis e.g. merits of one model over another | Focused on use / increasingly an accepted, almost invisible component |
| **General Properties** | | | | |
| ***Market*** | Undefined market | Forming market / an array of competing forms and different models of understanding | Growing market / consolidation to a few competing but more accepted forms. | Mature market / stabilised to an accepted form |
| ***Knowledge management*** | Uncertain | Learning on use / focused on testing prediction | Learning on operation / using prediction / verification | known / accepted |
| ***Market (Ecosystem) Perception*** | Chaotic (non linear) / Domain of the “crazy” | Domain of “experts” | Increasing expectation of use / Domain of “professionals” | Ordered (appearance of being linear) / trivial / formula to be applied |
| ***User perception*** | Different / confusing / exciting / surprising / dangerous | Leading edge / emerging / uncertainty over results | Increasingly common / disappointed if not used or available / feeling left | Standard / expected / feeling of shock if not used |
| ***Perception in Indusry*** | Future source of competitive advantage / unpredictable / unknown | Seen as a competitive advantage / a differential / looking for ROI and case examples | Advantage through implementation / features / this model is better than that | Cost of doing business / accepted / specific defined models |
| ***Focus of value*** | High future worth but immediate investment | Seeking ways to profit and a ROI / seeking confirmation of value | High profitability per unit / a valuable model / a feeling of understanding / focus on exploitation | High volume / reducing margin / important but invisible / an essential component of something more complex |
| ***Understanding*** | Poorly understood / unpredictable | Increasing understanding / development of measures | Increasing education / constant refinement of needs / measures | Believed to be well defined / stable / measurable |
| ***Comparison*** | Constantly changing / a differential / unstable | Learning from others / testing the water / some evidential support | Competing models / feature difference / evidential support | Essential / any advantage is operational / accepted norm |
| ***Failure*** | High / tolerated / assumed to be wrong | Moderate / unsurprising if wrong but disappointed | Not tolerated / focus on constant improvement / assumed to be in the right direction / resistance to changing the model | Surprised by failure / focus on operational efficiency |
| ***Market action*** | Gambling / driven by gut | Exploring a "found" value | Market analysis / listening to | Metric driven / build what is needed |
| ***Efficiency*** | Reducing the cost of change (experimentation) | Reducing cost of waste (Learning) | Reducing cost of waste (Learning) | Reducing cost of deviation (Volume) |
| ***Decision Drivers*** | Heritage / culture | Analysis & synthesis | Analysis & synthesis | Previous experience |

Getting Started
Competitor Analysis
Evolution
Flow
Weak Signals
Ecosystem
Type
Brexit

Self
driving car


Uncharted
Industrialised
Visible
Value Chain
Invisible
A to B
Comfort
Affordable
2015
Genesis
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution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A to B
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Commodity (+ utility)
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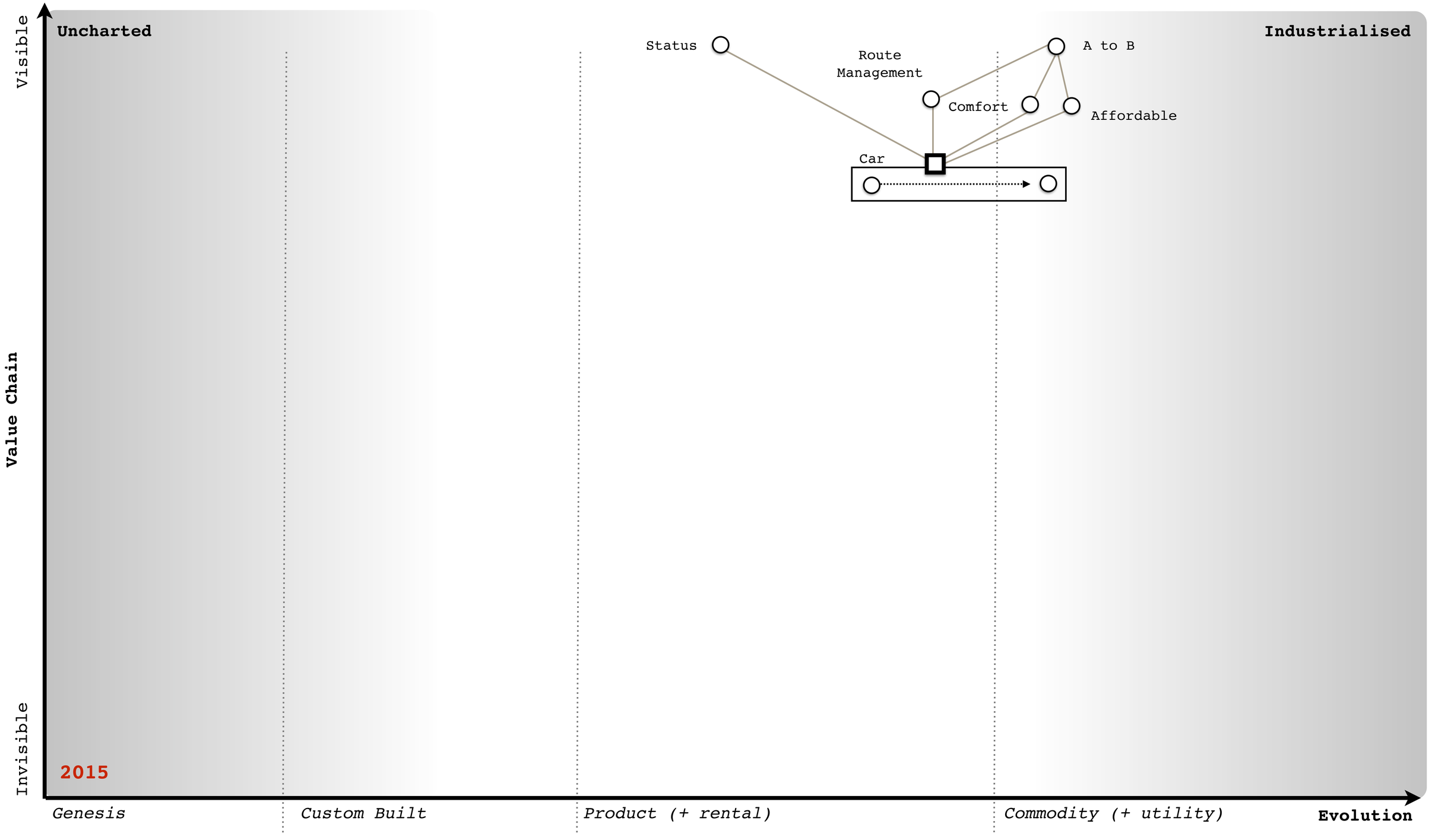
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Commodity (+ utility)
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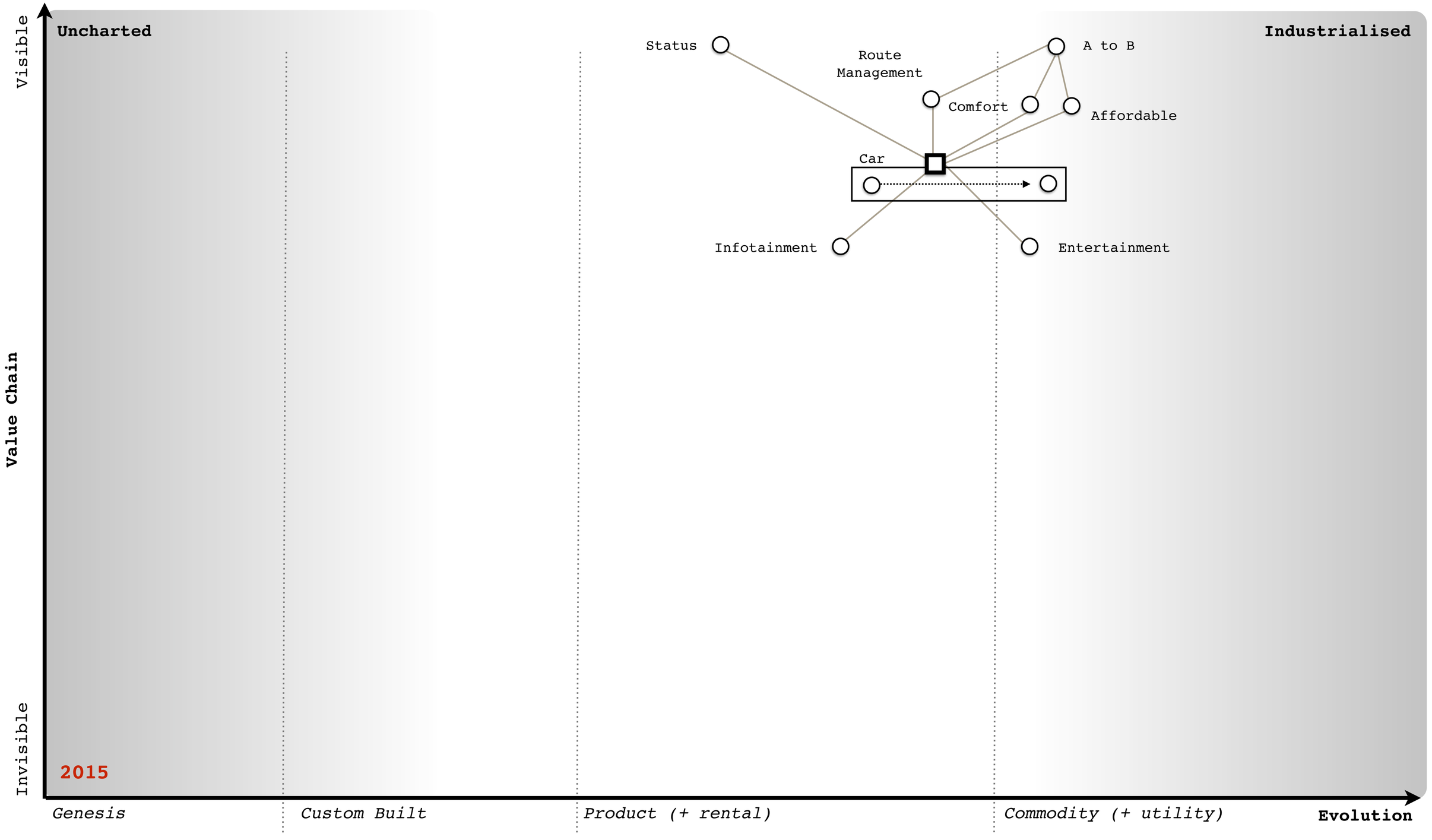
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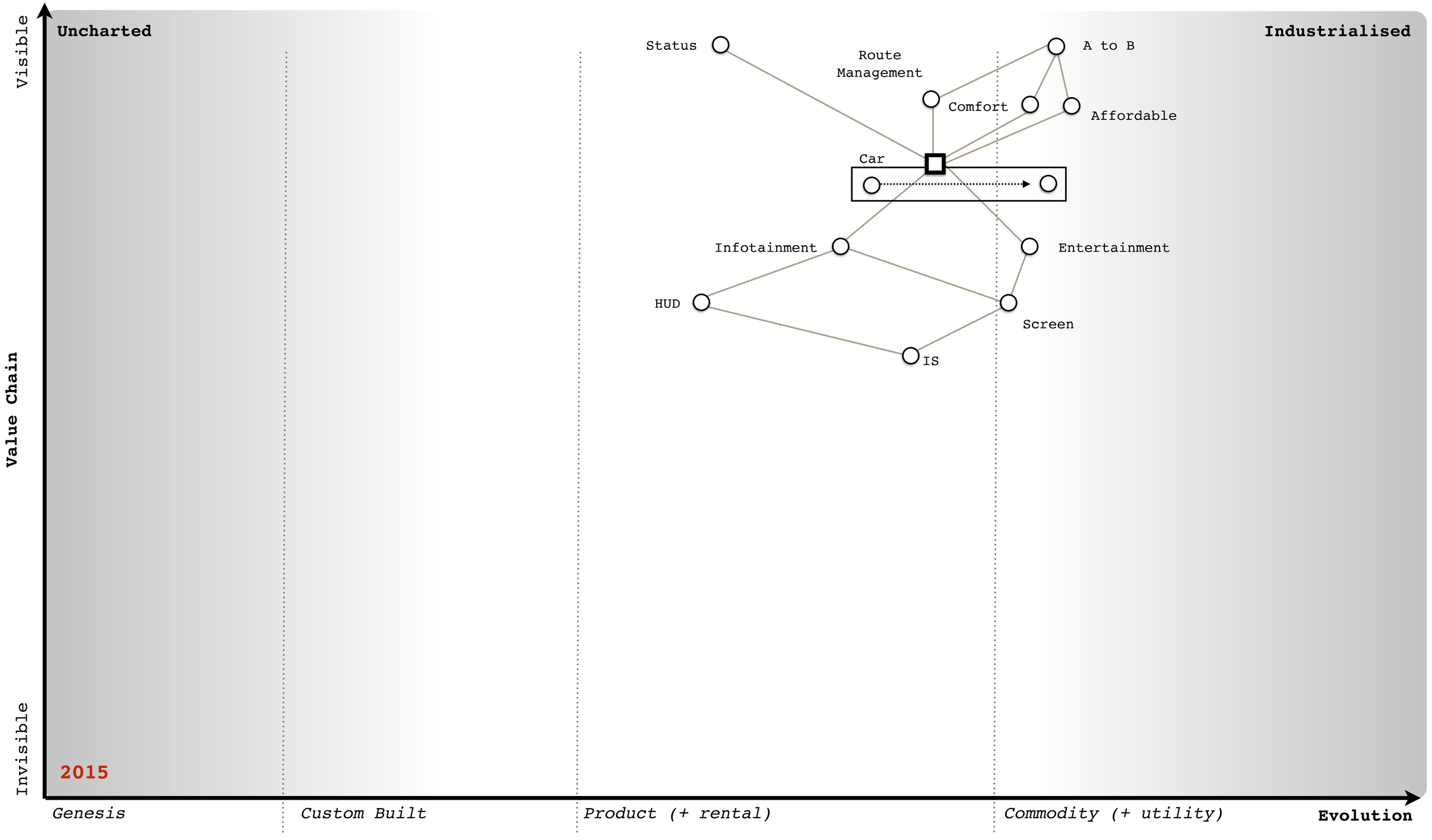
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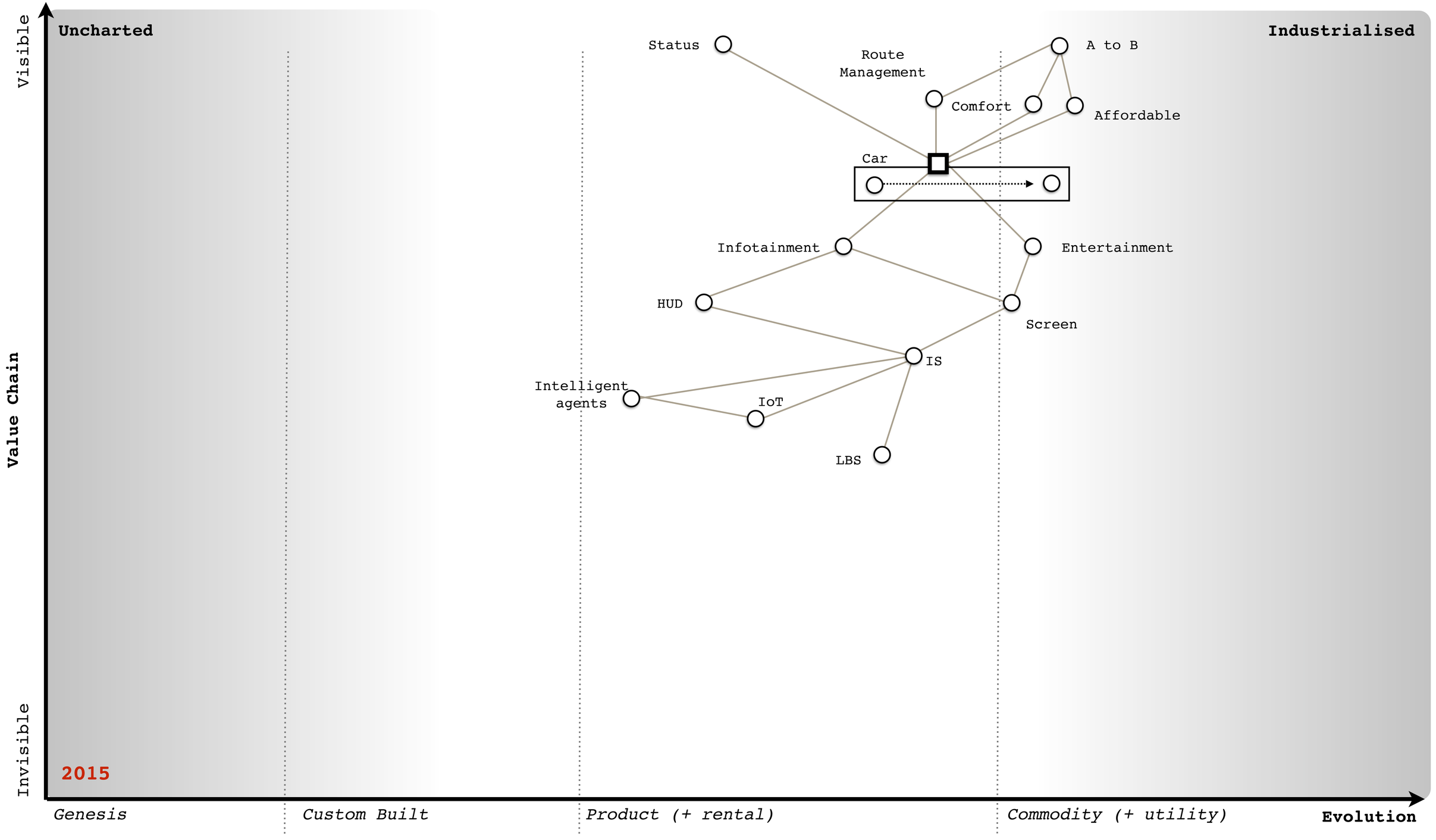
Commodity (+ utility)
Evolution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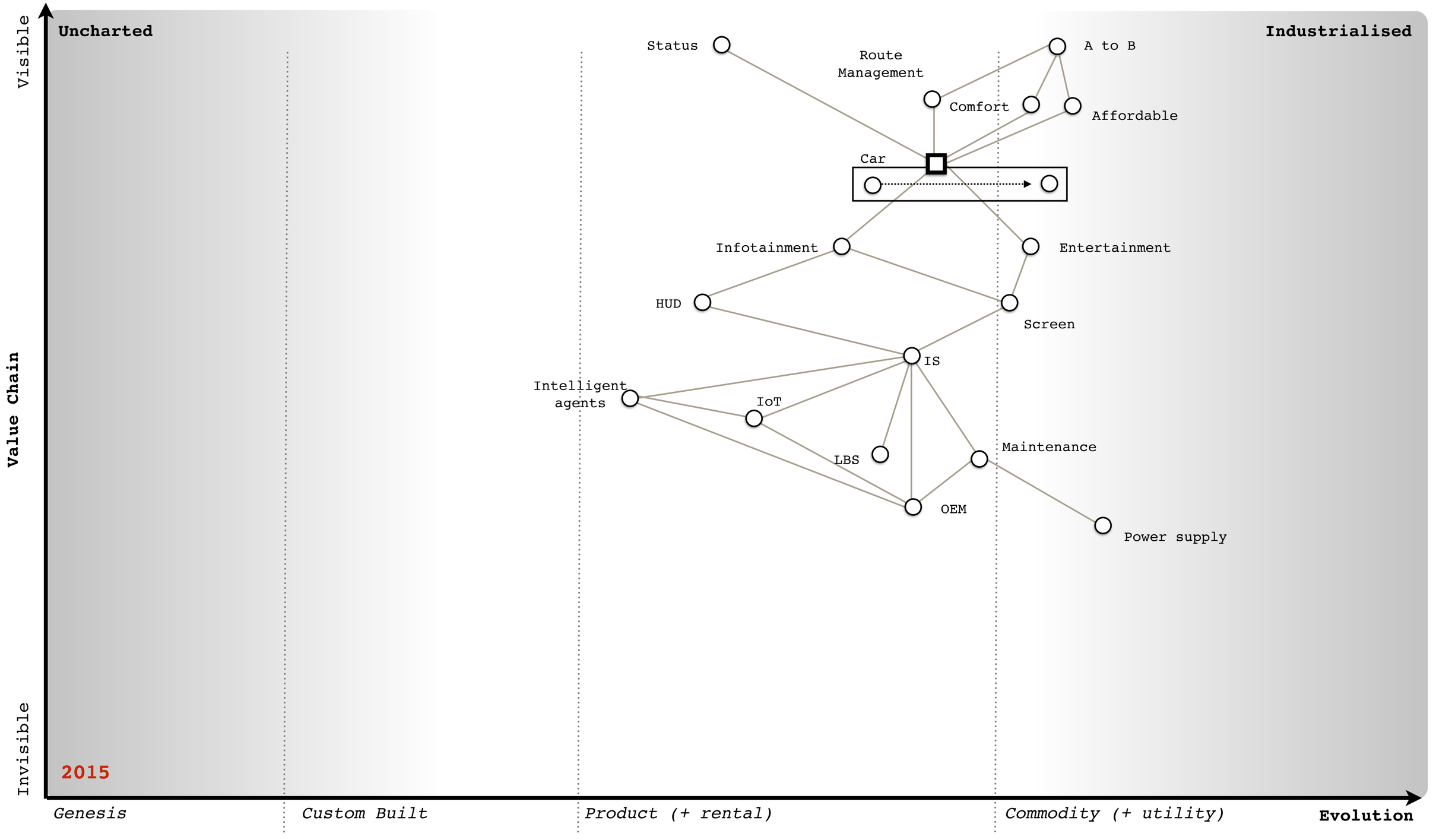
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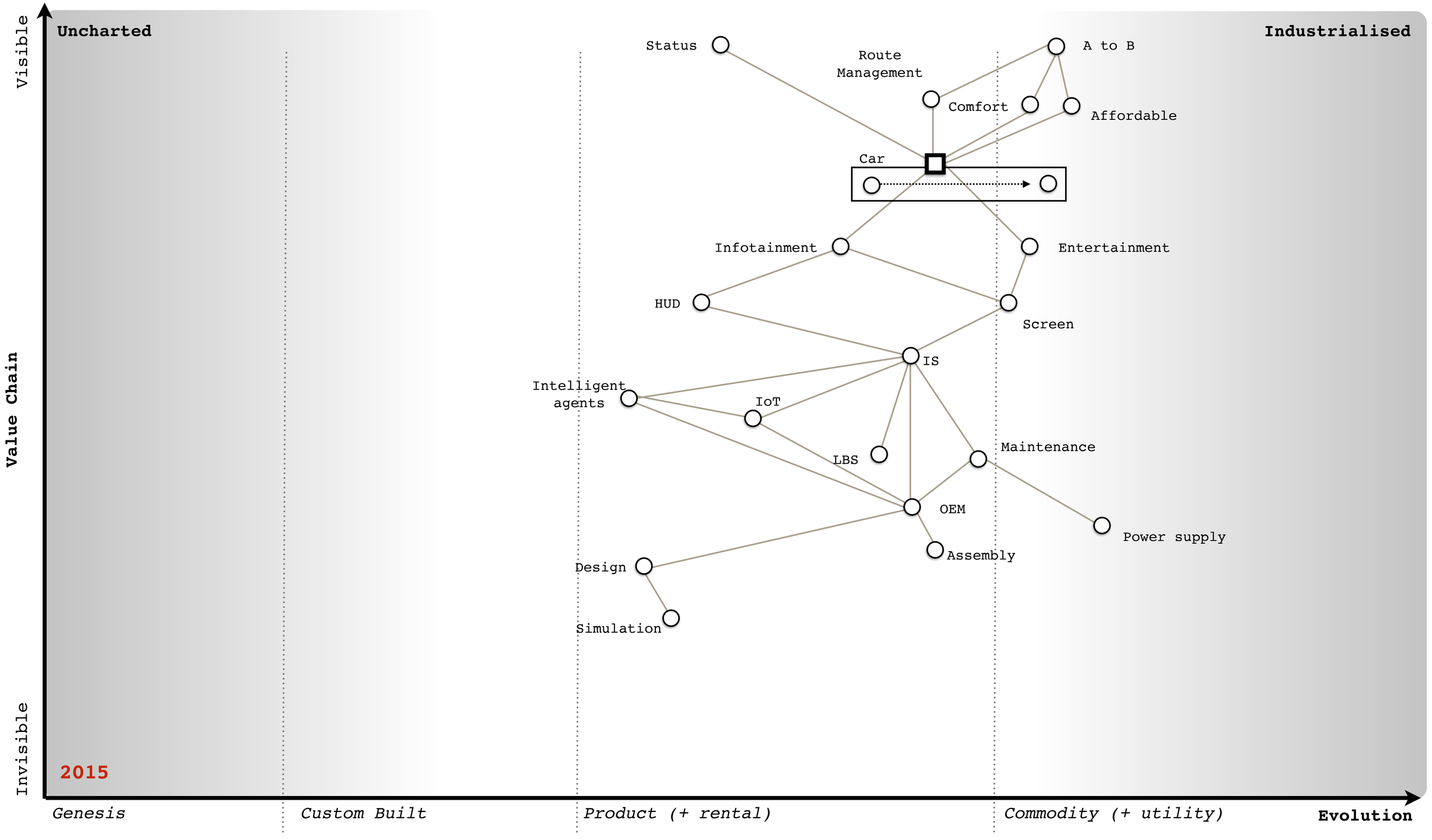
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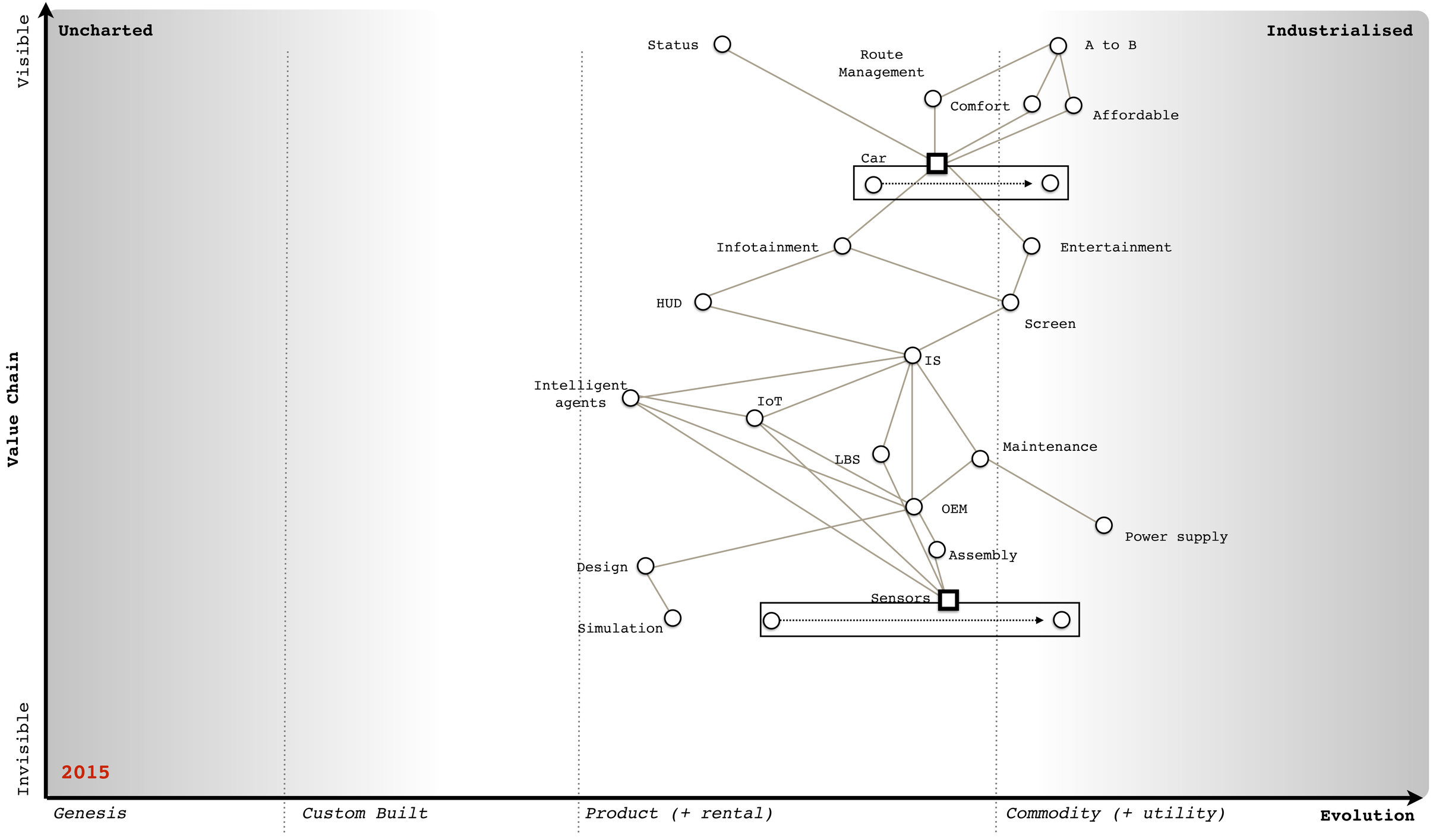
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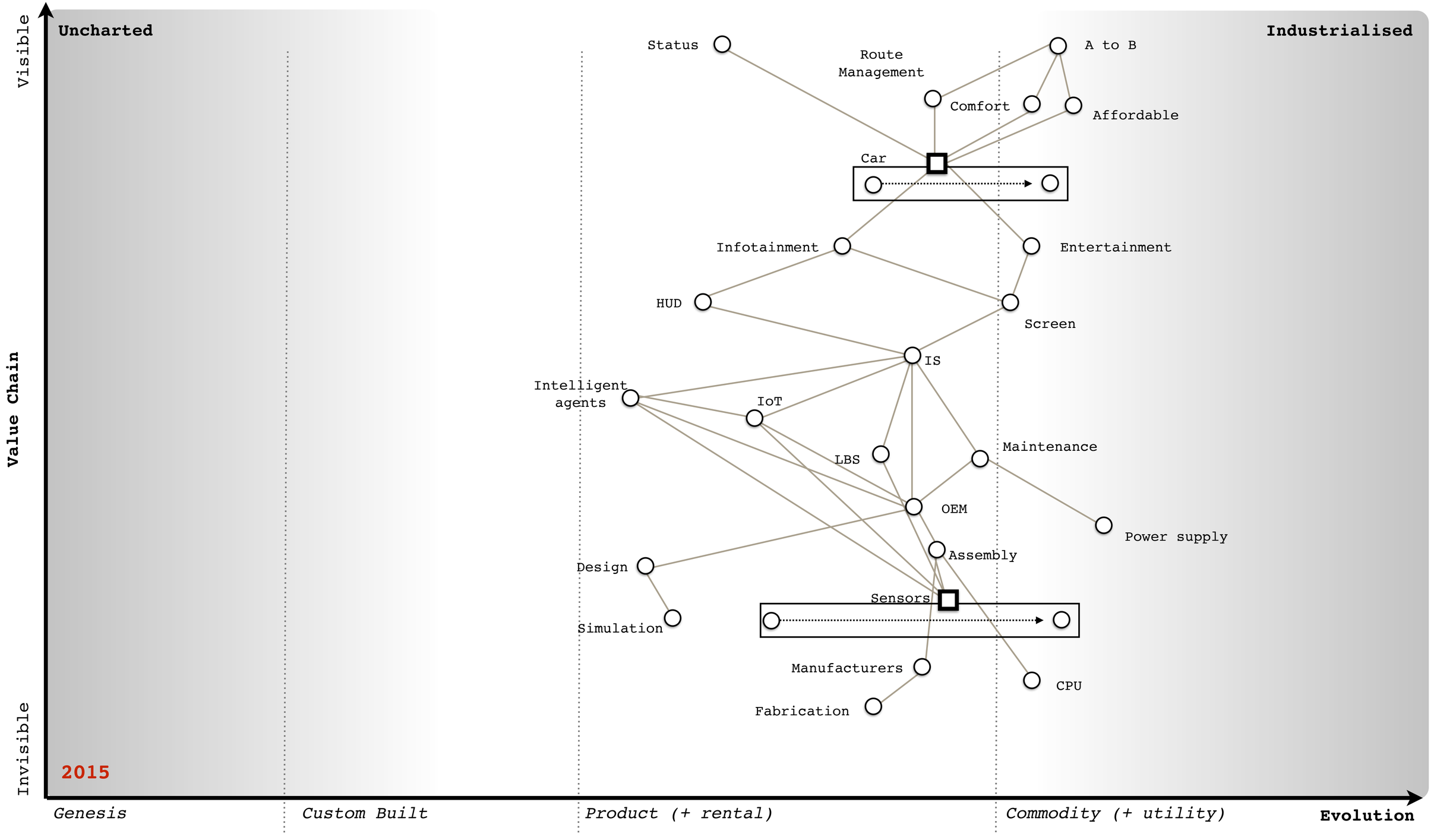
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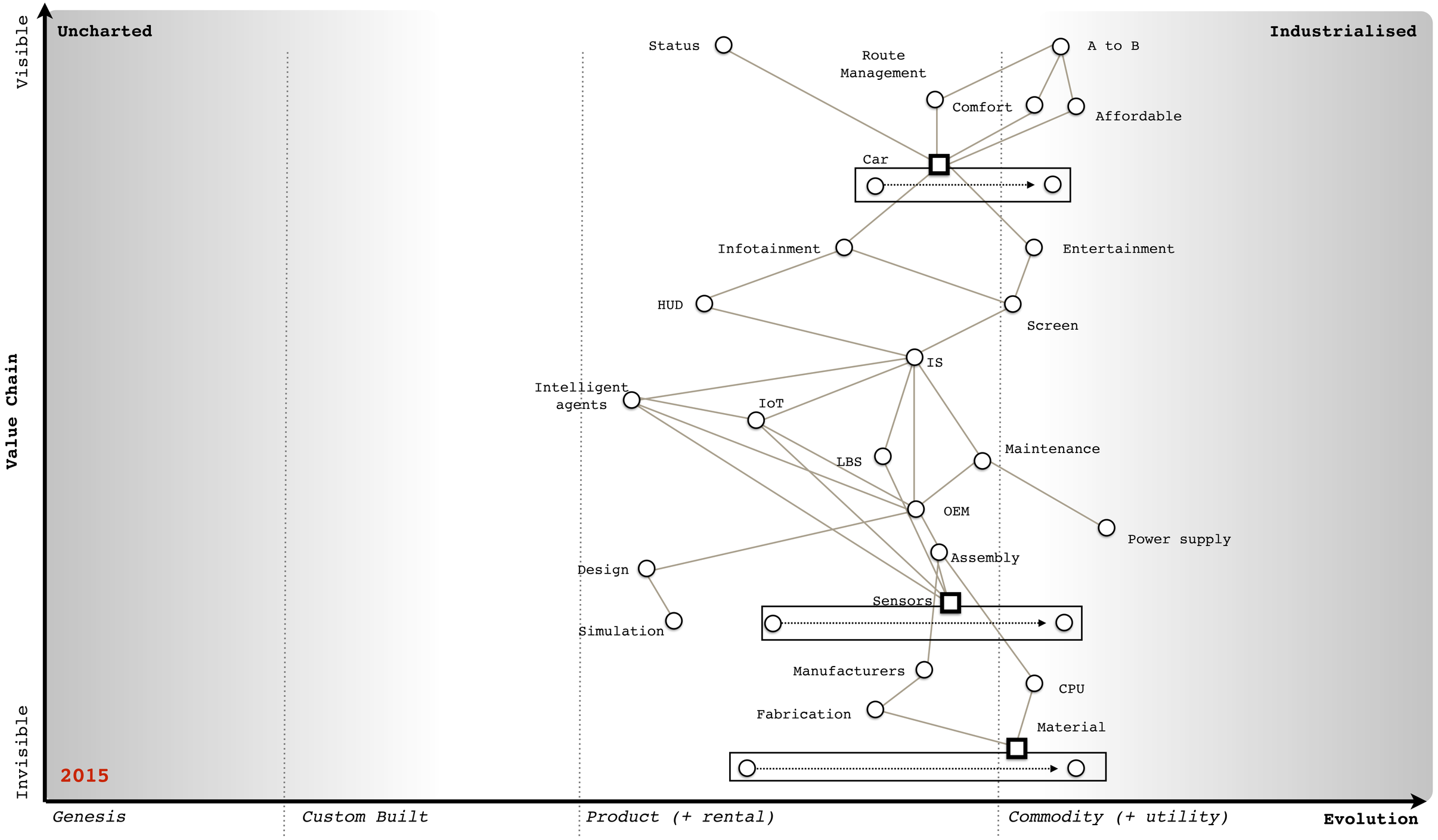
Evolution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Product (+ rental)
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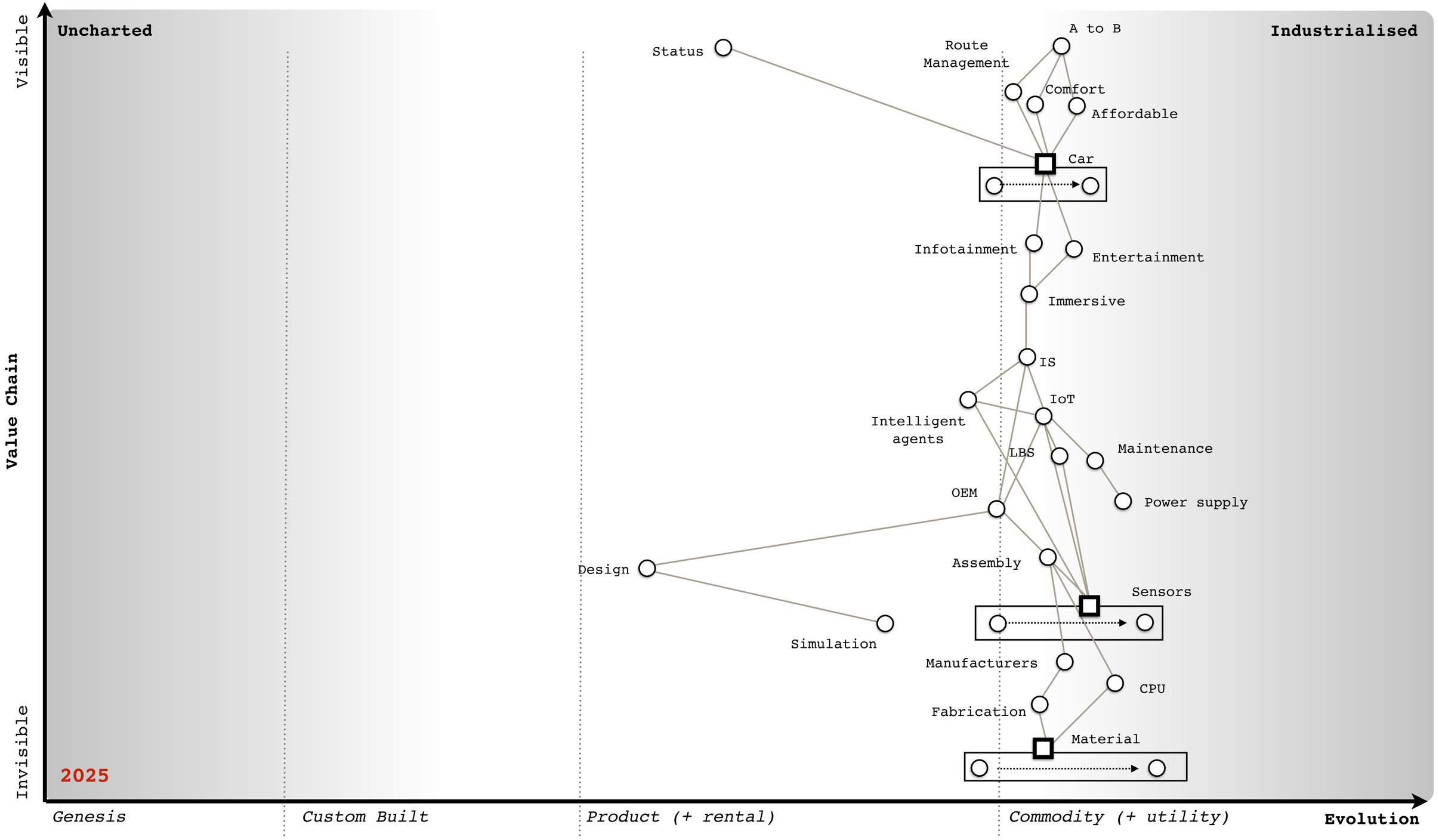
Evolution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Intelligent
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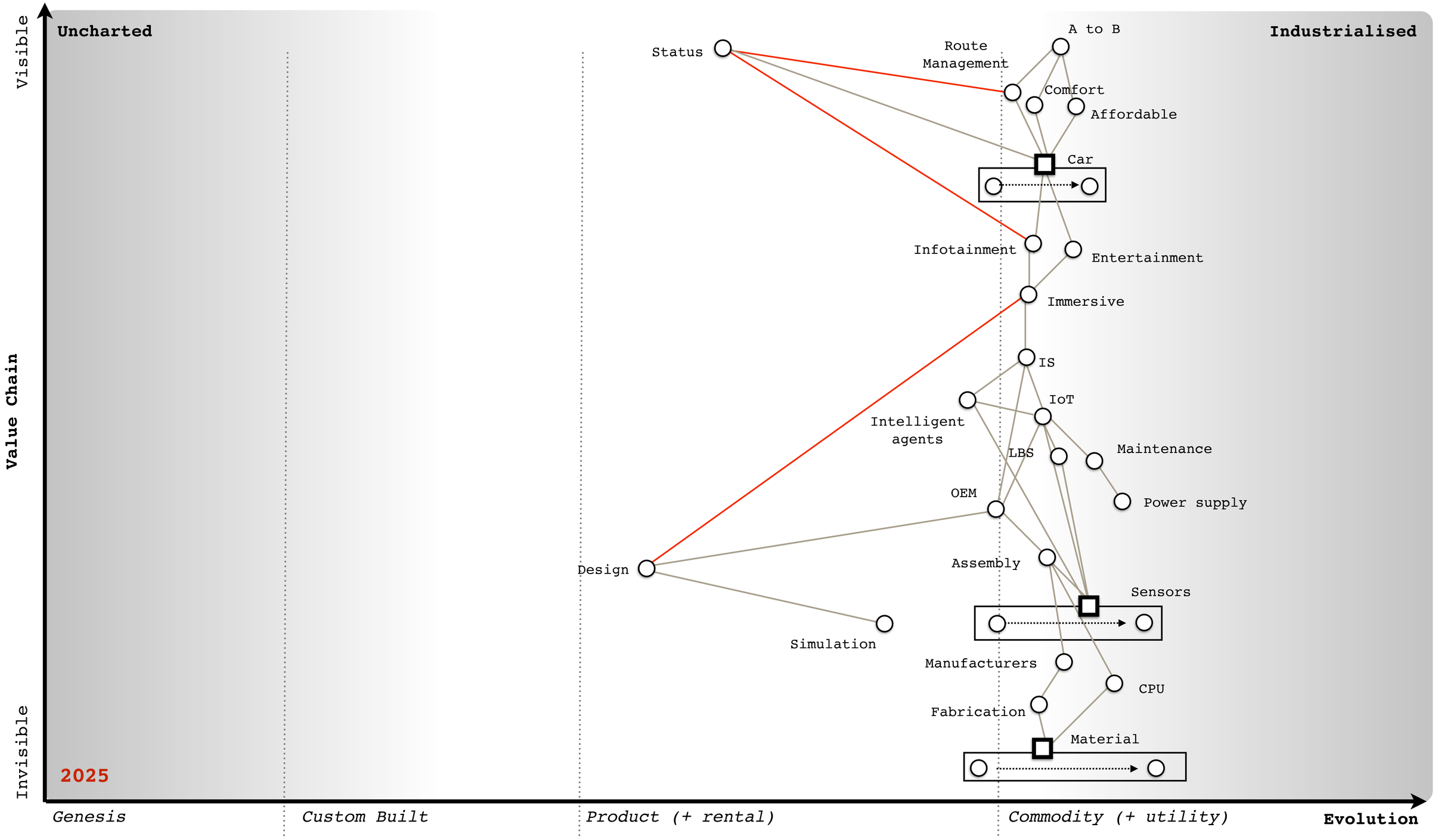
Product (+ rental)
Commodity (+ utility)
Evolution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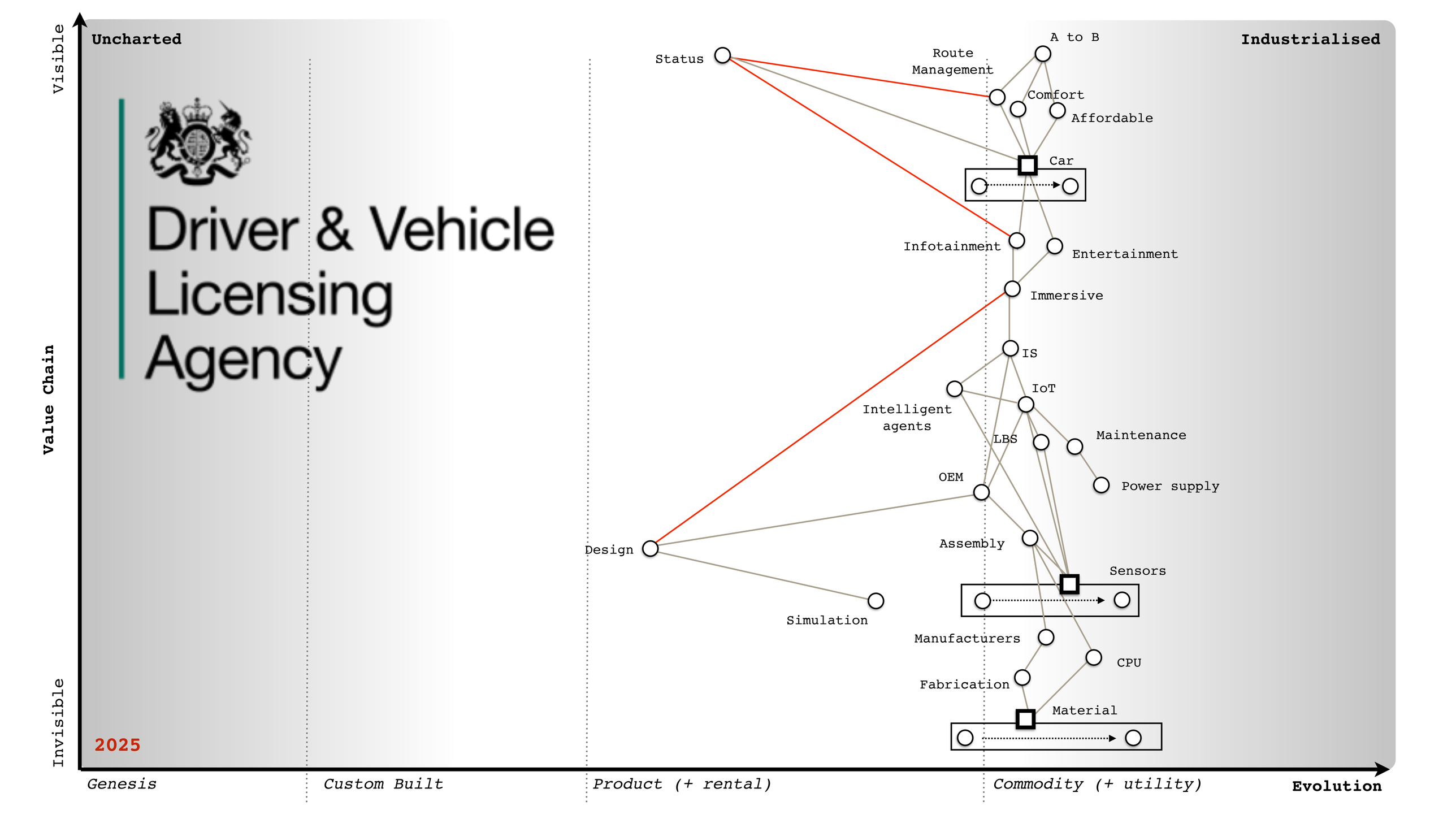
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
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Value Chain
Driver & Vehicle Licensing Agency
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Status
A to B
Route Management
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Car
Infotainment
Entertainment
Immersive
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Intelligent agents
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Power supply
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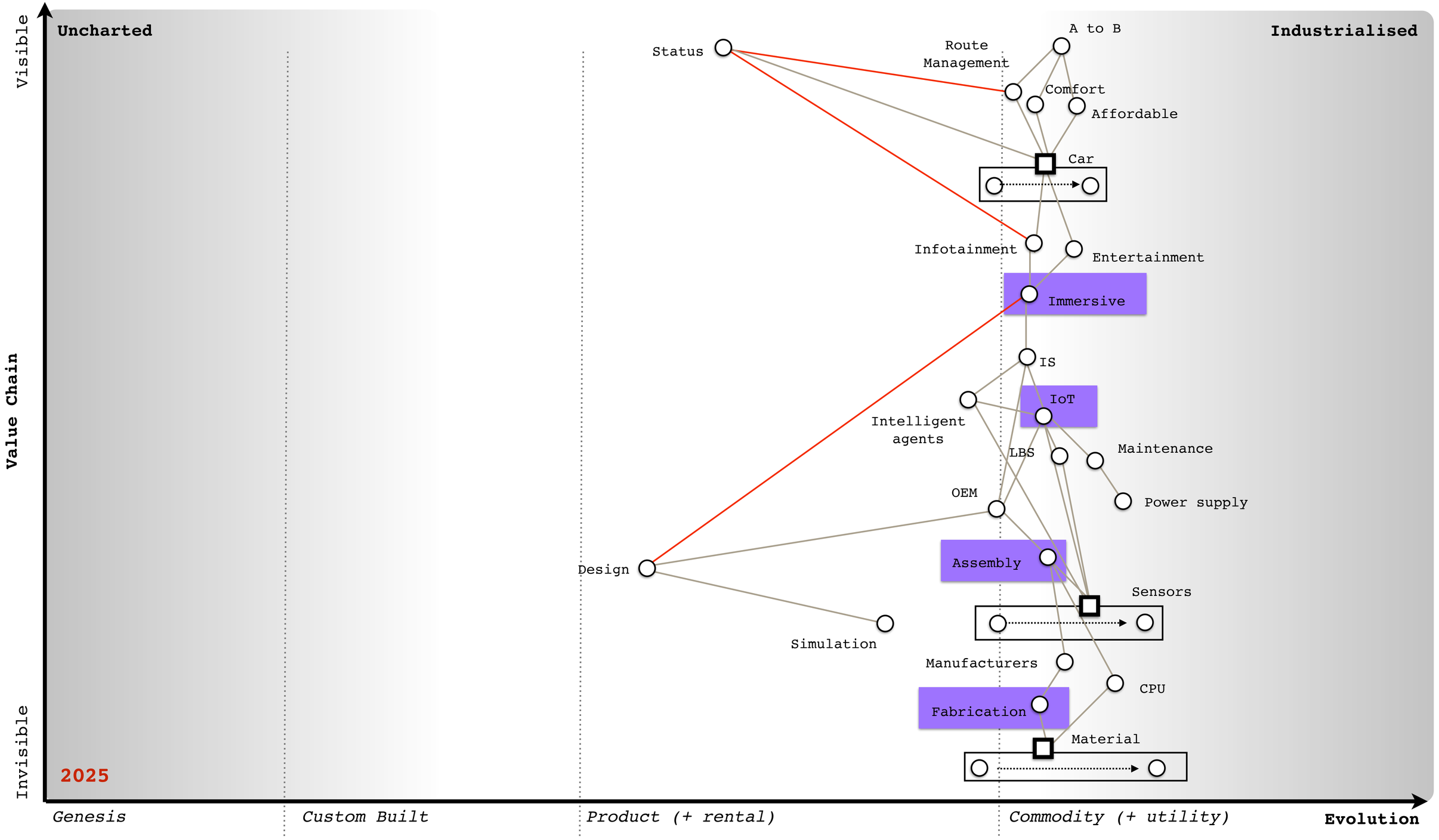
Custom Built
Product (+ rental)
Commodity (+ utility)
Evolution


Uncharted
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Value Chain
Invisible
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Entertainment
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agents
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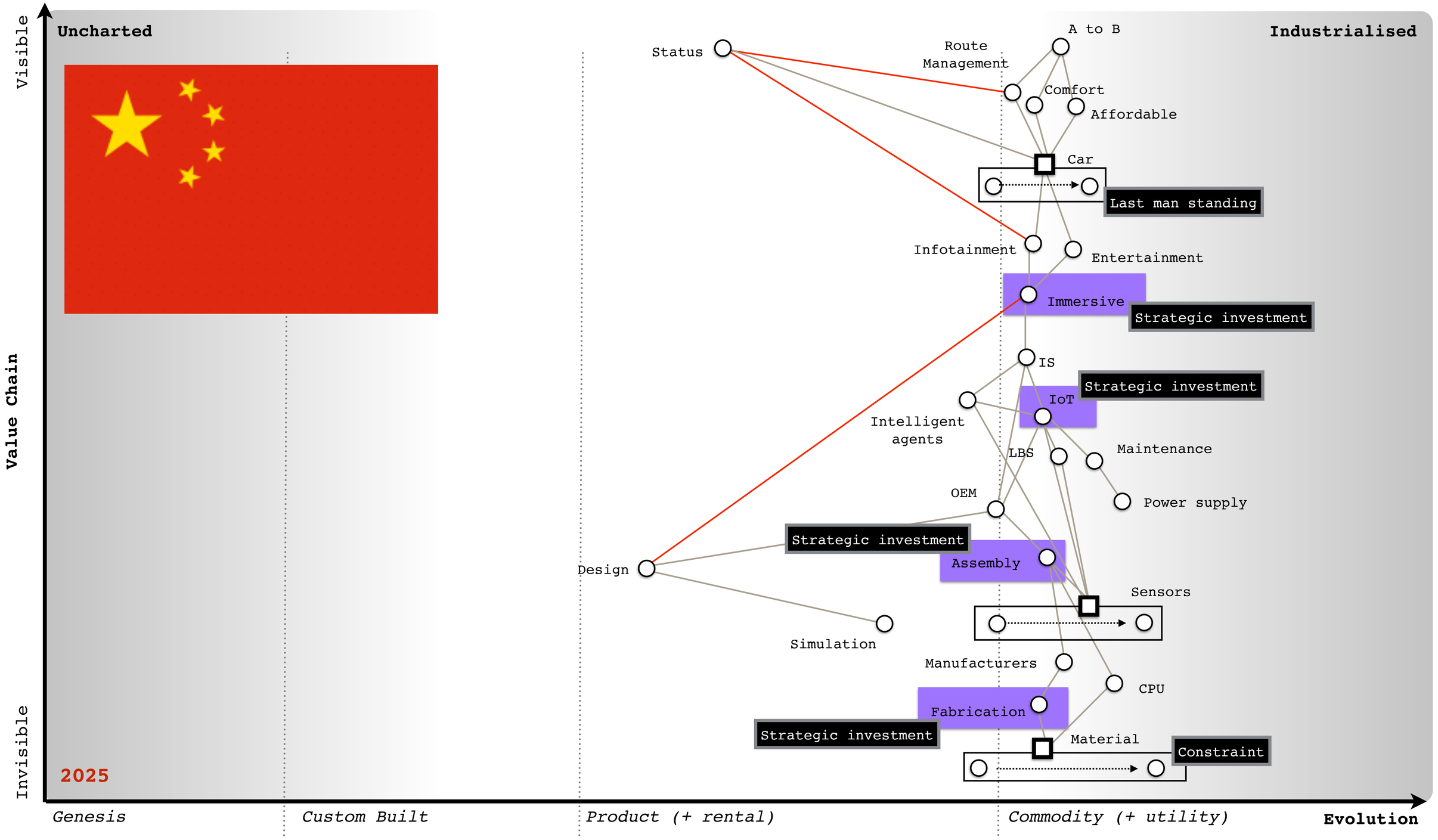
Product (+ rental)
Commodity (+ utility)
Evolution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Value Chain
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A to B
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Car
Last man standing
Infotainment
Entertainment
Immersive
Strategic investment
IS
Strategic investment
IoT
Intelligent
agents
LBS
Maintenance
Power supply
OEM
Strategic investment
Assembly
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Material
Constraint
Genesis
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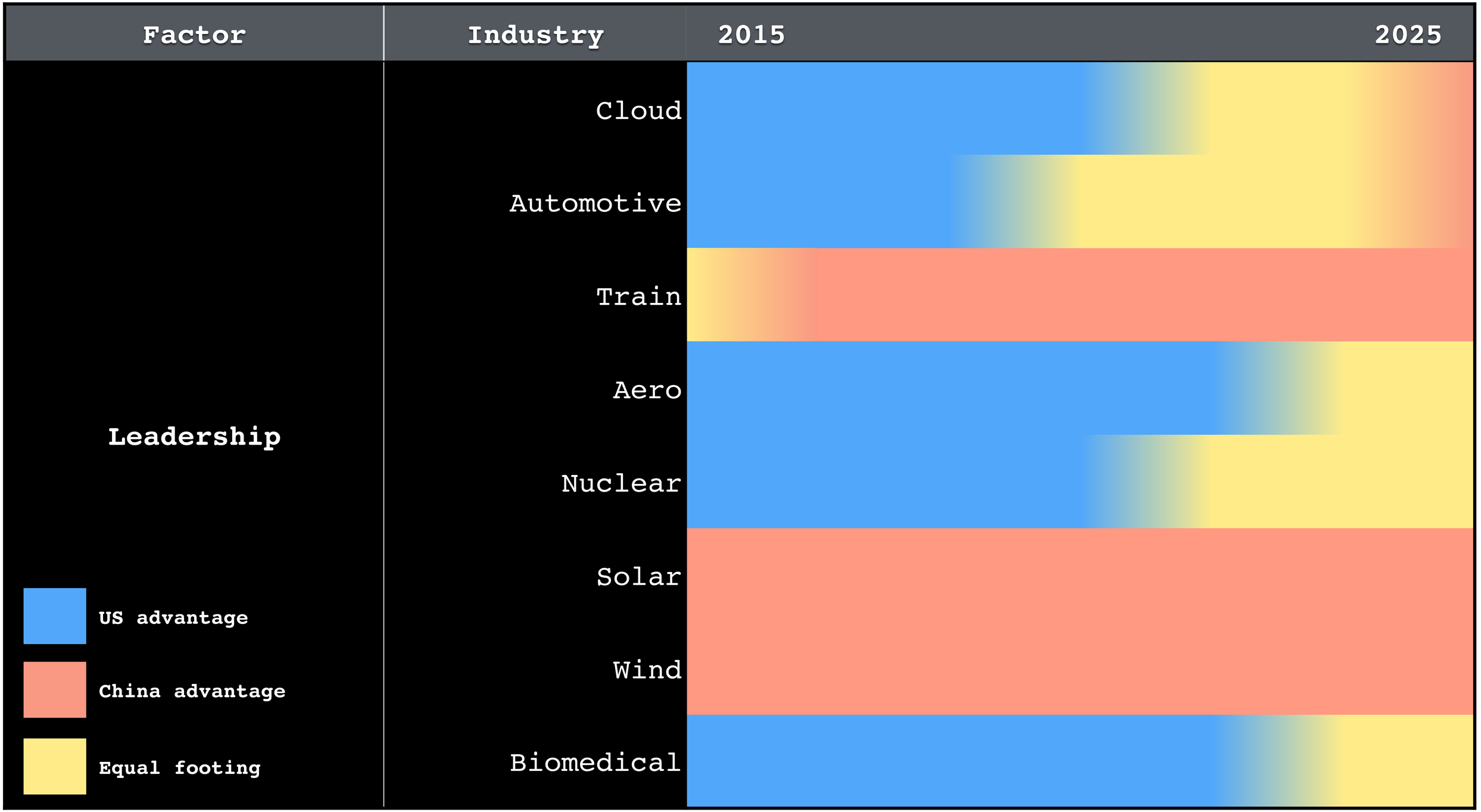
Product (+ rental)
Commodity (+ utility)
Evolution


Factor
Industry
2015
2025
Leadership
Cloud
Automotive
Train
Aero
Nuclear
Solar
Wind
Biomedical
US advantage
China advantage
Equal footing

Competition is rarely
a zero sum game.

Learning from China.

# Thank you

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LEADING EDGE FORUM