# The Organisation As A System

*Structured Coherent Design*

## Fifth Transition – Pattern Recognition ET AL

The Performance Organisers

# Fifth Transition – Pattern Recognition ET AL

The fifth deck of a series of seven covering pattern recognition et al. The full set listed below.

- 0. Operating Concepts
- 1. Data Capture and validation
- 2. Operational Alignment
- 3. Fact Generation
- 4. Evidence Collation
- 5. Pattern recognition et al
- 6. Extending the scope
- 7. Anything Else To Think About?

# Fifth Transition – Pattern Recognition ET AL

- Purpose - To explain, in overview pattern recognition and some associated techniques
- Target audience – non technical people who need to understand what information management might be capable of contributing as part of an enterprise architecture initiative
- First of 3 presentations on Organisation mapping two others, aligning process and “pulling it together”
- Run Time - Approximately 45 mins.

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A few things to think about..

As the nature of decision making changes from the operational to the strategic, so the nature of the reporting requirement changes from the "deterministic" to something more subtle of a "predictive" nature.

That means the introduction into an information management architecture different forms of:

- Data, both storage and real time on request deployment
- Processing in respect of the complexity of the calculations involved at the point of delivery
- Policy and governance related to who can see what
- Route efficiency and a new, more abstract for of geometry
- And an entirely different set of skills (all hard to acquire) related to both analysis and coding

In short.. It all gets a tad more fiddly…. AND expensive!

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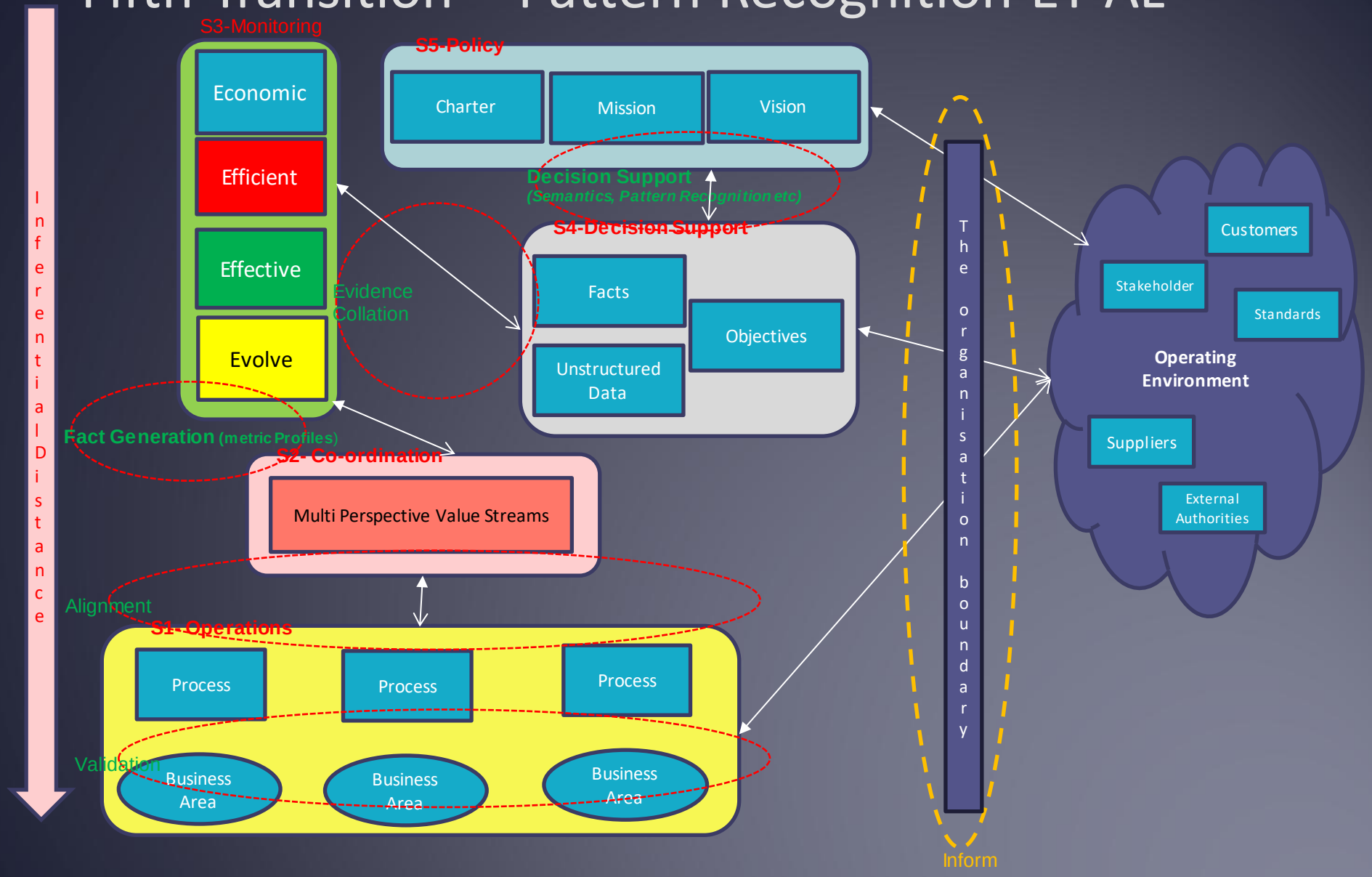


NOTHING crosses the organisation boundary, in or out, without "consent"

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A Little Revision Won’t Go Amiss…

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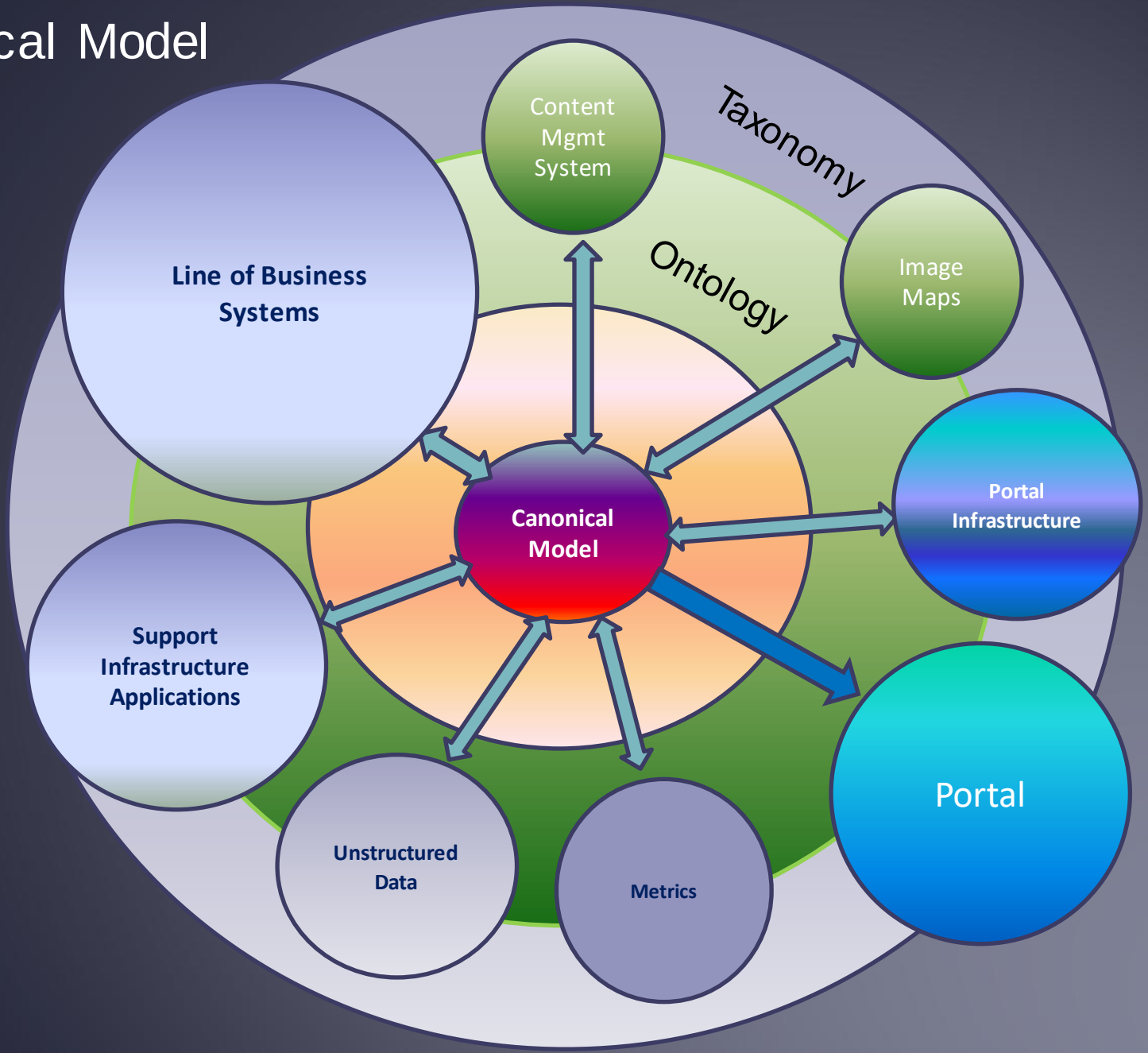
## Canonical Model



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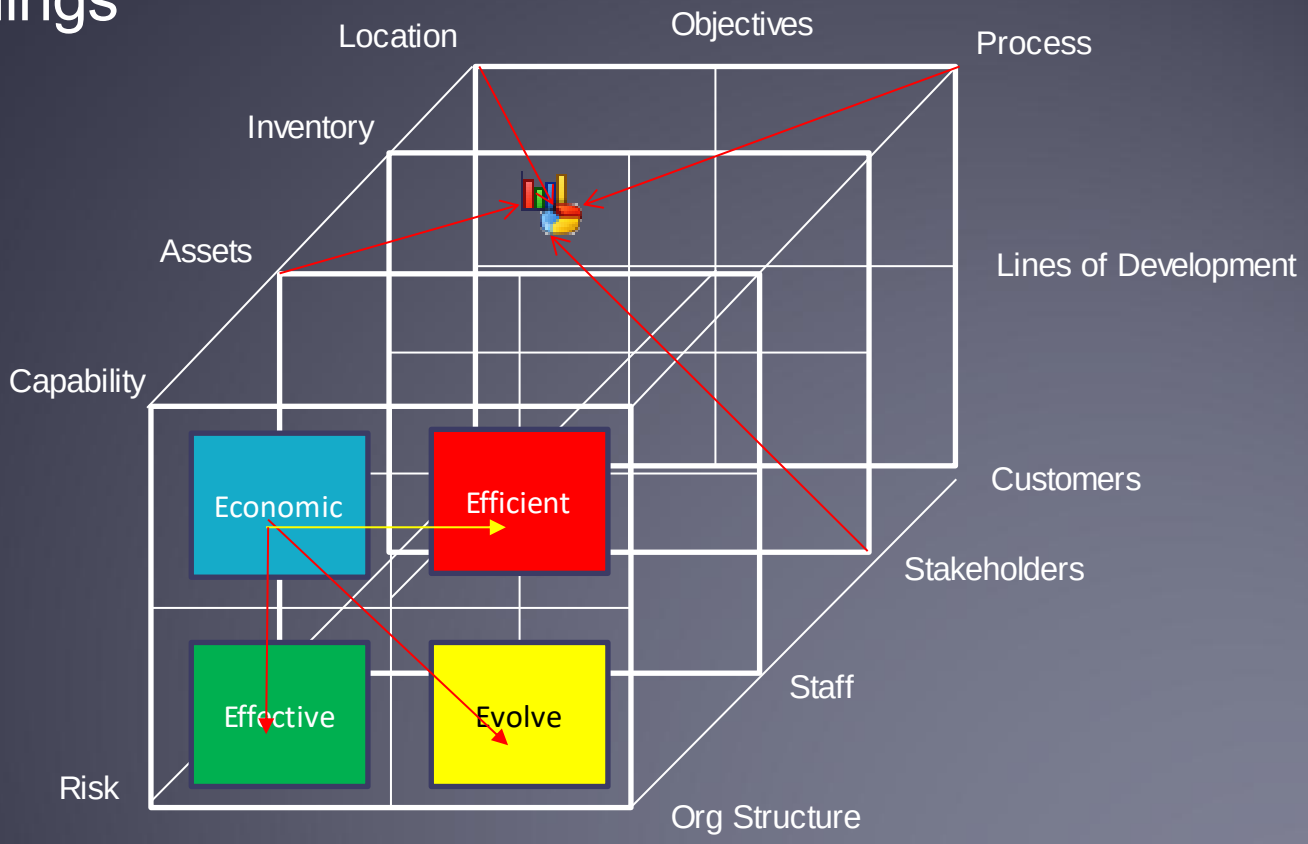
Multiple Views, Contexts, Perspectives and Relationships Between "Things"



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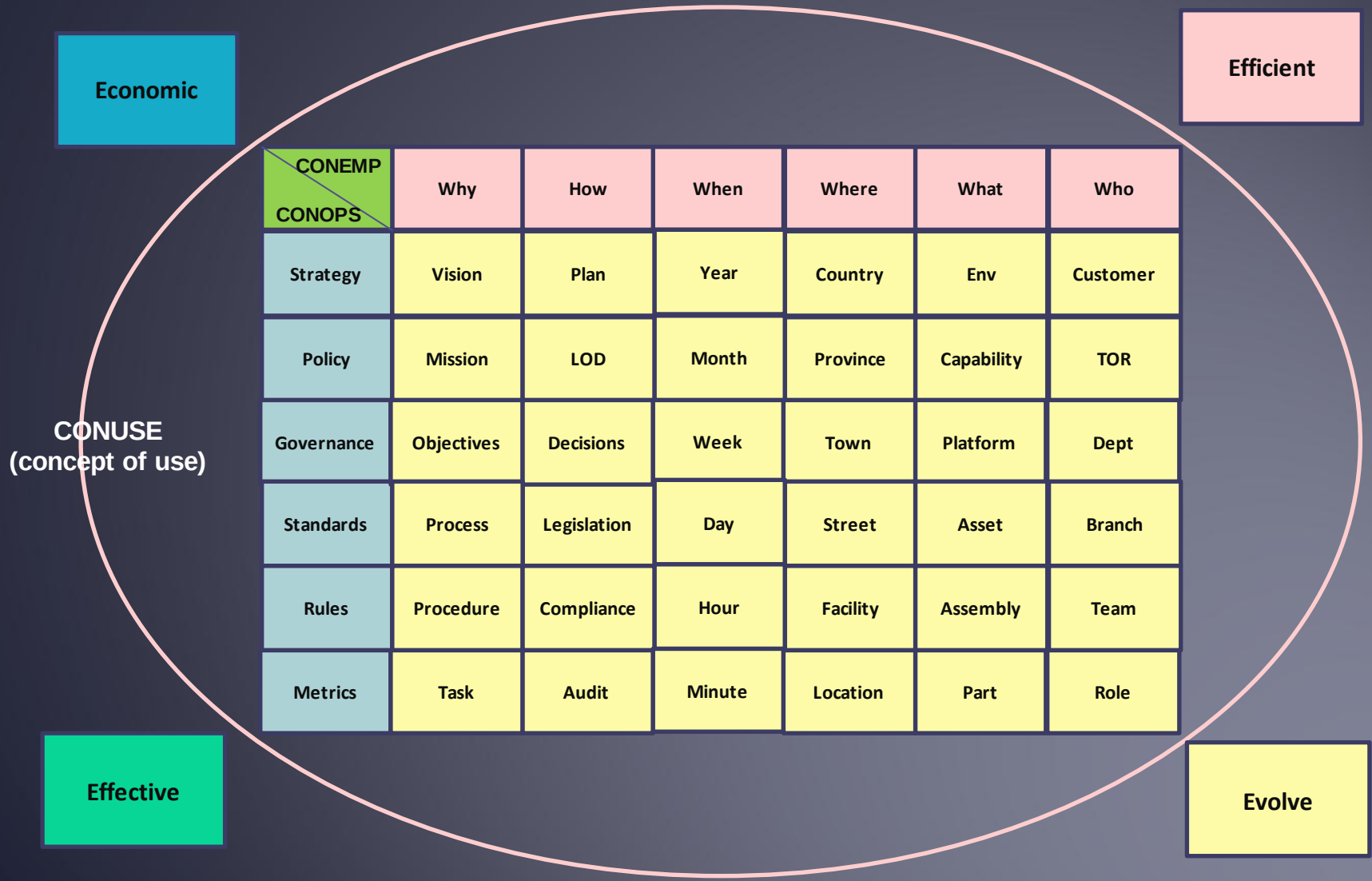
Gateways. Entry points, top down, bottom up and lateral navigation




| CONEMP / CONOPS | Why | How | When | Where | What | Who |
|---|---|---|---|---|---|---|
| Strategy | Vision | Plan | Year | Country | Env | Customer |
| Policy | Mission | LOD | Month | Province | Capability | TOR |
| Governance | Objectives | Decisions | Week | Town | Platform | Dept |
| Standards | Process | Legislation | Day | Street | Asset | Branch |
| Rules | Procedure | Compliance | Hour | Facility | Assembly | Team |
| Metrics | Task | Audit | Minute | Location | Part | Role |

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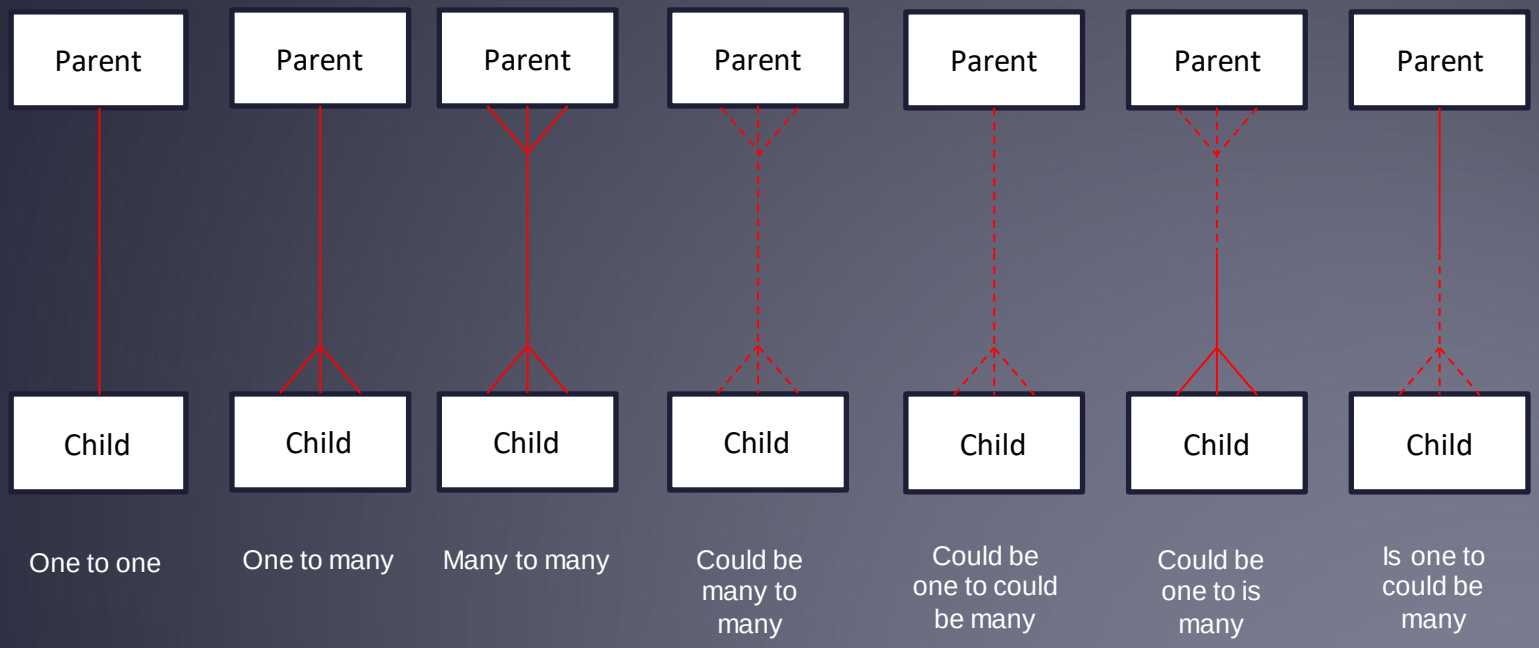
Things and relationships between them

# Fifth Transition – Pattern Recognition Et Al

Database "types of relationships" between things




There is a mathematical proven method called "normalisation" that should be applied to produce….

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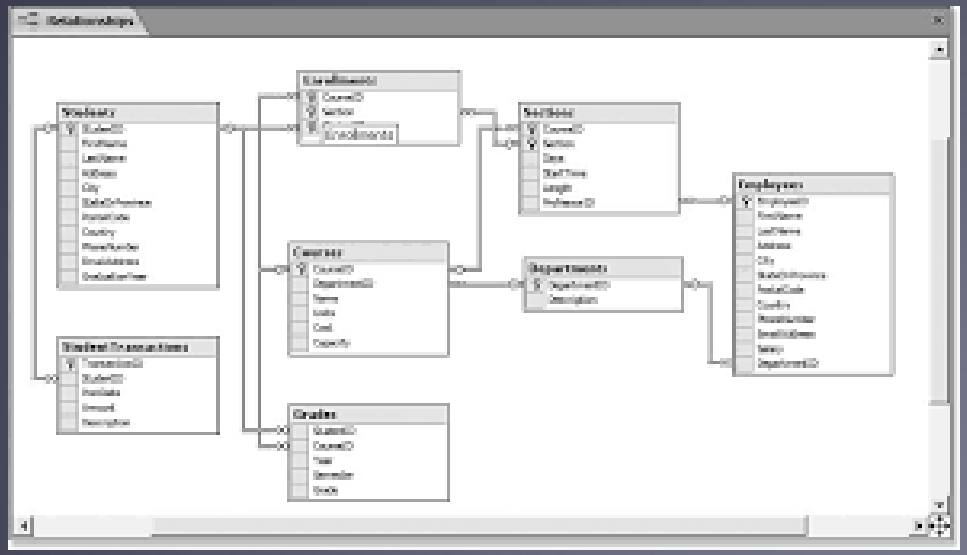
Complex database designs



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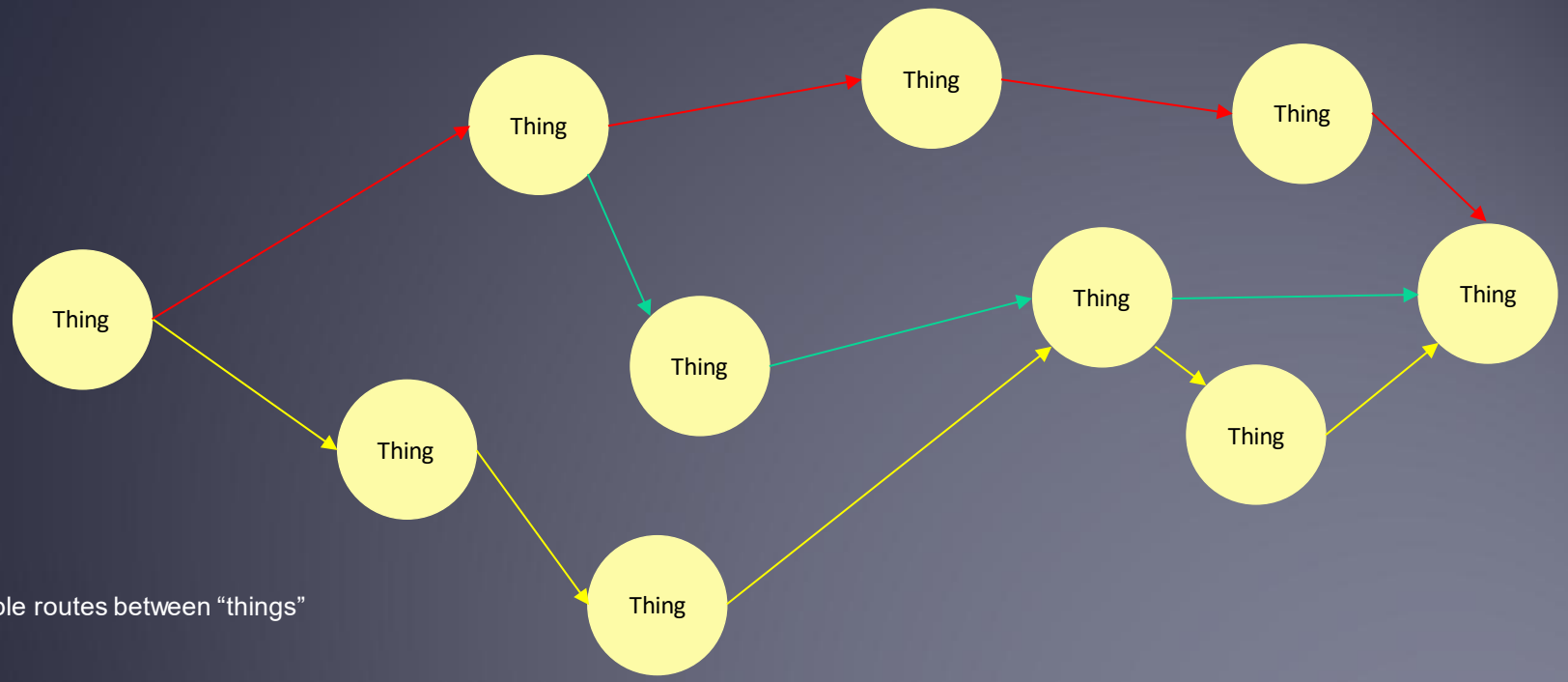
Graph Schemas, another way of mapping relationships…




Normally drawn as flat, 2D diagrams

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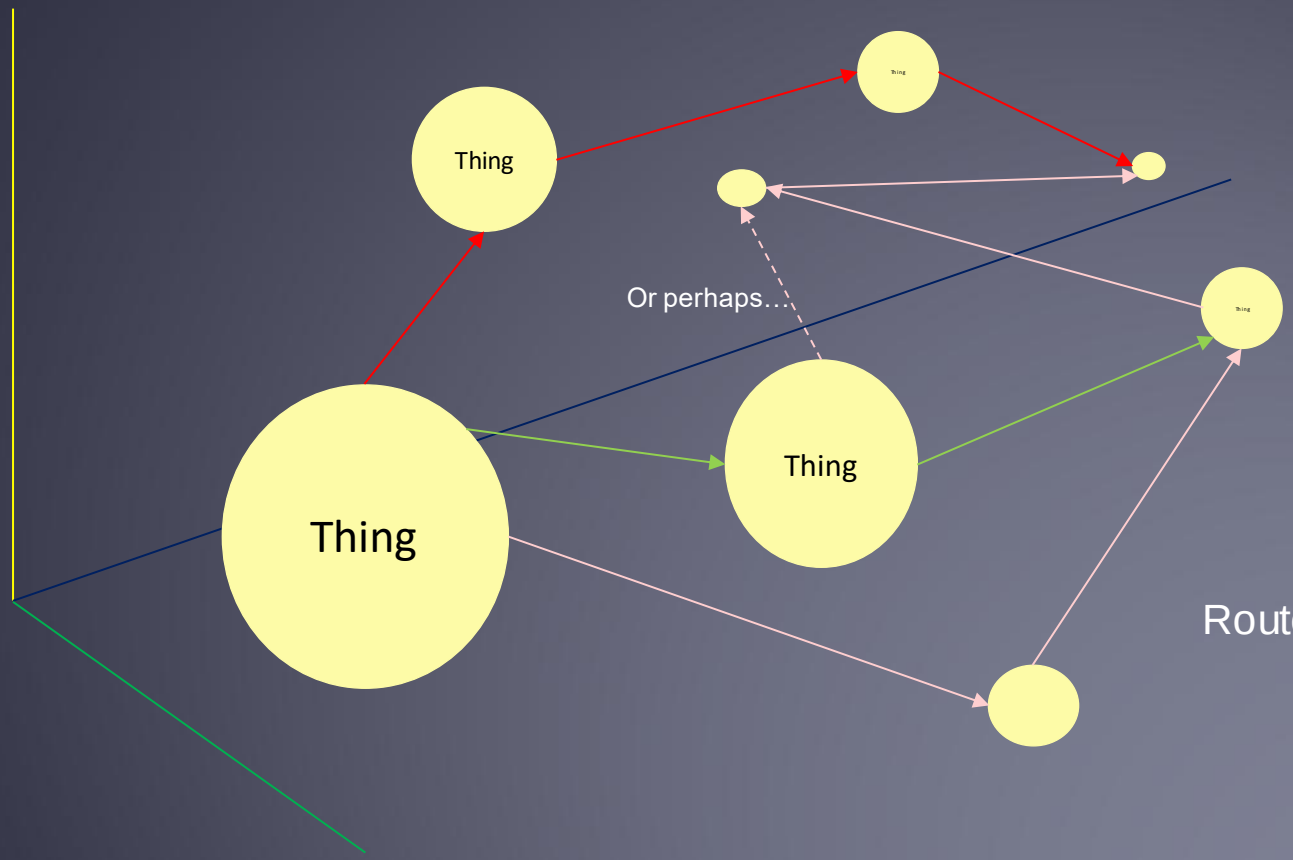
But there is much more going on…




Things, Relationships, Distance relative to each other in time and space

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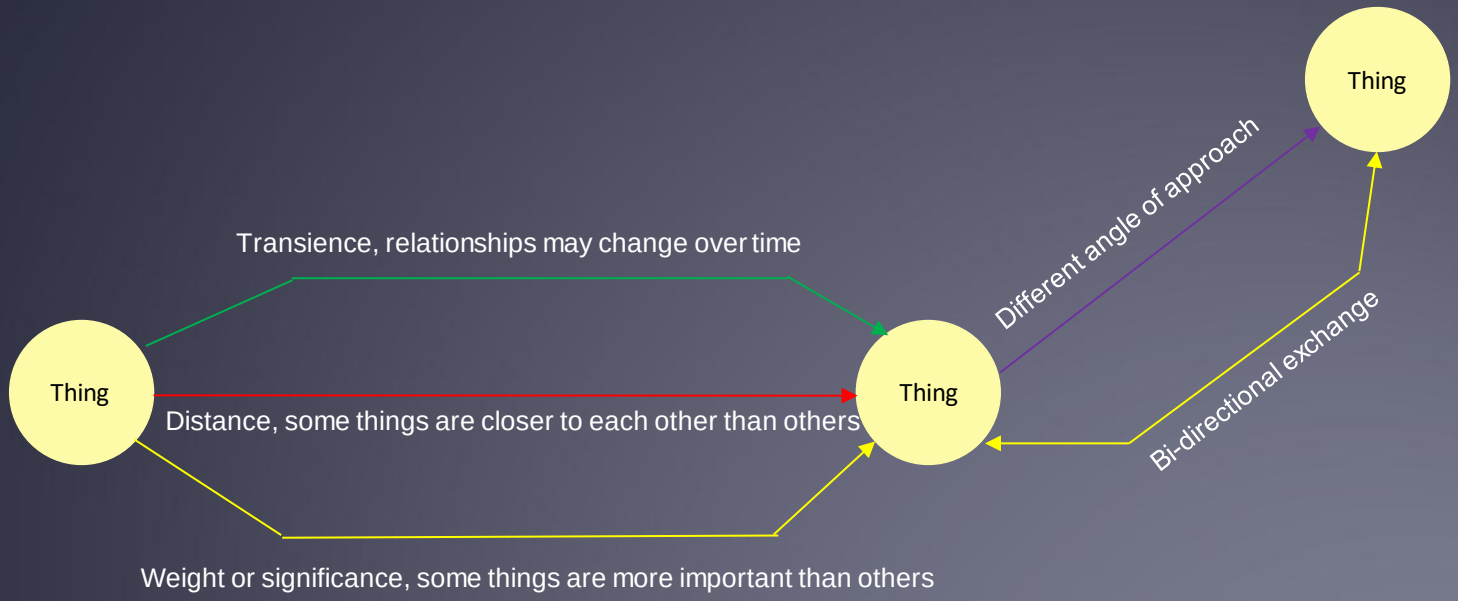
## Relationships between things are nuanced




Etc…..

In short, there is a form of "Conceptual Geometry"

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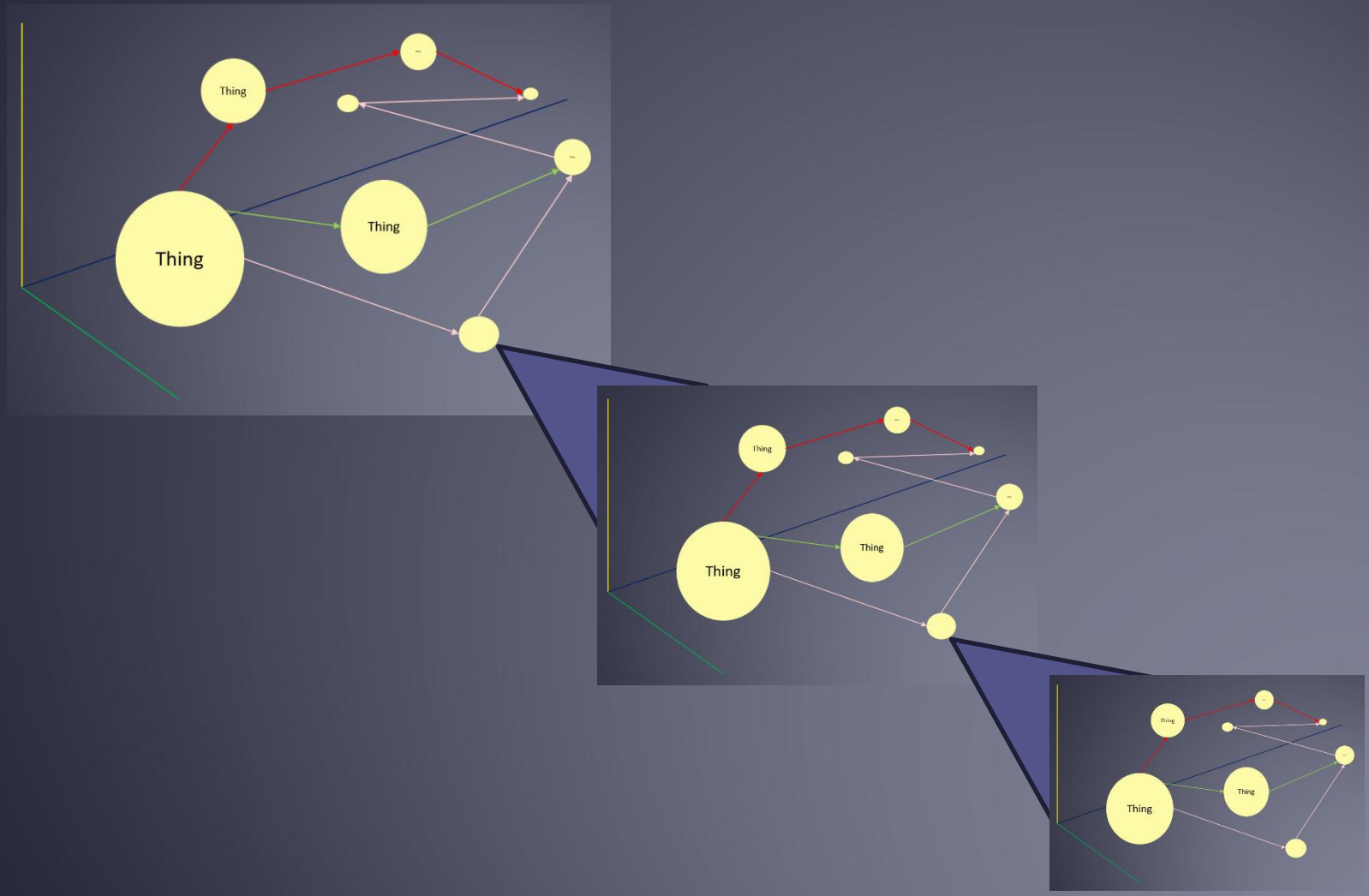
Which is all fractal in nature as detail emerges and is exploited



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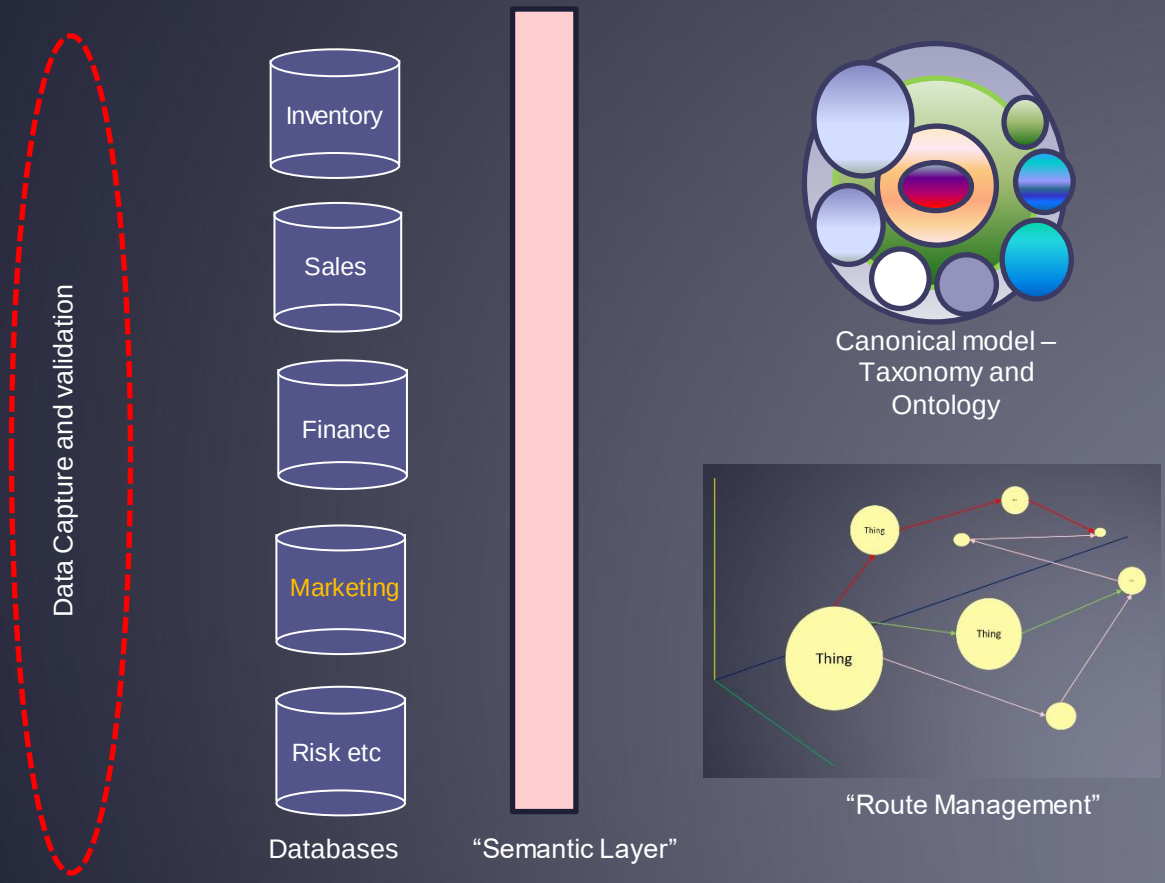
In short, a tipping point may be reached in which billions of exploitable relationships are exposed




To be able to answer questions like:

Its raining, how does that affect my sun cream sales?

Etc.

ALL, stress ALL dependent on accurate validated data capture

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## But….

From Microsoft

| Pattern | Summary |
|---|---|
| Cache-Aside | Load data on demand into a cache from a data store |
| CQRS | Segregate operations that read data from operations that update data by using separate interfaces. |
| Event Sourcing | Use an append-only store to record the full series of events that describe actions taken on data in a domain. |
| Index Table | Create indexes over the fields in data stores that are frequently referenced by queries. |
| Materialized View | Generate prepopulated views over the data in one or more data stores when the data isn't ideally formatted for required query operations. |
| Sharding | Divide a data store into a set of horizontal partitions or shards. |
| Static Content Hosting | Deploy static content to a cloud-based storage service that can deliver them directly to the client. |
| Valet Key | Use a token or key that provides clients with restricted direct access to a specific resource or service. |

## And the Application of..

Structural amendments like "denormalization"

Many forms of "neural network"

Many forms of predictive mathematical techniques including, but not limited to:

Probability testing
Regression Testing
Topological analysis

For which many forms of skill and expertise will need to be learned acquired and applied

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The next deck…

Extending the scope

# Organisation Mapping 1 – Digitally Mapping Organisation Form and Function

Tel: +44 07780 568449

Email: woodsa200@gmail.com

Skype: apw808