



The evolution of a System Engineering practice towards business and mission value

14th Jan 2021

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Who am I?

- Studied Economics at University
- Worked in IT for circa 20 years
- Engaged in Architecting Complex systems for around 10 years
- Worked with Mood for around 15 years

- British Computer Society Enterprise and Solution Architecture Practitioner
- TOGAF certification around 2009
- Deliver MODAF training to UK MOD, through Cranfield University
- Designed Mood International's NATO Architecture Framework training offering.

- History of engagements providing Architecture and Modelling Services to UK Enterprises across various industry sectors, most recently in the Defence and National Security practise at IIG-Mood.
- Increasing focus on architecting in highly “evolutionary” enterprises, and Information Rich Enterprises.

More difficult context we operate in

- Increased Hybrid Systems
- Information as both a product and as a resource.
- Increasing connectivity
- The Rise of “Agile” and the growth of DEVOps
- Smaller Budgets
- Major Changes in working practices

Do we need to think about the changing times as a Paradigm Shift

- Software development tools and methods have evolved through time
- Manufacturing processes and tools have evolved through time
- International Standards have changed, grown, and evolved (slowly!) through time
- Domains are increasingly capable within themselves

- ...some things that we, as architects, need to be concerned with are much easier than they used to be

- yet....our Frameworks and notations borne in the experiences of the 1960's

What if there were no architects??

- “Traditional standardization is done” – The State Of EA 2017: Aspirations And Challenges (Forrester)
- “Businesses” will continue to function
- Some aspects of operation are now easier
- The world won’t stop
- Our skillset and discipline is being used!
 - So.....We can all go for a beer/wine/soft drink/dinner now, right?
 - We have completed Architecture!



**Wrong – We have simply found another
foothold**

**We have only just begun to develop “the business as a
platform”**

**We should now look to exploit the position we have
created and enhance what value we can offer**

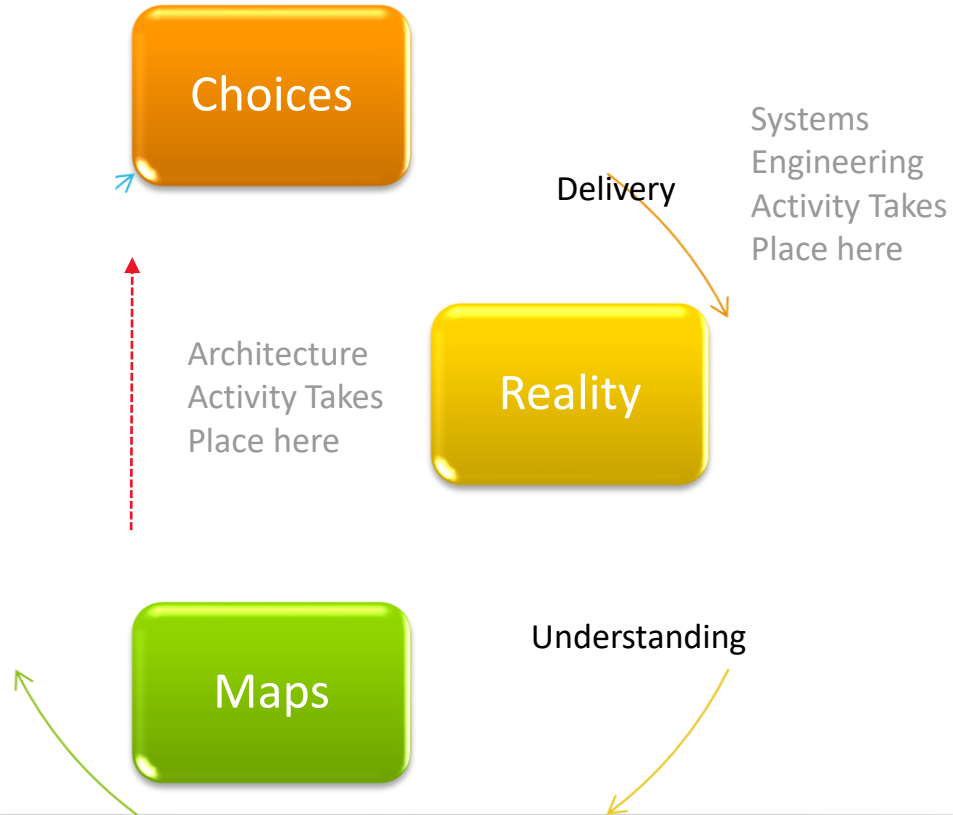
What's next for Architecture?

- It's still about ensuring we have the *platform for agility*
 - *Turning the Strike Fighter into a Multi-Role Aircraft*
- We make “the business” more configurable, and more re-usable
- We need to focus on lifecycle management
- We need to help “the business” gain insights to drive and direct those required changes.
- We need to ensure we root our architectures in Outcomes and Effects

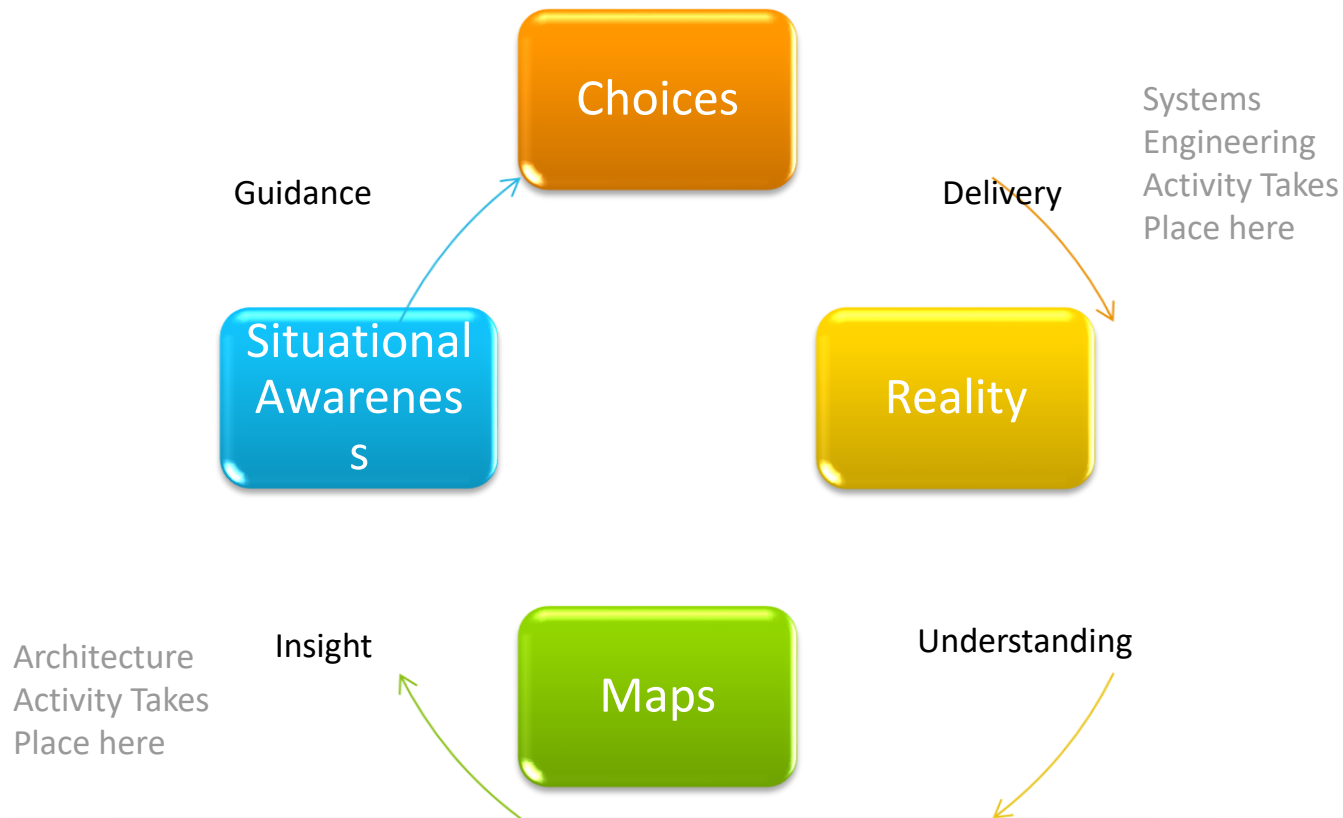
In an increasing world of notations, languages and frameworks

- Notation is important
- Frameworks won't go away
- They're our backbone and our "glue". They enable Rigour, and facilitate Re-use. They even enable Readability within our own community
- But...When was the last time you heard a member of "the business" talk about a "system port connector end", or a "Node Role in Flow". When was the last time you used a UML diagram to convince your leadership of the value of your systems engineering/architecture practise?
- The language of the enterprise simply isn't being reflected in many of our frameworks and tools.

Traditional Architectural Activities



Join the Dots of Insight, not the Dots of Data



What is the “Common Business Picture”

- The value we add as a practise isn't just one of tooling, language or notation
 - We shouldn't force the business to adopt our context-free language, or our concept heavy frameworks
- The value we add is about
 - connecting concepts and ideas
 - providing structured, systems thinking
 - analytical approaches.
- We should look to our core competencies:
 - Abstraction, Logic & Structure
 - Enabled the Development of Models
- Encourage the development of tools which can be used by the leaders to gain insights and provide an architecture driven around those points.

To the future.....

- Embed the language of “the business” in our work
- Promote a systems thinking approach within “the business” to increasingly shape the environment, alongside enablement through technology
- Empower the business with tools that develop insight, provide them with situational awareness in ways that they can use
- Develop Architectures that support the connection of insights gained, not items captured
- Obsess about the delivery of the outcomes, not capabilities.