Applying EA-driven development of Air Traffic Management

Dan Meadows
Head of EA and Requirements – NATS

Peter Slump
Associate, Advanced Digital Engineering – Arup
Setting the scene…

• The National Air Traffic Services (NATS), supported by Arup, are introducing a new approach to managing the development of requirements
  – Focused on future transformational change programmes
  – Approach founded on the TOGAF methodology
  – Underpinned by the use of an Enterprise Architecture

• Implementing this approach, for a ~£800m change portfolio in a highly complex critical national infrastructure domain, comes with many challenges and generates many lessons…
Who are NATS?

VIDEO
What is our Vision?

Industry-wide, problems with requirements drive substantial costs and delays

- Re-work where deficient
- Clarification where not clear
- Ultimately, failure to deliver the right thing

An EA-driven approach is seen as key to mitigating these issues

- Improving consistency and coherency
- Eliminating project-silos
- Providing greater clarity and strategic alignment
It’s not just EA…

Changes are being delivered as part of a broader **Business Change Framework**

- Portfolio, Programme and Project Management
- Change Management
- Benefits Management

All in a highly-regulated, risk-averse environment
What have we changed?

- Text-based to Model-based
- Service-oriented / capability-driven
- Top-to-bottom traceability / strategy-led
- Specialist roles and centralised teams
- Consistent but tailorable processes
- Appropriate use of stakeholder expertise
Leveraging Best Practice and Tools

The new EA and requirements approach uses:

- TOGAF and the NATO Architecture Framework (NAF)
- Business Motivation Model
- Standardised tools: MEGA and DOORS

The broader Business Change Framework also integrates these with:

- Management of Portfolios (MoP) and Managing Successful Programmes (MSP)
- People Centred Implementation (PCI)
Our Journey

Arup and NATS have been working together since 2017 to change the way NATS manage requirements

- Starting with a review of existing practices
- Recommending a new approach
- Developing a new methodology
- Developing a training and communication programme
- Supporting the initial implementation
Implementing the change…

**PROCESS**
- Process Definition
- Guidance Materials
- Templates
- Role Definitions

**PEOPLE**
- Recruitment
- Training
- Centre of Excellence
- Community of Practice

**CULTURE**
- Shared Vision
- Engagement
- Pragmatism
A Centre of Excellence

Previously - Requirements roles are treated as add-ons to other roles and spread out, without cohesion.

The Vision - Centralise ownership and implementation of processes to be adopted and tools/guidance to support them.

The Benefits - Efficient, coherent, consistent approaches with clear accountabilities and responsibilities.
Successes

• Senior buy-in
• Investment
• Training
• Enduring support
Challenges and Lessons

• Dealing with the legacy
• Realistic ambition and pragmatism
• Devil in the detail
• Change curve
Thank you