The Scarecrow MBSE Embassy presents...

MBSE in a slide

Prof Jon Holt & Simon Perry
Protocol and resources

• Please mute microphones
• Raise any questions via chat
  – We will get to you
• Resources available off line
  – Slides with hand-drawn notes
  – Video
  – Access to Scarecrow’s KNOB
  – Access to the MBSE Embassy YouTube channel
Hello from Jon & Simon!
1. Overview

1. The Need for MBSE
2. Deploying MBSE
3. Summary
1. The Need for MBSE

• Complexity
  – Accidental
  – Essential

• Communication
  – Common language
  – Different stakeholders

• Lack of understanding
  – Across life cycle
2. Deploying MBSE

• Three Considerations must be answered
  • Reason
    – *Why* does the organisation want to implement MBSE?
  • Capability
    – *What*, with regards to MBSE, can the organisation already do and what do they want to be able to do in the future?
  • Evolution
    – *How* does the organisation need to evolve in terms of its People, Processes and Tools to be able to do what they want to do in the future?
Why do you want MBSE?

Context modelling  
TeamStorming  
Structured Text

- Improve quality of system design
- Reduce the amount of post-manufacture fixes
- Reduce time to market
- Reduce development costs
- Reduce manufacturing costs
What is your current MBSE capability? How do you need to evolve?

RAVEnS

Stage 1: Document-based
Stage 2: Document-centric
Stage 3: Model-enhanced
Stage 4: Model-centric
Stage 5: Model-based
2. MBSE in a Slide
MBSE in a Slide

![Diagram](image-url)
MBSE in a Slide

![Diagram of MBSE components with relationships]

- System
- Model
- View

1..* abstracts 1

1..* is consistent with 1..*
MBSE in a Slide
MBSE in a Slide

- Viewpoint
  - defines template for
  - is consistent with

- System
  - abstracts
  - 1..*

- Model
  - 1
  - visualises
  - 1..*

- Notation
  - 1
  - 1..*

- Diagram
  - 1
  - 1..*
  - is consistent with

- View
  - 1
  - 1..*

- Viewpoint - System - Model - Notation - Diagram

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Ontology Viewpoint Model System View Notation Diagram
1..* 1..* 1..* is based on visualises defines template for visualises is consistent with is consistent with

abstracts

is consistent with
MBSE in a Slide

Framework is based on Ontology.

Viewpoint defines template for System.

Model is consistent with View.

Notation visualises Diagram.

Diagram is consistent with View.
MBSE in a Slide
MBSE in a Slide

- **Approach**: Process Set describes how to use Framework, which is based on Ontology.
- **System**: Model defines template for View, which visualises Diagram. View is consistent with Notation.
- **Visualisation**: Diagram is consistent with Notation.
Summary

- MBSE in a slide (and a bit) may be used for
  - Summarising MBSE
  - MBSE capability determination
  - Gap analysis
  - Understanding tools
- Used in Scarecrow on a daily basis
Further information

• Resources available off line
  – Slides with hand-drawn notes
  – Video
  – Access to Scarecrow’s KNOB
  – Access to the MBSE Embassy YouTube channel

• Don’t forget SysML-anary
  – Every Friday morning
  – Follow us on LinkedIn
Further reading
Coming soon...

• Public training courses:
  – See our web site

• Bespoke courses and services also available

• New book in Q3 2020
  – ‘Implementing MBSE into Your Business – The Trinity Approach’

Visit: www.scarecrowconsultants.co.uk for more details