Using the C4 model as the glue between enterprise, business, solutions and software architectures

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Using the C4 model as the glue between enterprise, business, solutions and software architectures
Outline

• C4 model – a quick introduction
• Using C4 model at the Bank
  • EA Challenges and how C4 model can help
  • How we built C4 model into our EA metamodel
• Questions
Bank of England

C4 model
A quick introduction
What is the C4 model?

• An approach to diagramming software architecture developed by Simon Brown
• It brings:
  • Organisation to 4 layers of abstraction facilitating easy transition between them
  • Clarity to the meaning of diagrams, which should be self-explanatory
• It is:
  • Model and diagramming language agnostic
  • Supported by the Bank’s modelling metamodel being developed in Sparx EA
• It is not:
  • An architecture modelling solution
  • A comprehensive architecture artefact collection to address all architecture needs
  • For example, it doesn’t address data, customer journeys, process flow…
System Context diagram for Internet Banking System

The System context diagram for the Internet Banking System.
Workspace last modified: Wed Feb 05 2020 09:33:36 GMT+0100 (Central European Standard Time)

Source: C4model.com
Container diagram for Internet Banking System

The container diagram for the Internet Banking System.
Workspace last modified: Wed Feb 05 2020 09:33:36 GMT+0100 (Central European Standard Time)

Source: C4model.com
System Landscape diagram for Big Bank plc

The system landscape diagram for Big Bank plc.

Source: C4model.com
Deployment diagram for Internet Banking System - Live

An example live deployment scenario for the Internet Banking System.
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Self-explanatory diagrams
Bank of England

Using C4 model at the Bank
EA Challenges

• Insufficient engagement prior to creation of project
• Low Level Design & Implementation diverge from High Level Design
• Failure to maintain architectural assets

C4 Opportunities

• Level 1 diagrams focus on the business architecture (what & who, not how)
• All Levels can be checked for consistency and maintained
• Change to LLD may force a change to HLD (or be recognised as a deviation)

*C4 model needs to be embedded in our Enterprise Architecture metamodel*
Level 1 Context diagram - metamodel
Level 2 Container diagram - metamodel
Add a “Stakeholder” relationship

Replace “Person” with “Partner Role” and “Resource Role” (compatible with BPMN)
Add Platform deployment for Containers
Add links to business architecture classes