What is a system anatomy?

By

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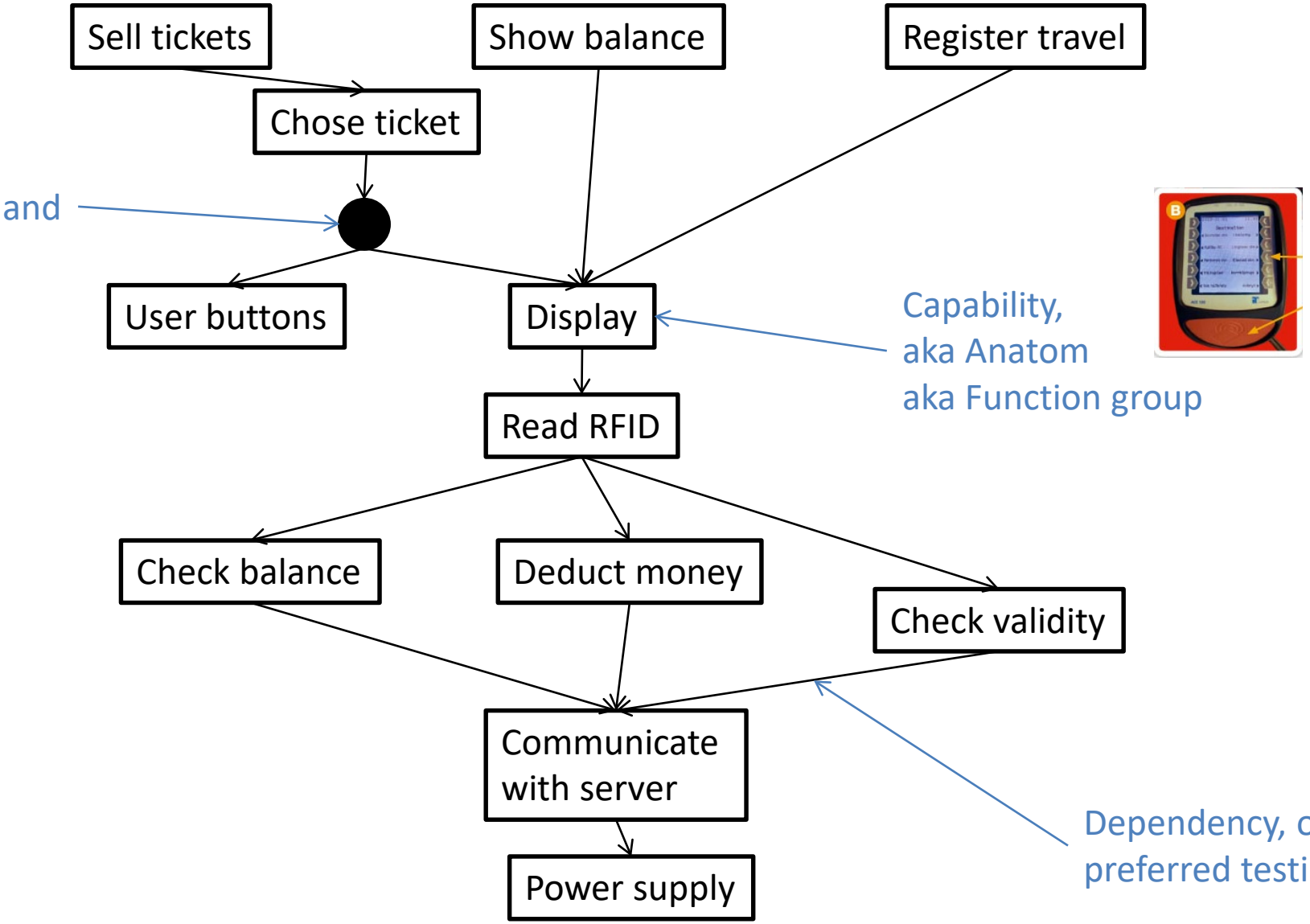
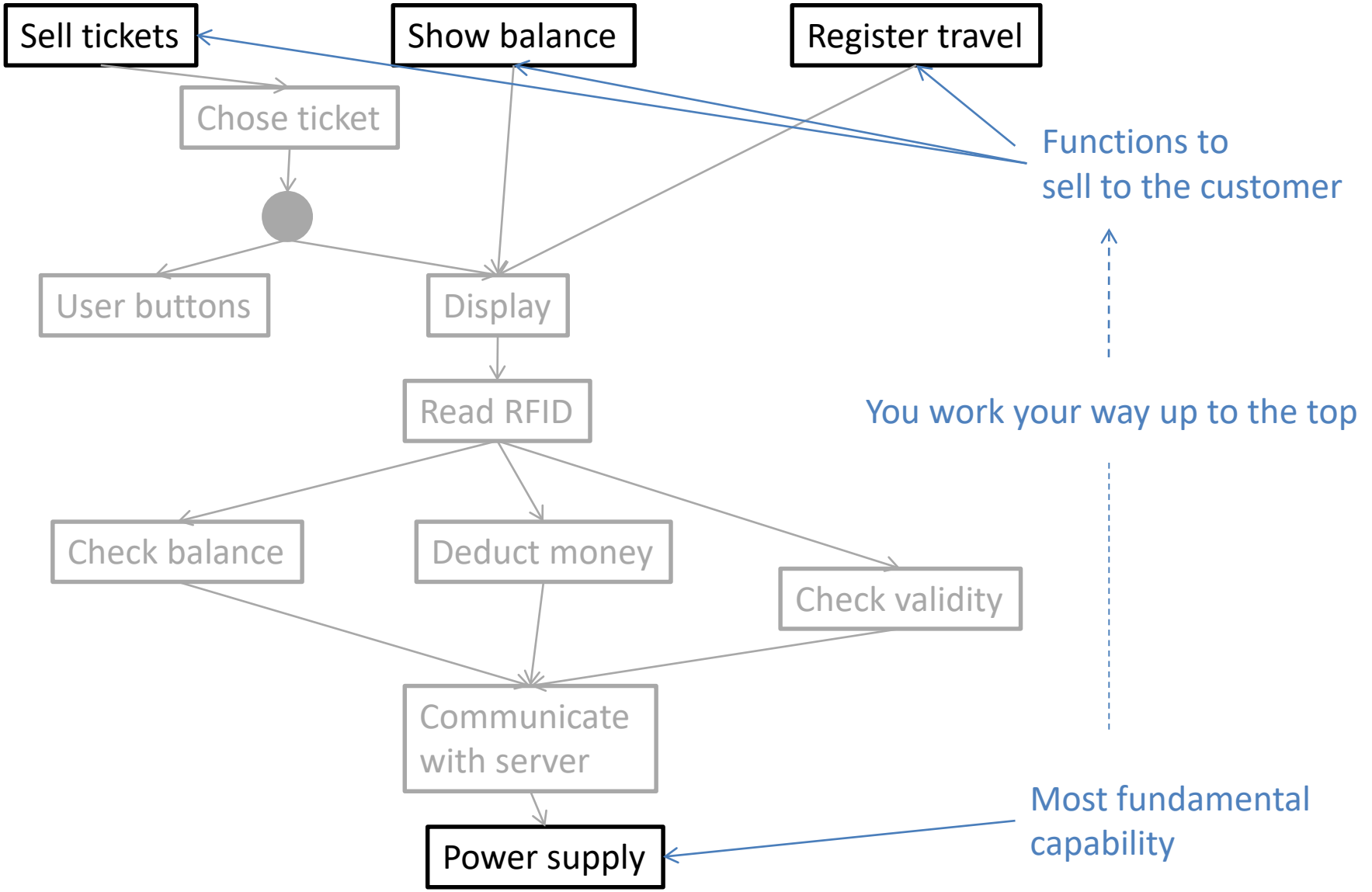
What is a system anatomy?

- A directed, acyclic graph of functional capabilities from a usage perspective
- A common understanding of a large product
  - Aligns the co-workers' inner pictures of the system
  - A means for communication
  - A means for decision making
- A basis for integration planning
- A basis for project planning
- A social accomplishment
- It is **not** an exact, unique, formal description
- Works in both agile and stage-gate project models
- Term coined by Jack Järkvik in early 1990's

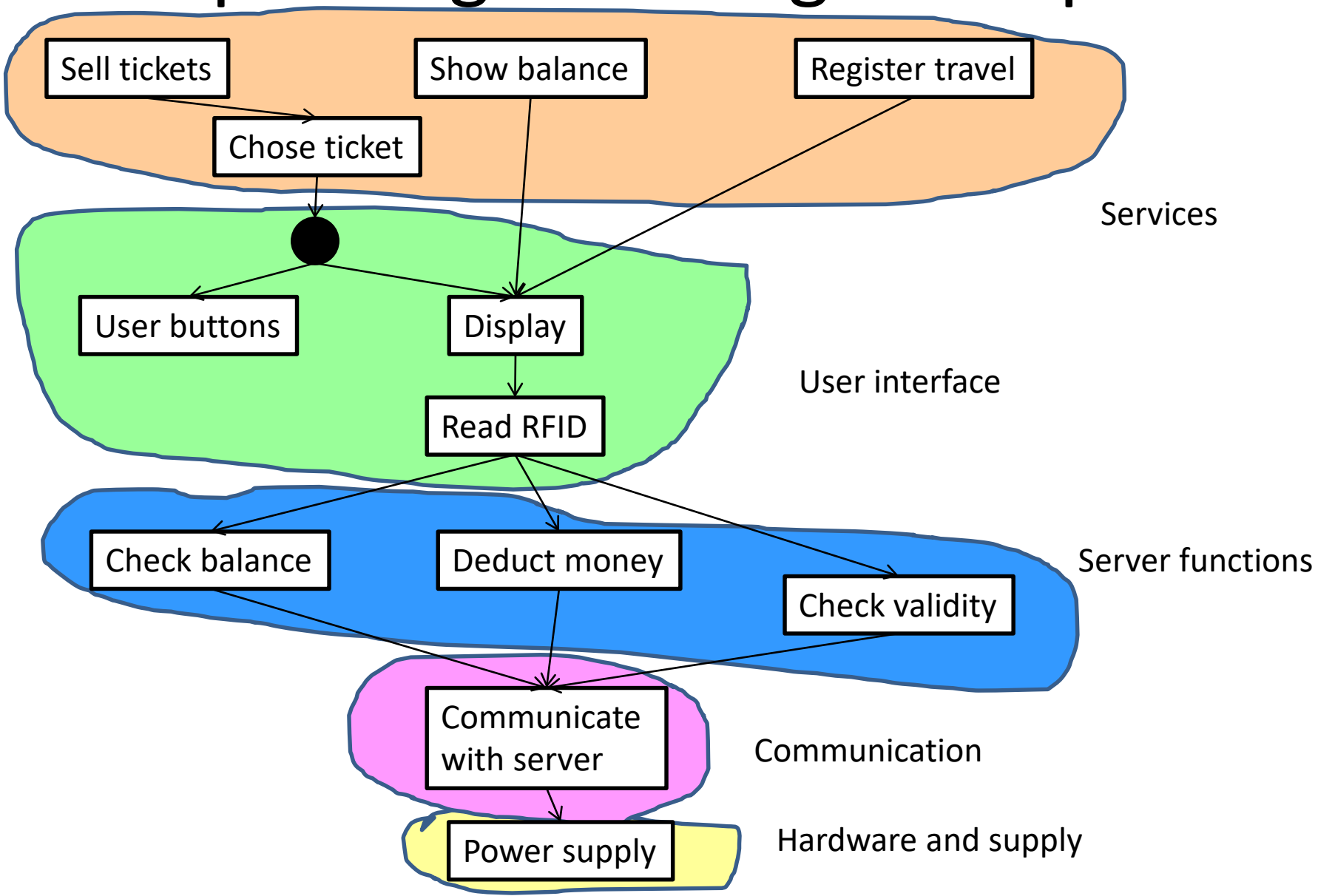
Example: Local bus card reader



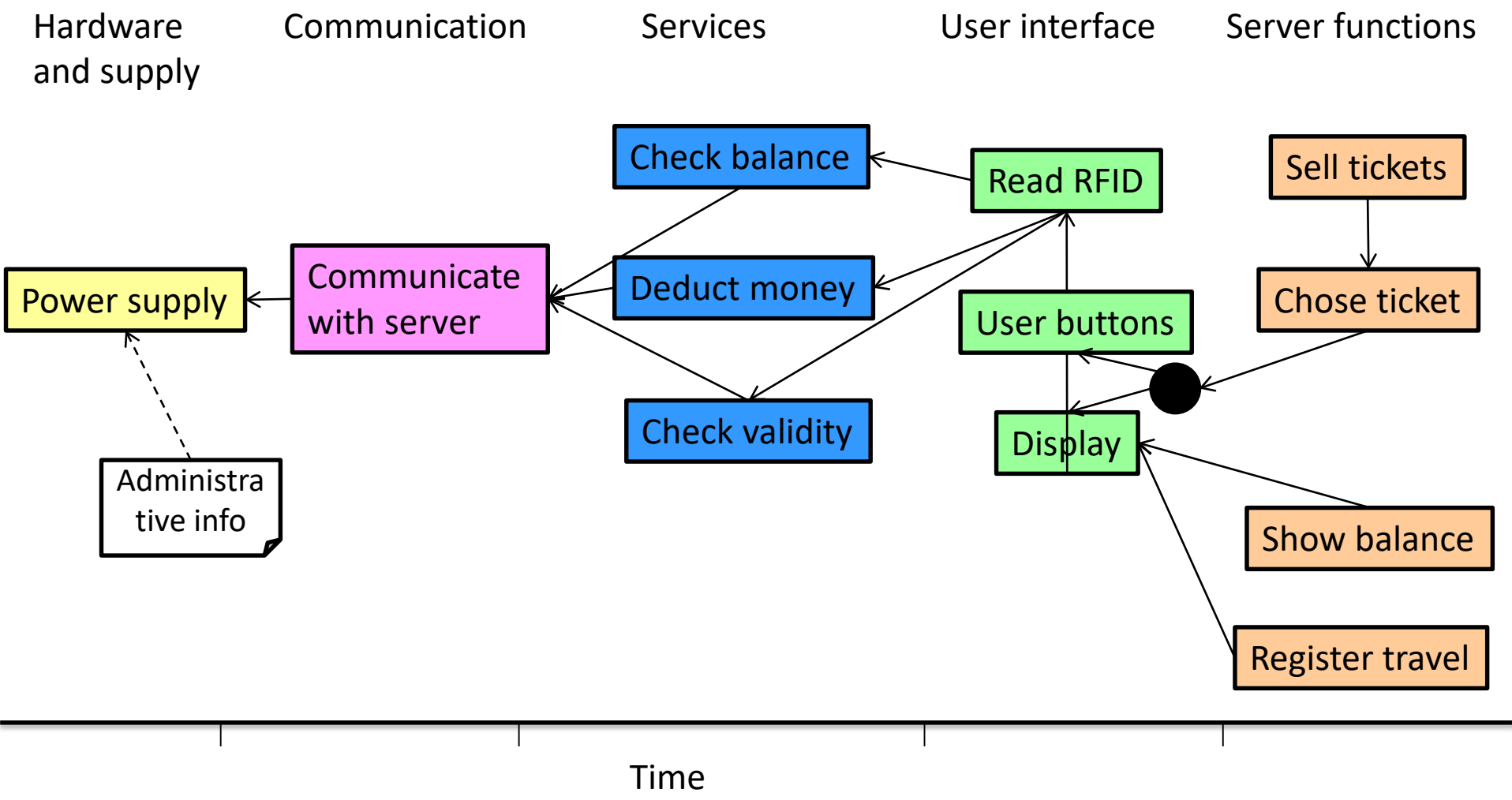
Layout of an anatomy



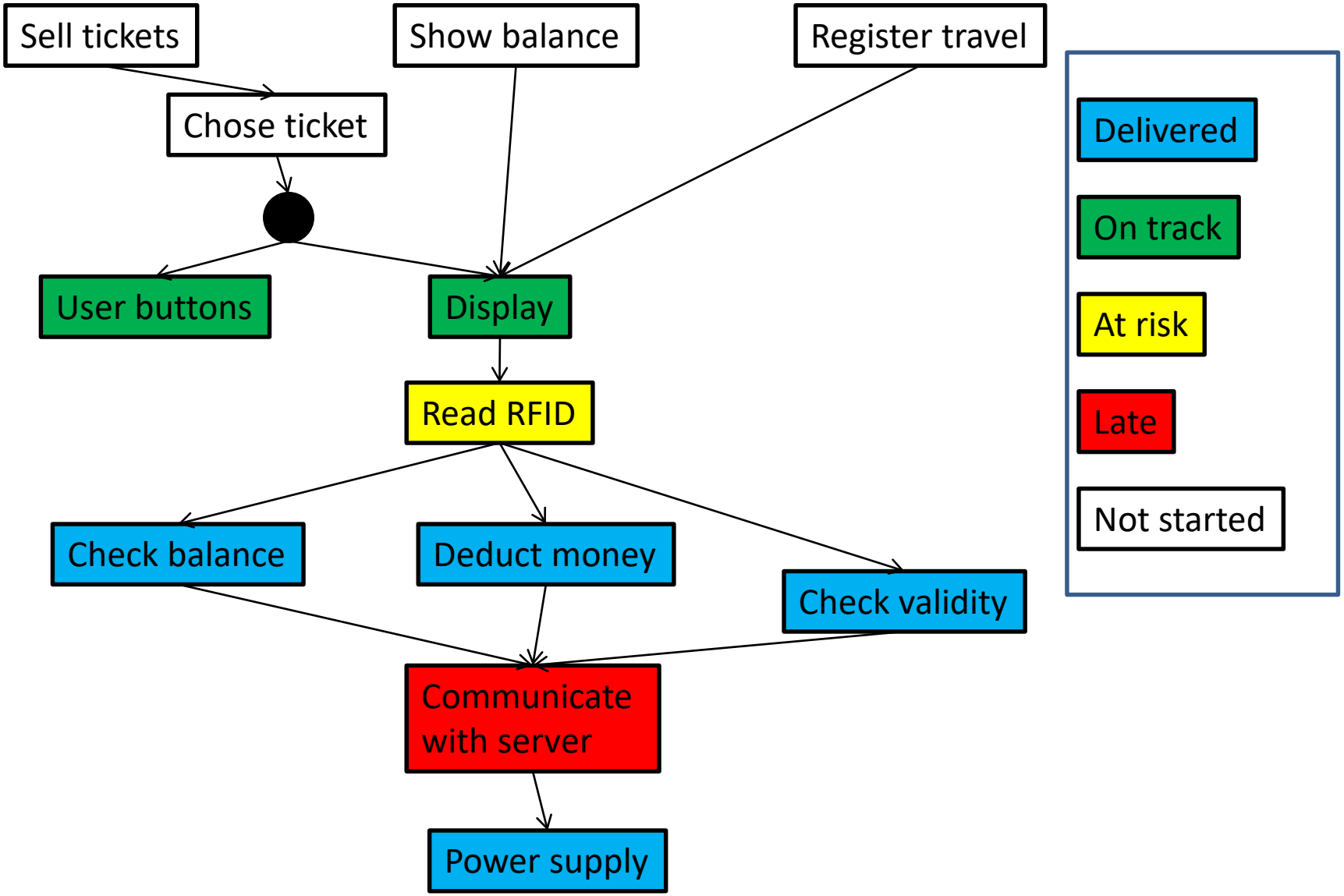
Example: Organic integration plan



Example: Twist the figure for a development plan

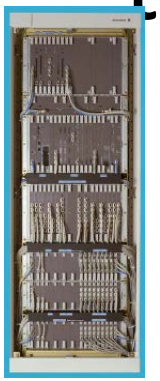


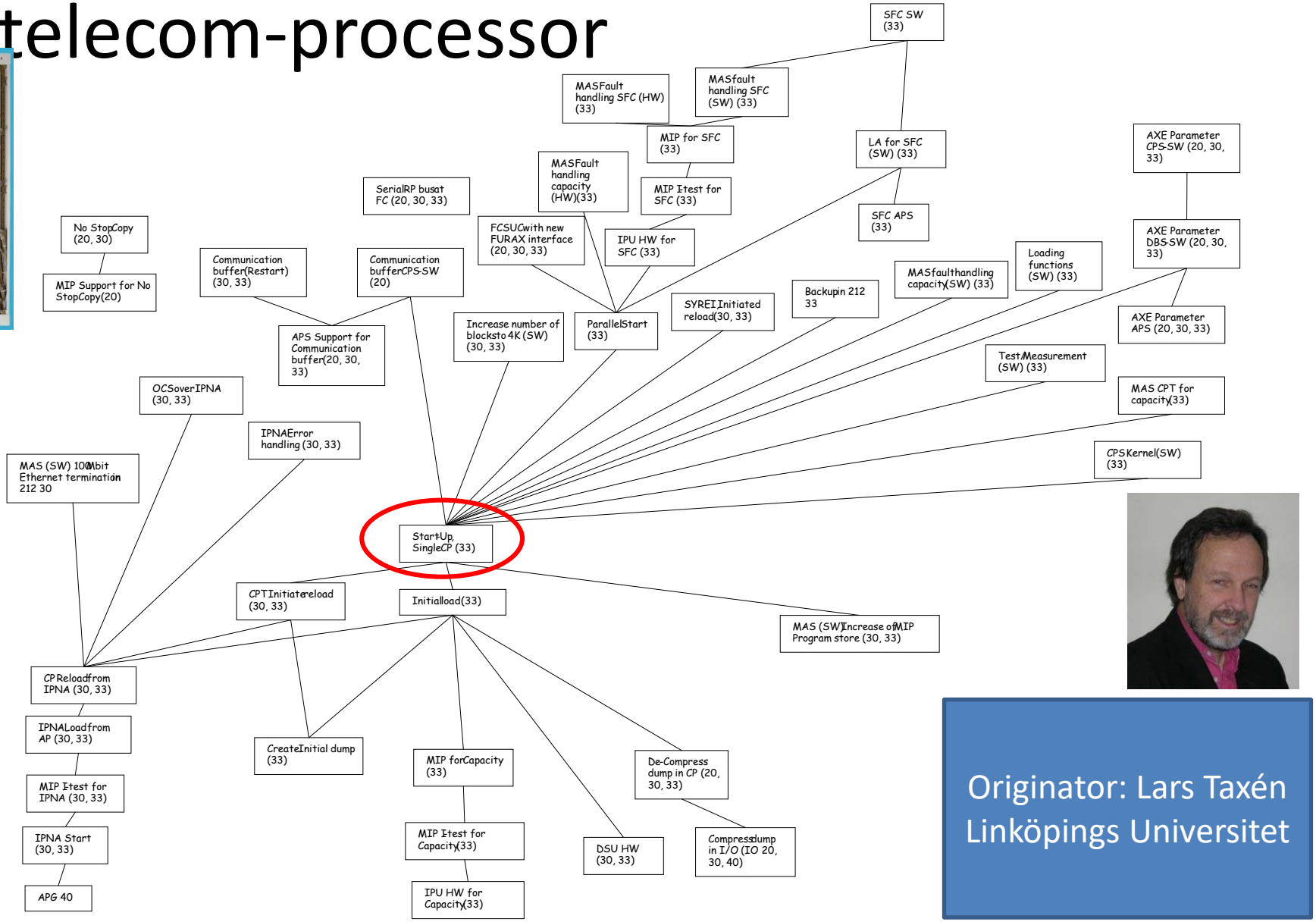
Example: Use colour code for progress tracking



Anatomy for a telecom-processor

ERICSSON





Originator: Lars Taxén
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How do we create an anatomy?

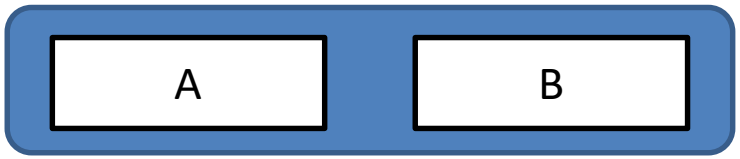
- All participants bring functional requriement material
- Work in teams of 6 - 12 people, compare and negotiate results periodically
- Identify function groups as anatoms
- Brainstorm with yellow stickers
- One sheet-of-paper => 30-60 anatoms
- Check soundness

Originator: Joakim Pilborg, KnowIT

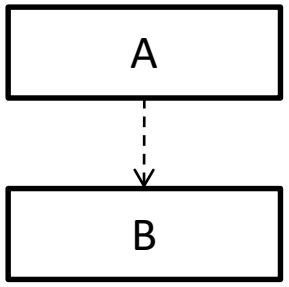
Check soundness

- Alignment with use-case model (if any)
- Alignment with architecture
- Money-making functions at top
- Fundamental functions at bottom
- Integration and test realistic
- Some more notations:

OR-symbol

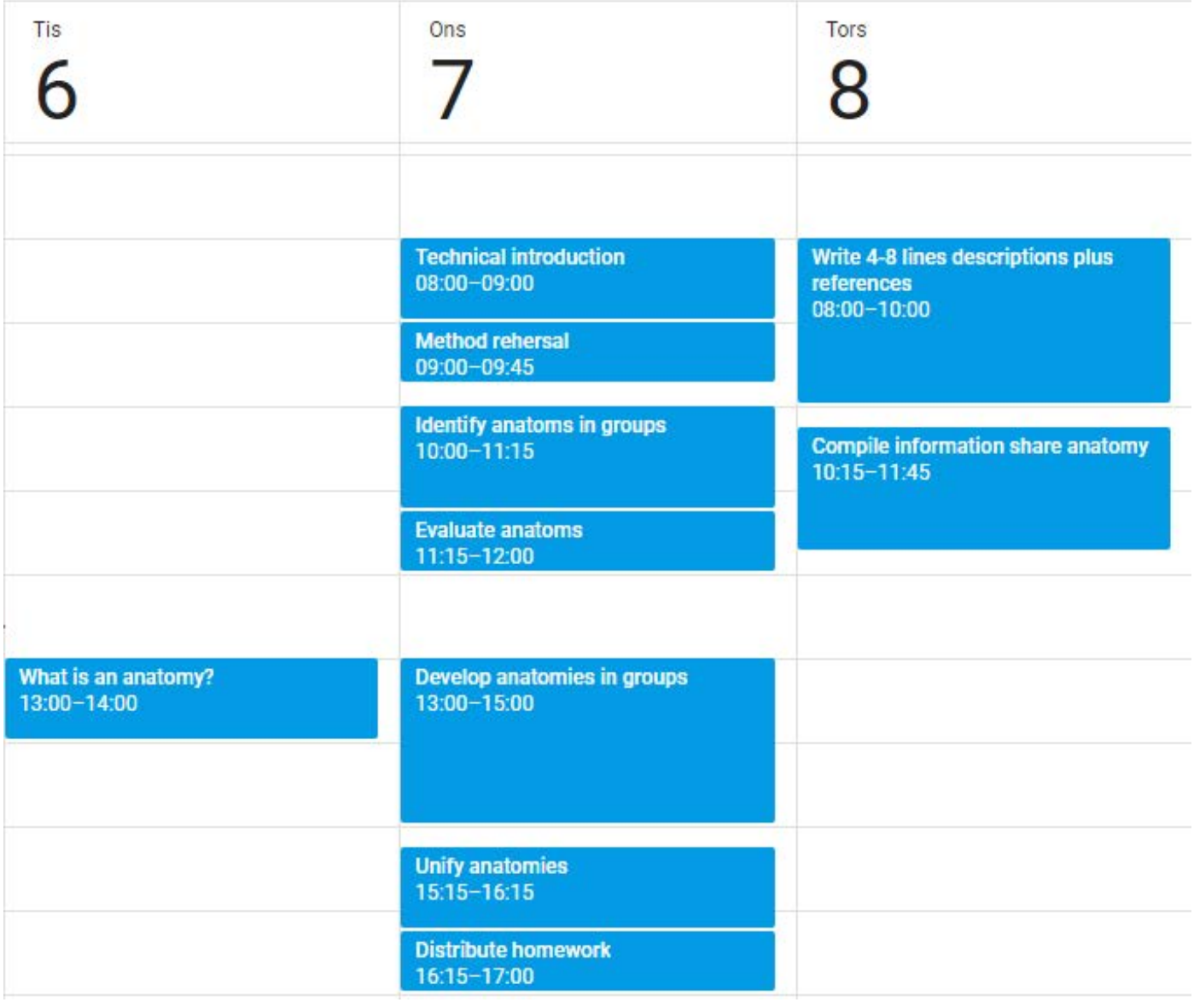


A and B depends on each other



Outstanding question regarding dependency between A and B

Possible agenda



Grounding

- Strong experience base
- Theoretical evaluation in:

Taxén, L. and Lilliesköld, J. (2008). Images as action instruments in complex projects*, International Journal of Project Management*, **26**(5), 527-536.

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Create an Anatomy for an ATM

Automated Teller Machine, ATM. A computer-based system in a kiosk allowing the user to conduct banking transactions. Functionality:

1. The ATM shall allow the user to withdraw cash and to check the balance of his/her account but only if the ATM card is OK and the PIN-code is correct.
2. The ATM-card is kept if wrong PIN is entered three times in a row.
3. A receipt shall be given for all transactions.
4. There shall be a possibility for the user to change his/her PIN-code.
5. If there are too few bank-notes left or the connection to the bank is lost, the ATM shall be automatically closed

Plan

Time	Major activity
9:00-9:30	Intoduction
9:30-10:00	Identify functions (2 groups)
10:00-10:30	Evaluate and agree on functions
10:30-11:00	”Lunch break” – coffee outside A2
11:00-12:00	Produce anatomies (2 groups)
12:00-12:20	Merge Anatomies
12:20-12:30	Summary