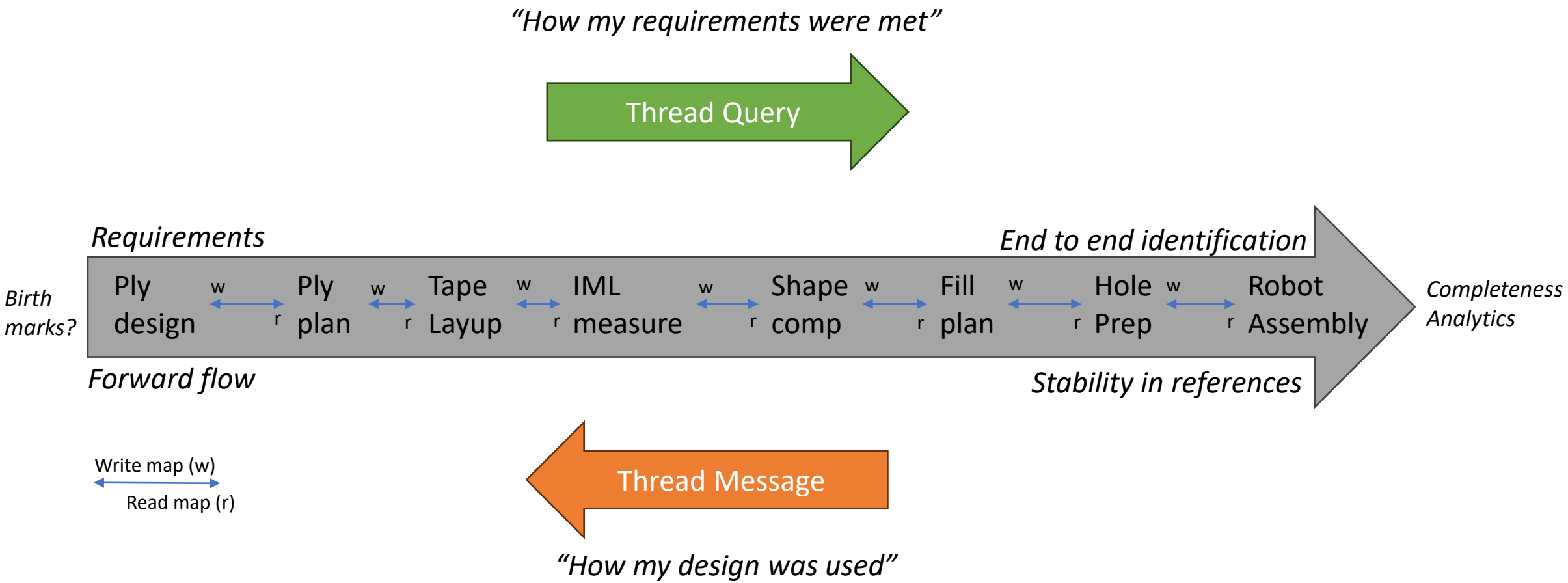
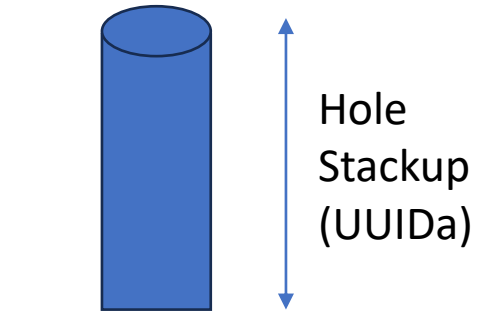
Digital Thread



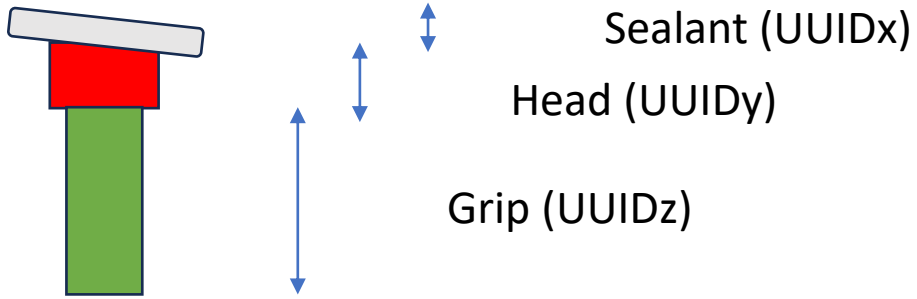
Requirements tracing

- What does an upstream design need to find in downstream manufacturing and measurement?
- Language for the query
  - Made on a particular machine
  - With a particular tool
  - On a particular day
- Tracing of requirements that get divided
  - E.g. One tolerance becomes three



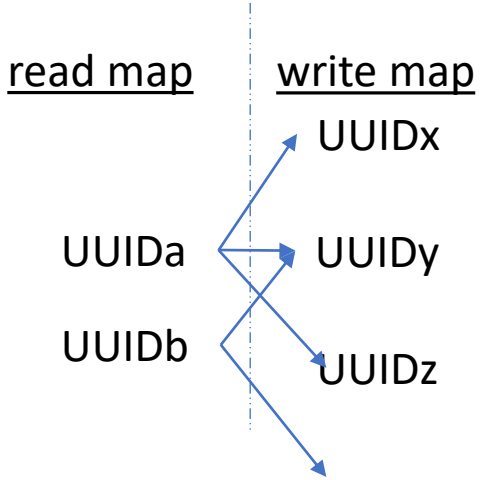
Hole Stackup (UUIDa)

Assembly design



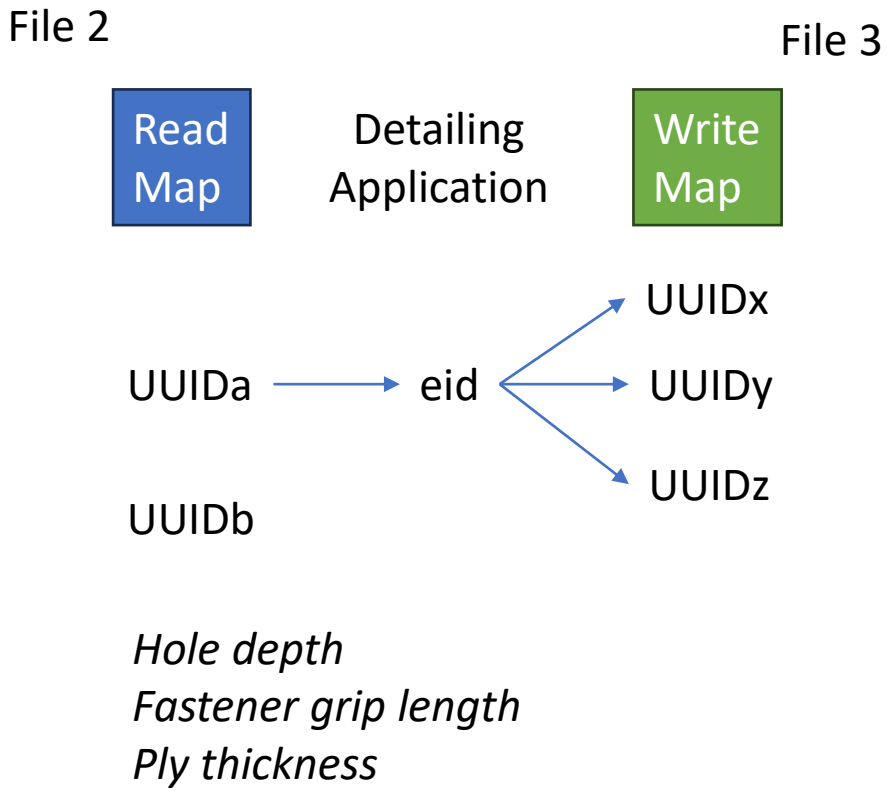
Detailed design

To trace UUIDa I need to follow UUIDx, y and z

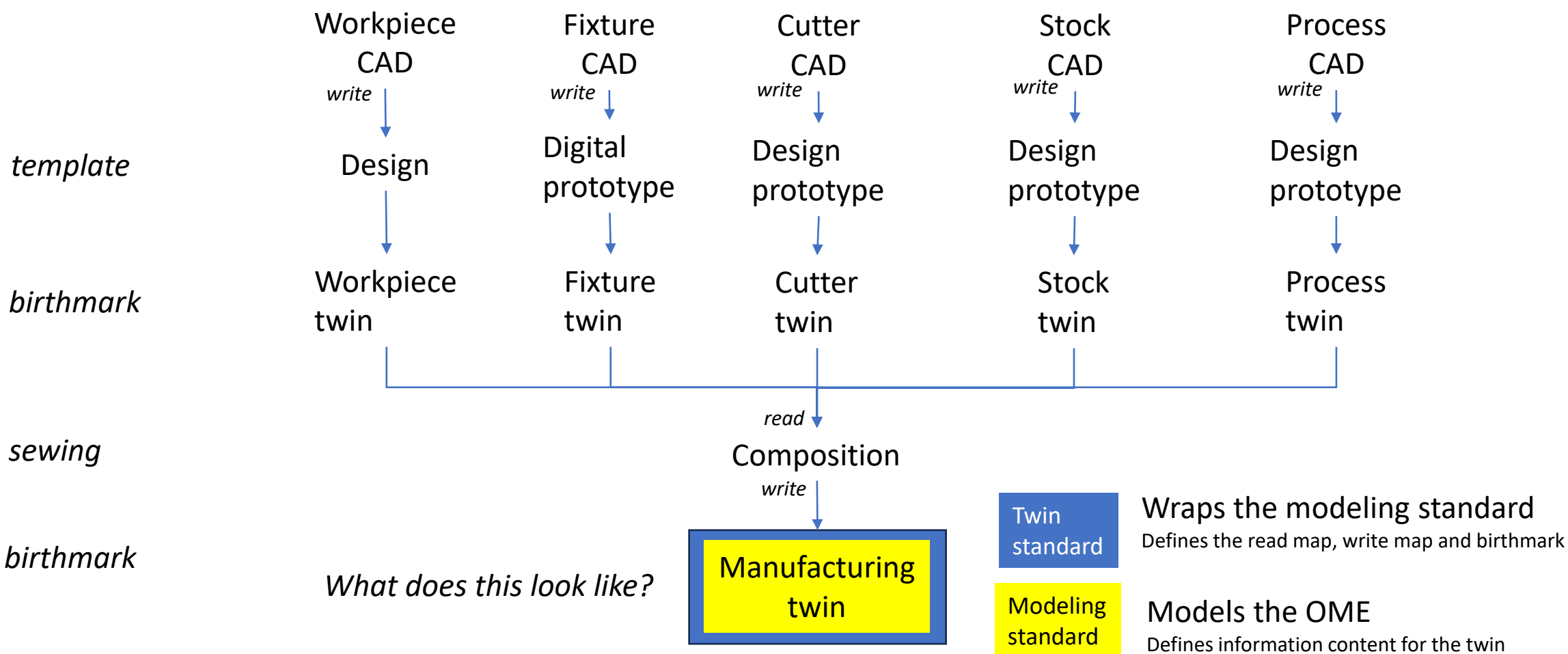


Thread management

- Simple pass thru
  - Requirement in, requirement out
- Clever software
  - Planner makes derived manufacturing requirement
- Bold assertion
  - Engineer connects input to output



Composition



What is needed in ISO 23247 Parts 5 and 6

- Read maps – what to define in 23247
- Write maps
- Birth marks – what to show/include
  - External standards such as digital passports
  - Parts, components and equipment
  - Enough for local identification
  - Enough for global identification
  - Stages of the life cycle