RCG

- Requirements
  - All mandatory attributes that define success
- Constraints
  - Anything standing in the way of success
- Goals
  - All preferable attributes that define a greater level of success

Checklist : Req & Const

- Are they unambiguous and testable?
  - Does each one have a CLEAR pass/fail criteria?
- Do they fully define the function?
  - Can a stranger determine what the project is from them alone?
- Are they all mandatory?
  - Is the project a failure if any one of them is not met?
- Do they define the product, not the project?
  - Time and money are YOUR constraints, not design constraints.

Checklist : Goals

- Rank in order of importance
  - Rank as more/less/equally important.
- Are they quantifiable (better / worse)?
  - Can you identify if one design is better than another?
  - “Aesthetically Pleasing” is subjective. Be specific.
    - as small as possible
    - no sharp corners
- Do they define the product, not the project?
  - Learning and making money are YOUR goals, not design goals.

RCG Evolution

- For every design decision, determine what drove the decision, and add it as an RCG.
- If an idea violates RC but solves problem, RC are flawed. Adjust RC to define the ACTUAL problem.
  - May inspire new ideas

Formal Testing

- All RC should be tested.
- Describe test procedure as a set of clear instructions that may be repeated exactly.
- Verify R&C by asking specific yes/no questions.
  - Torque > 1Nm ? (yes/no) Value = _____
- All tests must be completed **BY HAND**.
  - Any computer generated tick marks or names suggests that the test was pre-filled in to pass and proves nothing.