



Mdesign Solutions

Effective Engagement of Engineering Resource in Medical
Device Development

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Declaration

Conflict of interest:

Engage as Consultant for NHIC

Review Panelist in DXD hub

NUS LLP Medical Track instructor/Mentor

Entrepreneur in Residence – Temasek Poly

Co-Chair Singapore International Robo Expo
2017

Robotic Champion – Singapore Industrial
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Agenda

1. Profile of Engineering Resource
2. Communication
3. Data Collection and Archiving
4. Engagement
5. Measurement of Effectiveness



1: Profile of Engineering resource

Starting point for Engineering resource is hour spent:

1. Business focus - \$\$
2. Hobby interest - complexity
3. Can Do mentality – go no way
4. What I know – limited exploration
5. Objective driven – time spent

Solution: Define a framework

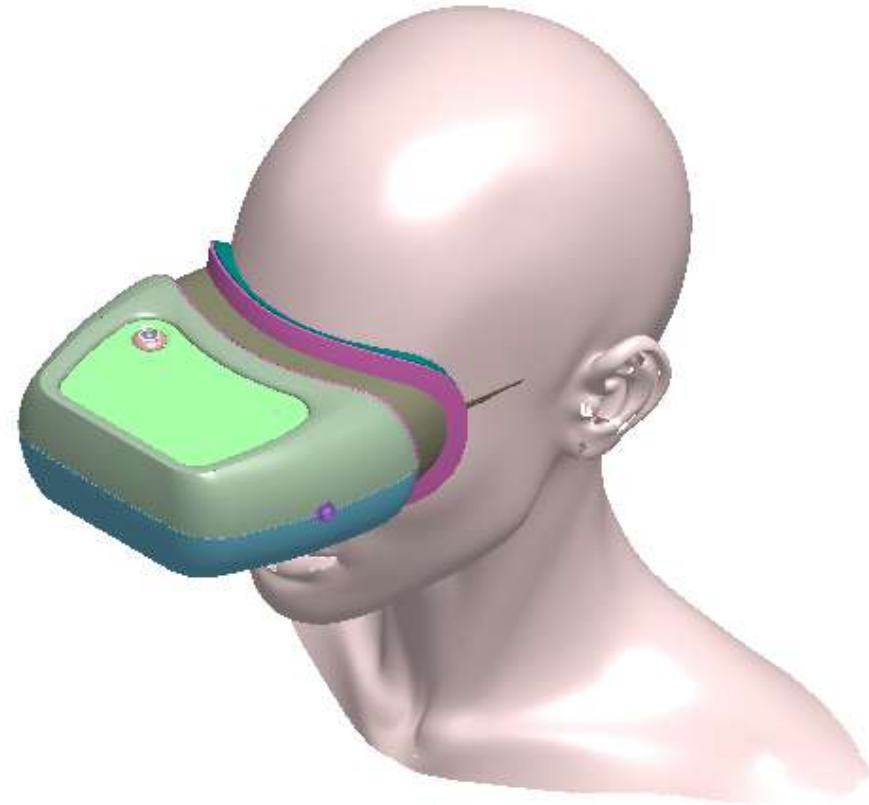


2: Communication

Engineering Design is like our daily life, full of compromise/optimisation. A good designer can explain to you every parameters of their design. Nothing is arbitrary:

1. Spend time to define the objective - boundary
2. Discuss how to do it and ask many whys – help to clarify understanding
3. Explore other alternatives in the discussion – understand their profile

Solution: Documenting the key considerations systematically



3: Proper data collection and Archiving

Medical device most important considerations are efficacy and Toxicity(risk/side effect):

1. System
2. Tracibility
3. Discipline
4. Audit purpose

Solution: Milestone review



4: Engagement

Medical device most important considerations are efficacy and Toxicity(risk/side effect):

1. Specification – end goal
2. Milestones – alignment, stop continuous development, let me do my work
3. Change management – due consideration
4. Testing – non-destructive, modular testing

Solution: Milestones review



5: Measurement of effectiveness

Medical device most important considerations are efficacy and Toxicity(risk/side effect):

1. Meeting the end goal - specification
2. Maximised the group wisdom – optimised all parameters
3. Timeliness – milestones deviation
4. Closure of issue list – no major outstanding

Solution: Transparent tracking - KPI





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Thank You

