Product Development Cycle
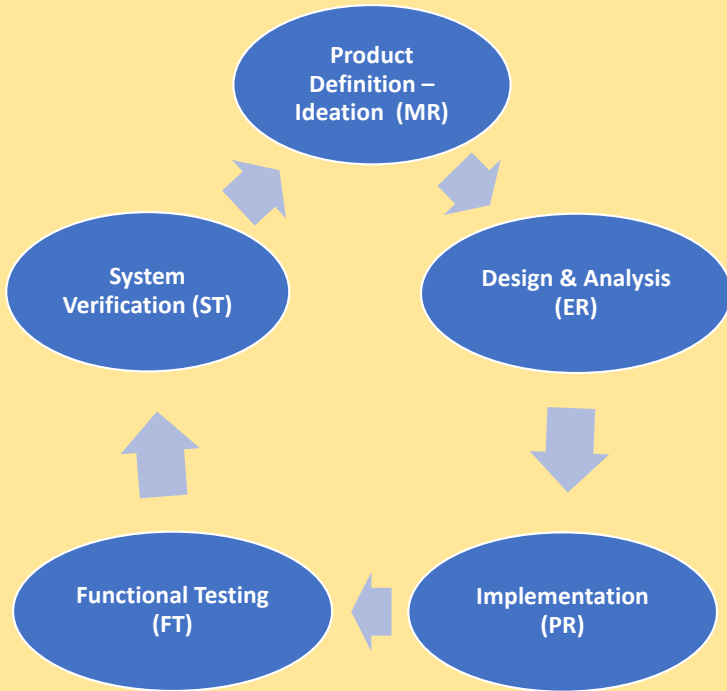
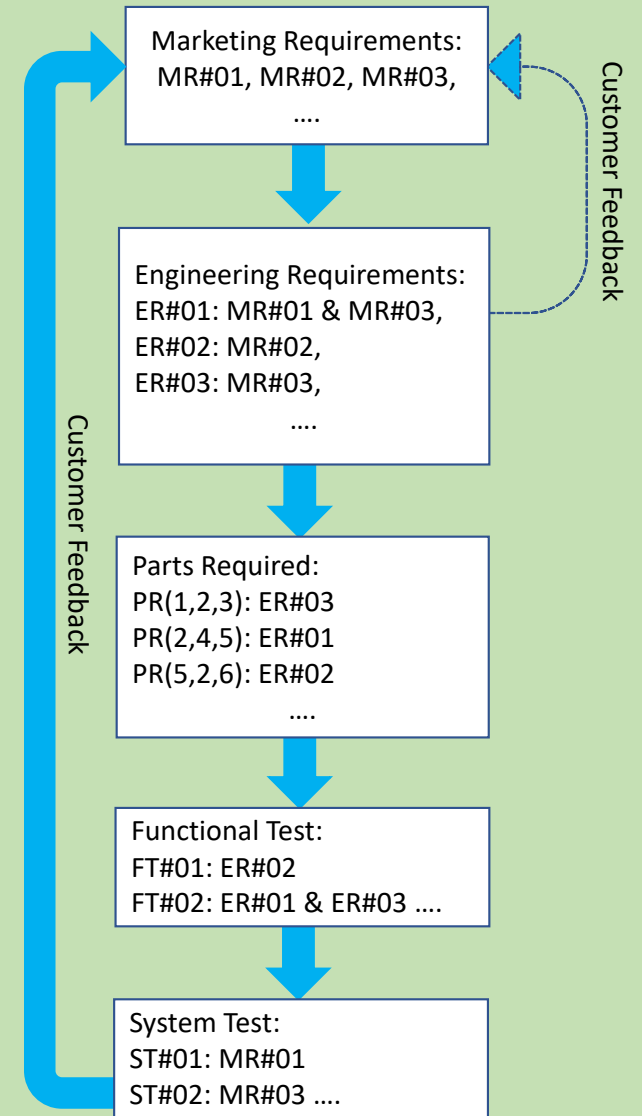The project definition is driven by different MRs from the customer

Using **Hardware & Software** Engineering Design Requirements MRs are addressed

ERs are implemented using various PARTS (electronics, mechanical, electrical, computer codes, algorithms, etc.) *

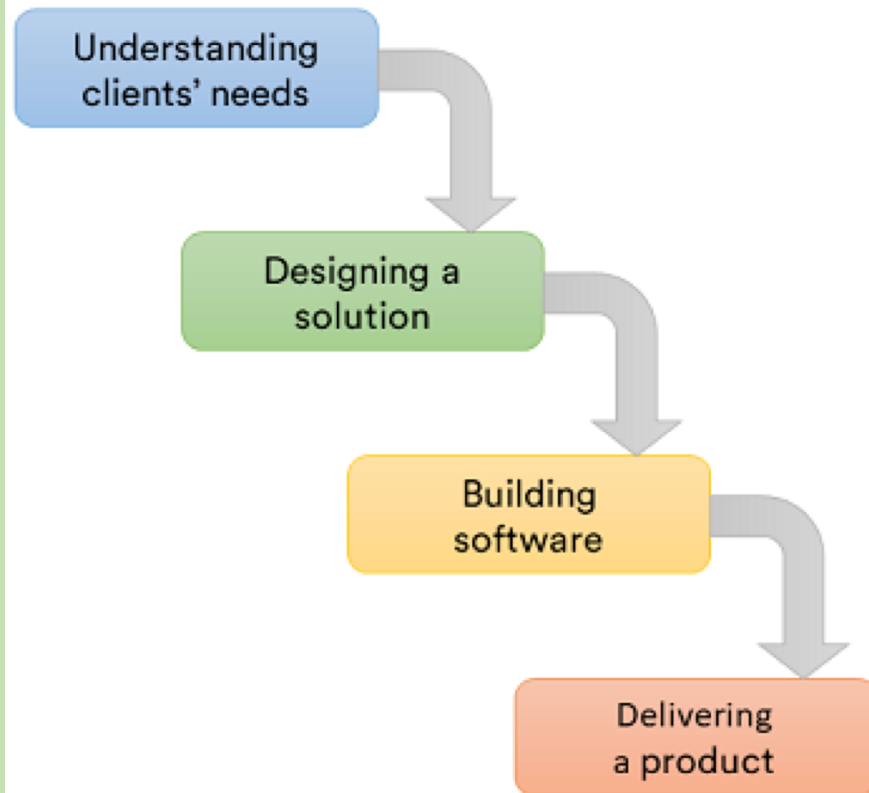Each hardware & software ER is tested & verified individually *

Each MR is tested & verified at system level

* Using Parallel Implementation

F. Farahmand

Cycle diagram
- Product Definition – Ideation (MR)
- Design & Analysis (ER)
- Implementation (PR)
- Functional Testing (FT)
- System Verification (ST)

Flow chart

Marketing Requirements:
MR#01, MR#02, MR#03, ...

Engineering Requirements:
ER#01: MR#01 & MR#03,
ER#02: MR#02,
ER#03: MR#03,
....

Parts Required:
PR(1,2,3): ER#03
PR(2,4,5): ER#01
PR(5,2,6): ER#02
....

Functional Test:
FT#01: ER#02
FT#02: ER#01 & ER#03 ....

System Test:
ST#01: MR#01
ST#02: MR#03 ....

Customer Feedback

Customer Feedback

Basic Design & Delivery Process Methodologies

'Waterfall' process

- Understanding clients' needs
- Designing a solution
- Building software
- Delivering a product

'Agile' process

Understanding — Designing — Building — Delivering — Understanding — Designing — Building — Delivering — Understanding — Designing — Building