

Identifying needs and establishing requirements



What, how and why?

- What

Two aims:

1. Understand as much as possible about users, task, context
2. Produce a stable set of requirements

- How:

Data gathering activities

Data analysis activities

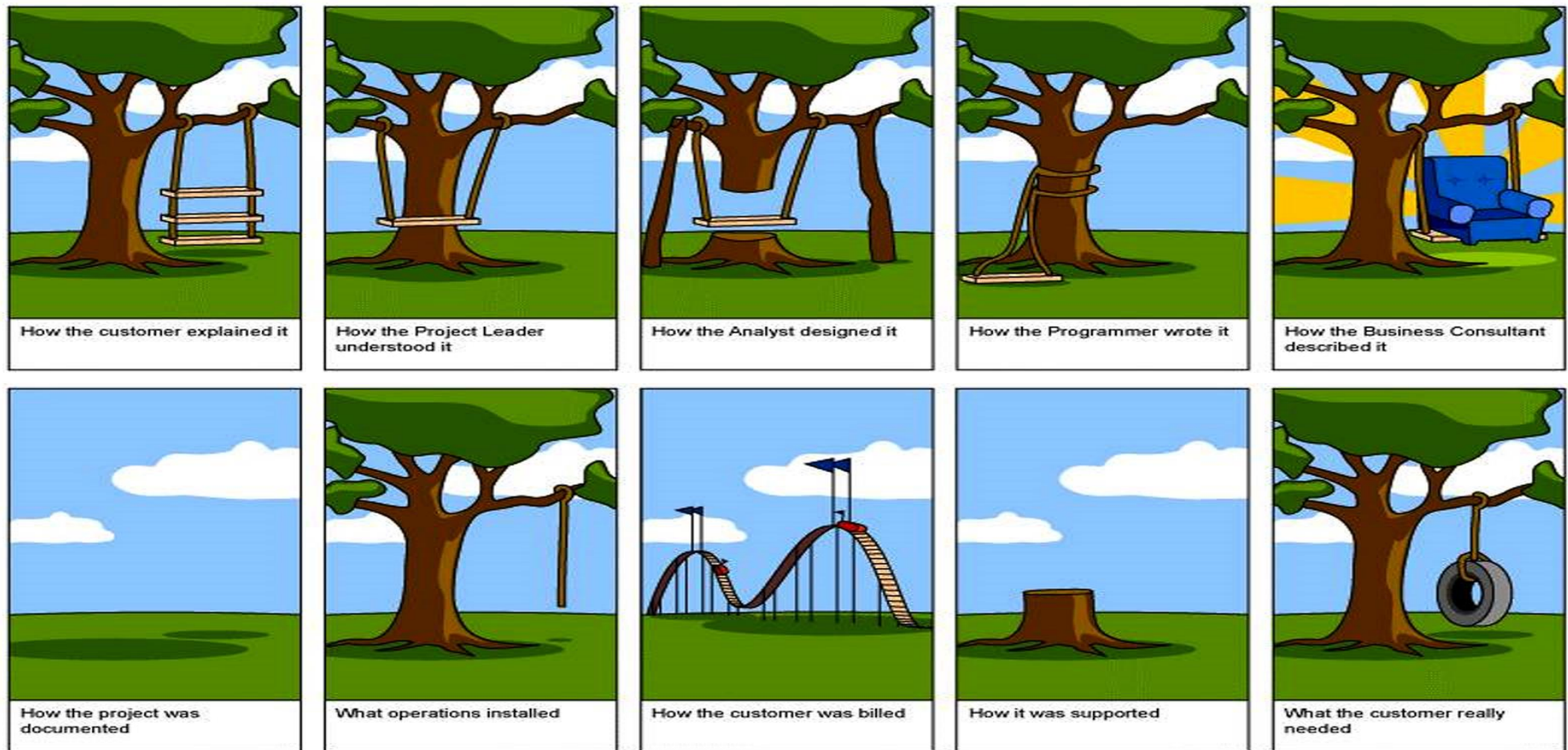
Expression as 'requirements'

All of this is iterative

- Why:

Requirements definition: the stage where failure occurs most commonly

What, how and why?



Getting requirements right is crucial

Requirements Types

- » FUNCTIONAL REQUIREMENTS
 - » The Scope of the Work
 - » Business Data Model and Data Dictionary
 - » The Scope of the Product
 - » **Features list**

Requirements Types

- » NON-FUNCTIONAL REQUIREMENTS
 - » Look and Feel Requirements
 - » Usability and Humanity Requirements
 - » Performance Requirements
 - » Security Requirements
 - » Cultural and Political Requirements
 - » Legal Requirements
 - » **Constrains** Requirements

» Requirements Types

» DATA REQUIREMENTS

- » Ability for Sharing Data

- » Privacy & Security

- » Data Accuracy and Updates (synchronous / asynchronous)

- » Persistency (or volatility)

- » Data Transfer

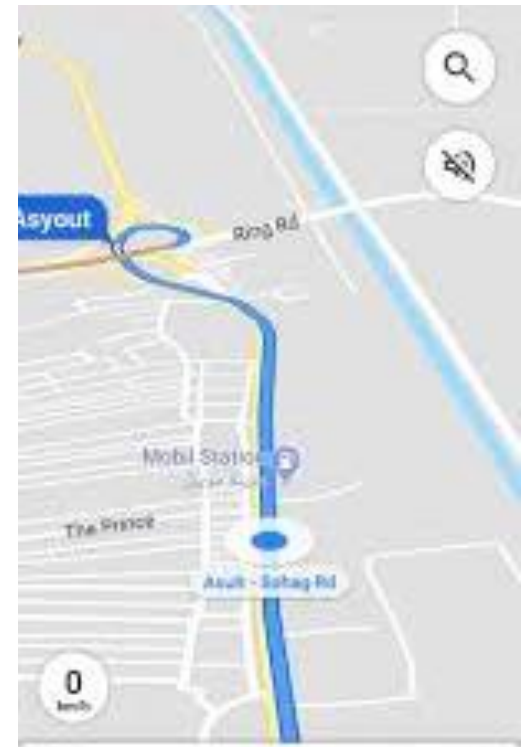
- » Amount & Size

Requirements Types

- » ENVIRONMENT REQUIREMENTS
 - » Physical environment
 - » Social environment
 - » Maintainability and Support Requirements
 - » Platforms that needs to run on

Exercise

- » Establish both the functional and non-functional requirements
- » for creating GPS Smartwatch



Exercise

- **Functional Requirements**

- Receive commands by voice
- Telling user his directions using sound
- Alert user when misdirection (e.g., use vibration)
- Offline map support
- Save favourites locations

- **Non Functional Requirements**

- Light (weight < 30 gm) and Small (area < 10 cm')
- Opened in less than 1 second, and find location in less than 2 seconds
- Fashionable
- Released in the market before next Summer



Exercise

» Data Requirements

- » Saves up to 100 favourites locations
- » Saves up to 1 GB of maps information
- » Detects location with 2 meters accuracy
- » Support "Check In" and Share Location
- » Show up-to-date maps with daily updates ch
- » Security & maintain privacy

» Environment Requirements

- » Waterproof
- » Dust proof
- » Capture commands even with noise



Exercise :mobile game app

» **Functional Requirements**

- » Challenging
- » Multiplayer Support
- » Offline mode support

» **Non Functional Requirements**

- » Medium level of graphics
- » Efficient Batter consumption
- » Developed, within 6 months