

RE
Phenomena

RE Problems

Reasoning

Manifestation
in Process

RE-specific
Phenomena

1: Weak Communication Customer

8: Underspecified Reqs

5: Incomplete Reqs

6: Obsolete Reqs. Specs.

7: Effort & Time Overrun

4: Unclear Reqs.

2: Instable Requirements

3: Failed Approval of Reqs.

SW Life Cycle
Phases

Change Management

24: Change Requests

25: Informal (unpaid) changes

26: Increased Process Cost

27: Negotiations

Acceptance

23: General Problems

22: Missing Features

21: Failed Acceptance

Config. Management

20: Missing Infrastructure

Quality Assurance

19: Increased Effort in Testing

18: Increased Effort in Reviews

Design

9: Inconsistent Object Models

10: Too complex Solutions

11: Wrong Design Decisions

Implementation

12: Wrong Implementation

14: Incomplete Implementation

15: Bugs & Defects

13: Increased Discussions

16: Stripping Features

17: Throw-away Prototypes

Overall SW
Project Quality

30: Weak Relationship Customer, Project Lead

29: Time Overrun

28: Cost Overrun

31: Additional Iterations

32: Additional Communication & Replanning

33: Stagnating Progress

34: Rework & Refactoring

39: Missing Transparency

38: Unavailability Customer

40: Customer Dissatisfaction

36: Missing User Involvement

37: Missing Traceability

35: No further improvement

Incomplete / hidden Reqs

Moving Targets

Time Boxing

Separation Reqs. from Solutions

Underspecified Reqs.

Communication Flaws to Customer

Inconsistent Reqs.

Communication Flaws in Team

Missing Traceability

Gold Plating

Terminological Problems

Insufficient Support by Customer

Unclear Responsibilites

Volatile Domain

Weak Access to Customer Needs

Insufficient Support by Project Lead

Technically unfeasible Reqs.

Weak Relationship to Customer

High Degree of Innov. vs. Need for Acceptance

Unclear NFRs

Rationale

Factors in RE

49: Implicit Requirements not made explicit

58: Too much Abstraction from Solution Level

59: Missing Abstraction from Solution Level

43: Unmeasurable Reqs.

54: Missing Understanding & unclear Terminology

42: No Validation

46: No Traceability

51: Obsolete Reqs

General Factors

62: No RE explicitly planned (in tendering)

50: Weak Communication

55: Frequent Changes

52: Missing CR records

53: Low Creativity in Team

41: Missing Coordination of Interdisciplinary Teams

48: Travelling Overhead

56: Lack of Experience

57: Too ambitious Time Planning

47: Late Fault Detection

44: Missing Overview of relevant Goals

45: Customer Staff overloaded

60: No Prioritisation by Customer

61: Lack of Support

Improvement / Mitigation

63: Improve Artefact Quality

64: Improve Time Planning and Focus in Multi Project Env.

65: Adapt Flexibility to Change

66: Refine Reqs.

67: Increase Knowledge Transfer w/ Customer

68: Improve Team Skills

69: Improve Team Communication

70: Parallelise RE and Design Activities

71: Improve Communication w/ Customer

72: Improve Cost Transparency