



SNS COLLEGE OF ENGINEERING



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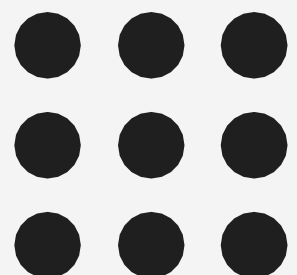
Department of Information Technology

Course Name – IT8075 Software Project Management

IV Year / VII Semester

Unit 3 – Activity Planning and Risk management

Topic 6 – Risk Identification



Identify the topic



Risk Identification

Risk

- An uncertain event or condition
- Has positive or negative effect

Categories of Risk

- Project Risk
- Business Risk



Risk Identification

Risk Identification

Two Approaches

- Checklist
- Brainstorming





Risk Identification

Checklist

List of risks found to occur regularly

Potential countermeasures for each risk

Risk	Risk reduction techniques
Personnel shortfalls	Staffing with top talent; job matching; teambuilding; training and career development; early scheduling of key personnel
Unrealistic time and cost estimates	Multiple estimation techniques; design to cost; incremental development; recording and analysis of past projects; standardization of methods
Developing the wrong software functions	Improved software evaluation; formal specification methods; user surveys; prototyping; early user manuals
Developing the wrong user interface	Prototyping; task analysis; user involvement



Risk Identification

Checklist

Gold plating	Requirements scrubbing, prototyping, design to cost
Late changes to requirements	Change control, incremental development
Shortfalls in externally supplied components	Benchmarking, inspections, formal specifications, contractual agreements, quality controls
Shortfalls in externally performed tasks	Quality assurance procedures, competitive design etc
Real time performance problems	Simulation, prototyping, tuning
Development technically too difficult	Technical analysis, cost-benefit analysis, prototyping , training

Risk Identification

Brainstorming

- Representatives of main stakeholders
- Preliminary plan drafted
- Identify problems that might occur in individual parts of project
- This creates Sense of ownership in project



Risk Assessment

Risk Exposure

- ***Risk exposure = (potential damage) X (probability of occurrence)***



Example

- New computer configuration establishment \$500,000 in case of fire
- Chance of fire 1 in 1000, probability 0.001
- Risk Exposure = \$500,000 X 0.001 = \$500

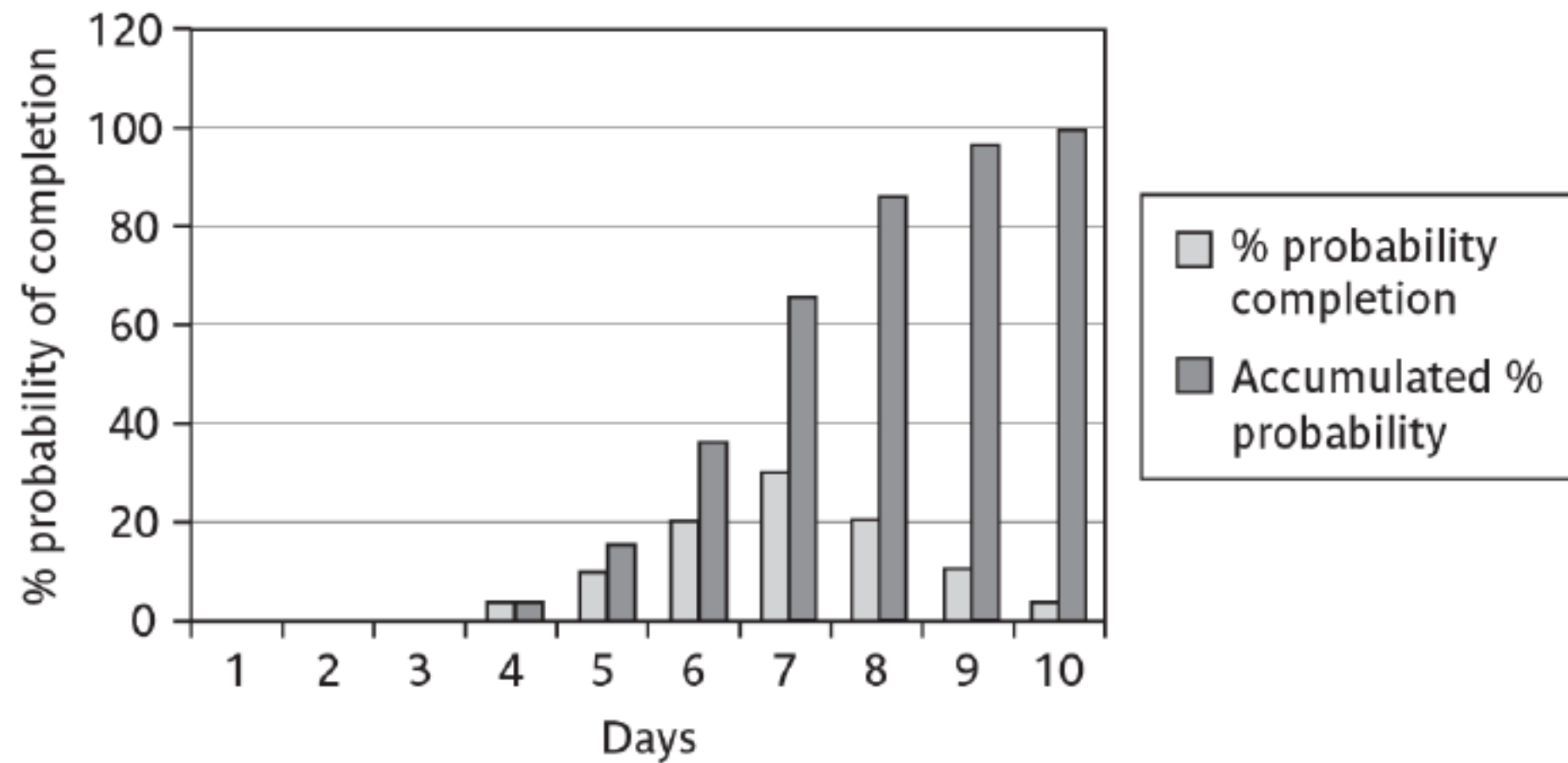


ONE in 1000

Risk Assessment

Risk Exposure

Not only ends in damage, some are gains.



Testing Software Project Completion

- Original Schedule 6 days
- Prob. of completion in 4 days 5%
- Prob of completion in 5 days 10%
- Prob of completion in 7 days 65%

Risk Assessment

Risk Exposure
Assessing Risk loses and Probabilities

Ref	Hazard	Likelihood	Impact	Risk
R1	Changes to requirements specification during coding	8	8	64
R2	Specification takes longer than expected	3	7	21
R3	Significant staff sickness affecting critical path activities	5	7	35
R4	Significant staff sickness affecting non- critical path activities	10	3	30
R5	Module code takes longer than expected	4	5	20
R6	Module test demonstrated errors of deficiencies in design	4	8	32

Risk Assessment

Qualitative descriptors of risk probability and associated range values

Probability Level	Range
High	Greater than 50% chance of happening
Significant	30-50% chance of happening
Moderate	10-29% chance of happening
Low	Less than 10% chance of happening

Risk Assessment

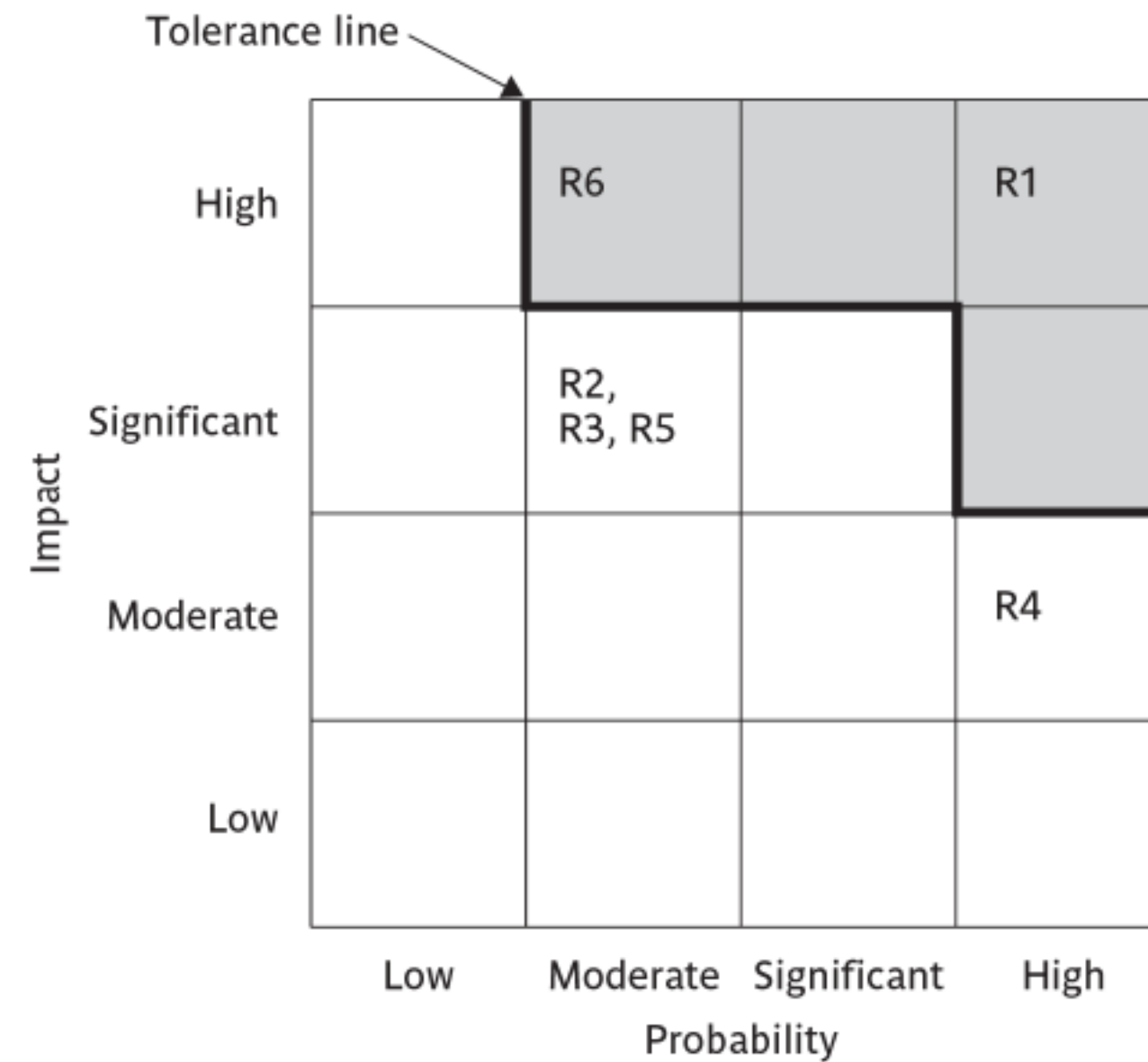
Qualitative descriptors of impact on cost and associated range values

Impact Level	Range
High	More than 30% above budgeted expenditure
Significant	20-29% above budgeted expenditure
Moderate	10-19% above budgeted expenditure
Low	Within 10% budgeted expenditure

Risk Assessment

Probability Impact Matrix

- Potential amount of damages has categorized in terms of impact on project costs.
- Impact of risks on project duration or on the quality of the project deliverables





Risk Assessment

Tolerance line

- Risk with in this lines are Serious risks that calls for particular attention
- Key users unavailable when requirements is High risk
- As project progress uncertainty will reduce if all requirements are clearly understood
- This lowers risk probabilities
- Potential damage will increase as investment in the project grows



THANK YOU