Risk, What Risk?
Managing risk in IS projects

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The theory

1. Identify the risks

2. Assess them

3. Devise responses

4. Implement actions

Simples!

So what gets in the way?

1. Inexperience
2. Over-optimism
3. Lack of information
4. Commercial pressure
5. 'Political' pressure

Inexperience

- New to IT

- New to project management

- Afraid to display ignorance

- Think you know it all!

Answer: Recognise your inexperience and ask for help

Over-optimism

- Keen and enthusiastic people in IS
- Focus on the exciting new technologies and techniques
- "It'll be all right on the night"
- Just because it went wrong before…

Answer: Recruit a cynic (or a monitor/evaluator) to the team

Lack of information

- Product is often intangible…

- … therefore hard to specify

- Poor metrics collection

- New developments all the time

- Unknown project team

Answer: Put caveats around estimates and add any uncertainties to the risk register

Commercial pressure

- Need to win a bid…

- … or secure funding

- Reliance on change to drive out profit

Answer: Put caveats around estimates and add any uncertainties to the risk register. Stand your ground!

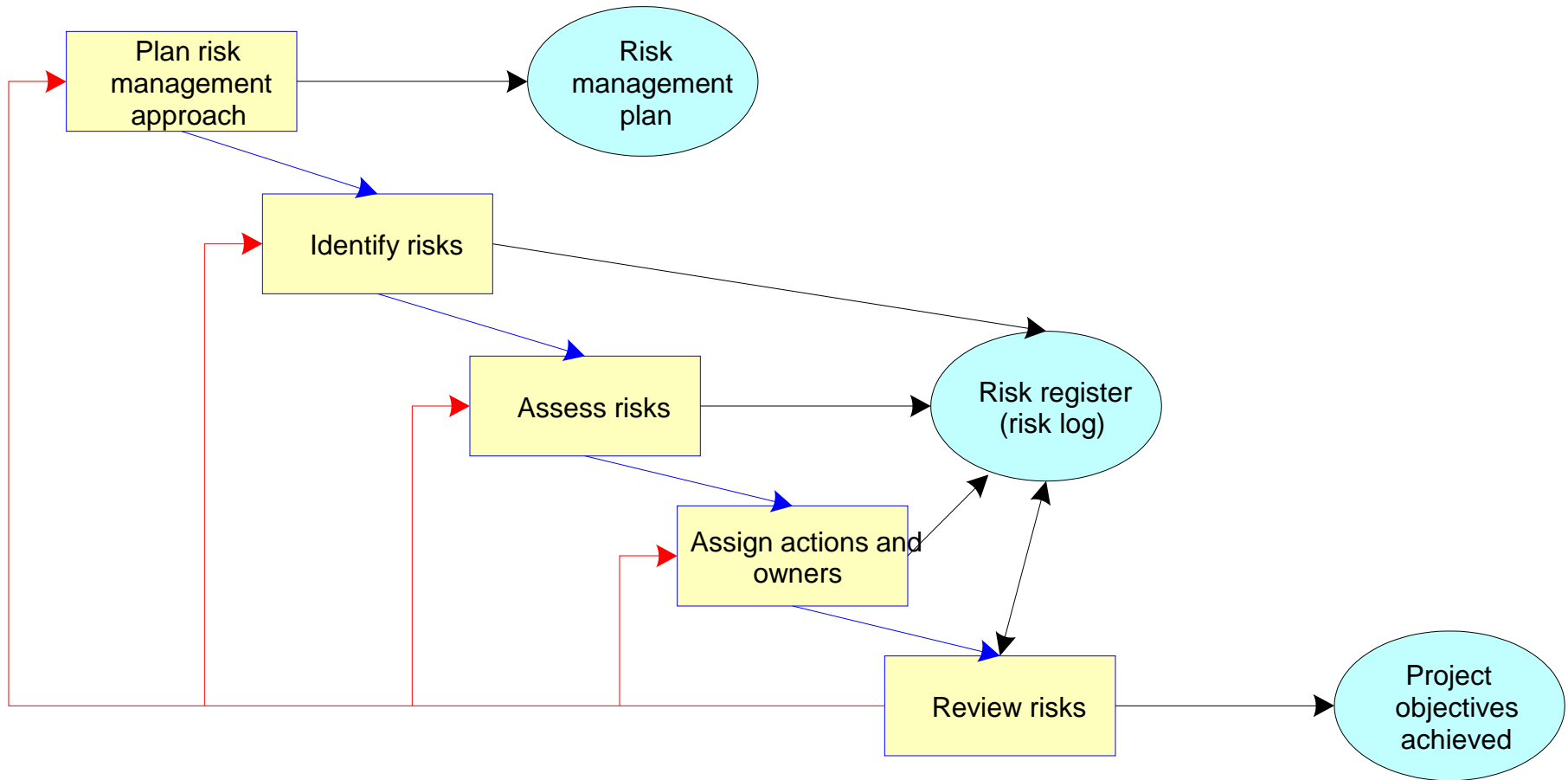# Political pressure

- Mr (or Ms) Big wants this done!
- Need to be seen as a team player
- Need to defend IT budgets
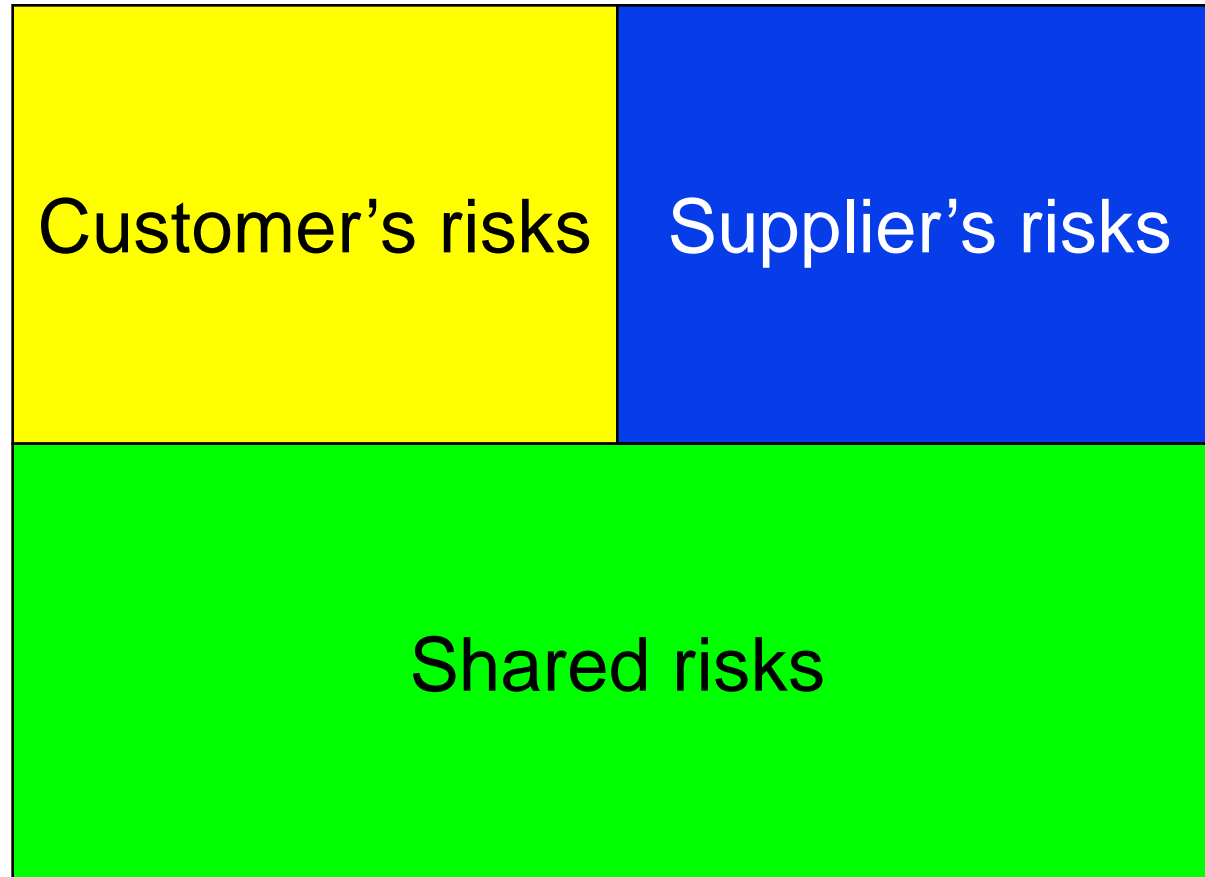
Answer: Put caveats around estimates and add any uncertainties to the risk register. Escalate the risk.

Risk management process

Risk perspectives

Types of risk

Known, identified, measurable

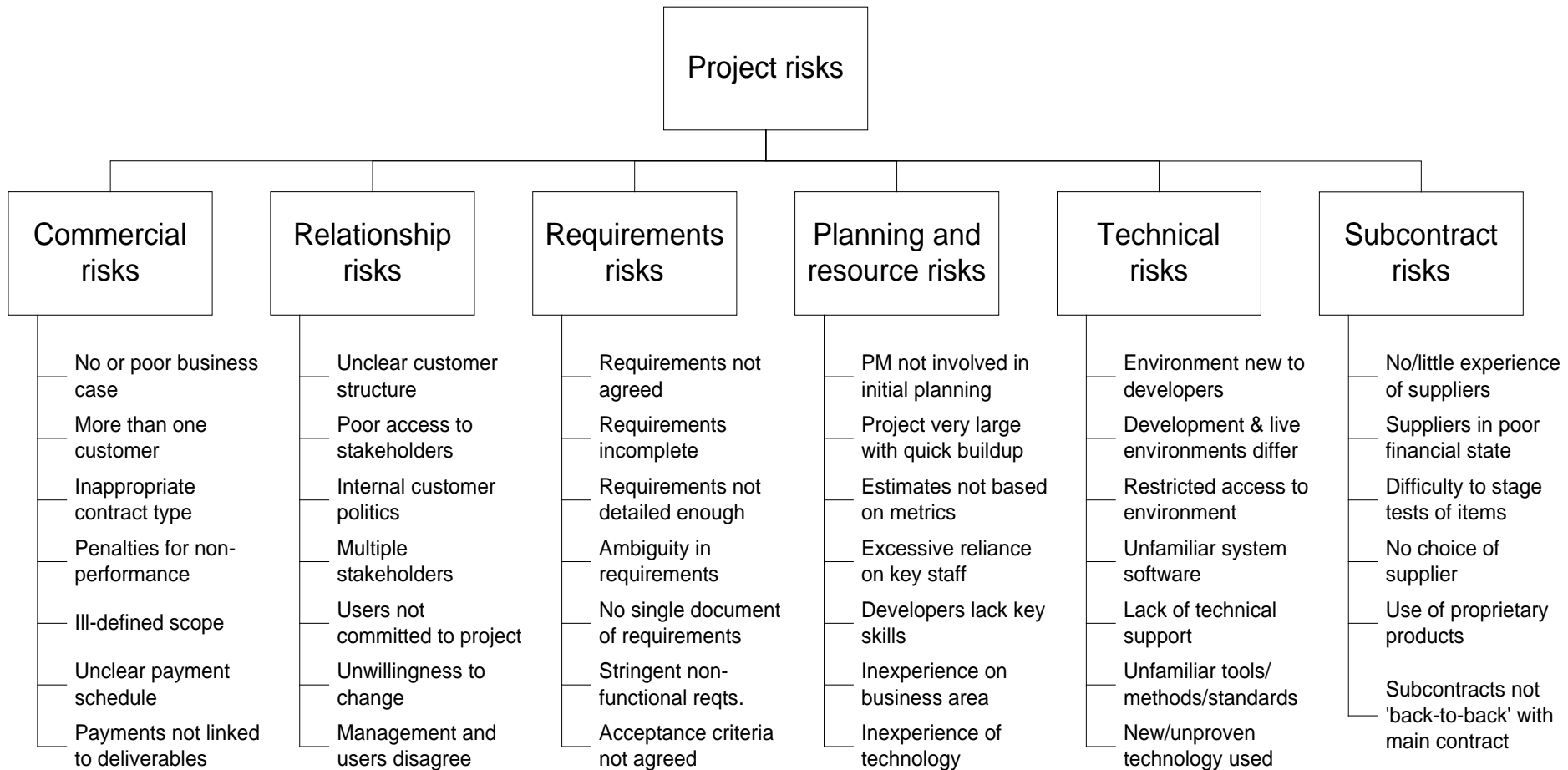Potential and possible but when, where and how unclear

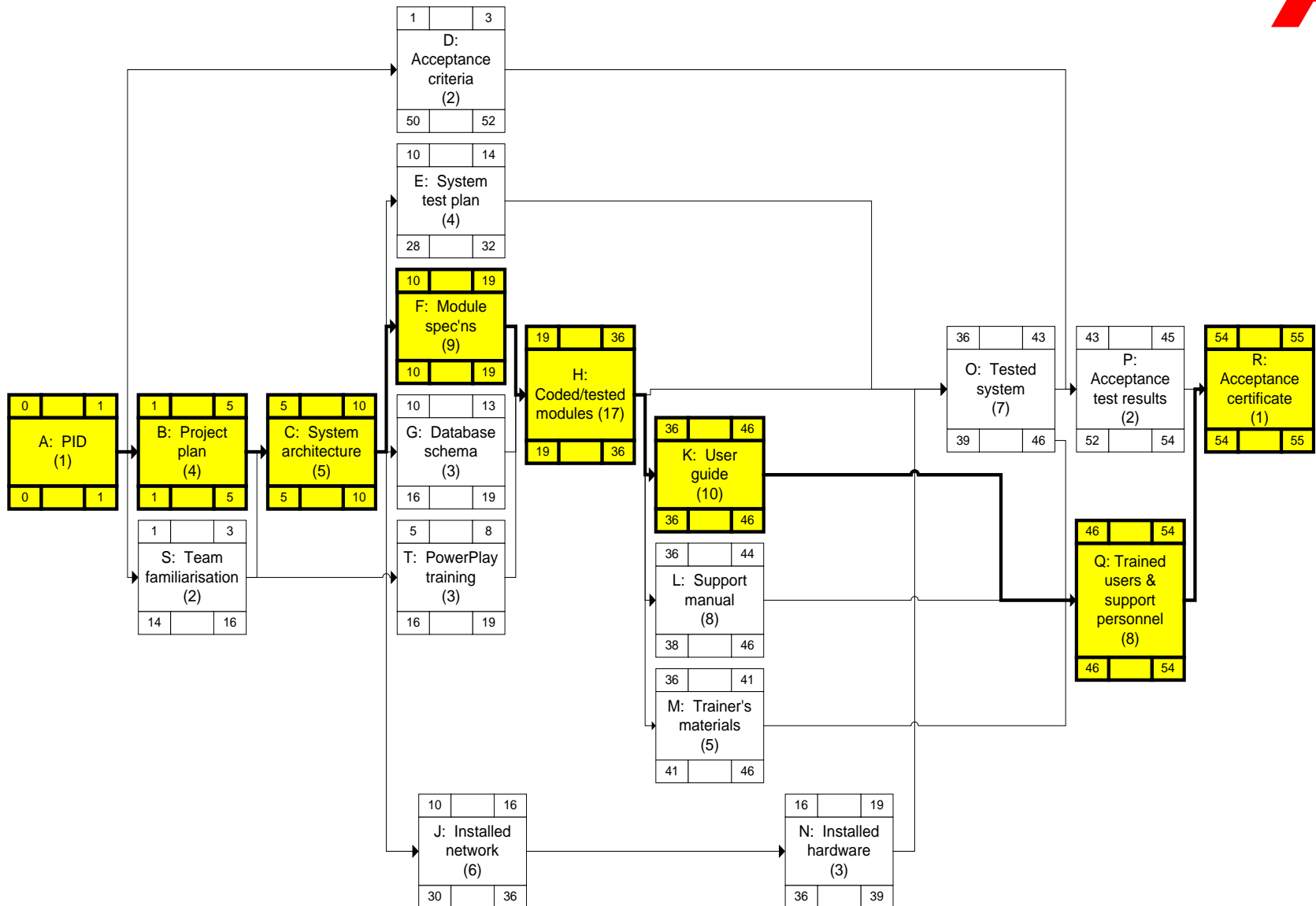Unexpected, not planned for

Methods of risk identification

- Own experience
- Others' experience
- Interviews
- Workshops
- Checklists

# Risk breakdown structure

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                              Project risks
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Commercial risks

- No or poor business case
- More than one customer
- Inappropriate contract type
- Penalties for non-performance
- Ill-defined scope
- Unclear payment schedule
- Payments not linked to deliverables

Relationship risks

- Unclear customer structure
- Poor access to stakeholders
- Internal customer politics
- Multiple stakeholders
- Users not committed to project
- Unwillingness to change
- Management and users disagree

Requirements risks

- Requirements not agreed
- Requirements incomplete
- Requirements not detailed enough
- Ambiguity in requirements
- No single document of requirements
- Stringent non-functional reqts.
- Acceptance criteria not agreed

Planning and resource risks

- PM not involved in initial planning
- Project very large with quick buildup
- Estimates not based on metrics
- Excessive reliance on key staff
- Developers lack key skills
- Inexperience on business area
- Inexperience of technology

Technical risks

- Environment new to developers
- Development & live environments differ
- Restricted access to environment
- Unfamiliar system software
- Lack of technical support
- Unfamiliar tools/methods/standards
- New/unproven technology used

Subcontract risks

- No/little experience of suppliers
- Suppliers in poor financial state
- Difficulty to stage tests of items
- No choice of supplier
- Use of proprietary products
- Subcontracts not 'back-to-back' with main contract

Risks to the critical path

1		3
D: Acceptance criteria (2)		
50		52

10		14
E: System test plan (4)		
28		32

10		19
F: Module spec'ns (9)		
10		19

19		36
H: Coded/tested modules (17)		
19		36

10		13
G: Database schema (3)		
16		19

5		8
T: PowerPlay training (3)		
16		19

0		1
A: PID (1)		
0		1

1		5
B: Project plan (4)		
1		5

5		10
C: System architecture (5)		
5		10

1		3
S: Team familiarisation (2)		
14		16

36		46
K: User guide (10)		
36		46

36		44
L: Support manual (8)		
38		46

36		41
M: Trainer's materials (5)		
41		46

36		43
O: Tested system (7)		
39		46

43		45
P: Acceptance test results (2)		
52		54

54		55
R: Acceptance certificate (1)		
54		55

46		54
Q: Trained users & support personnel (8)		
46		54

10		16
J: Installed network (6)		
30		36

16		19
N: Installed hardware (3)		
36		39

Typical impacts of risks

- Project failure
- Team overload
- Re-work
- Reductions in margin
- Missed delivery dates
- System test failure
- Customer's expectations not met
- Rejection of system by customer
- Poor system performance or reliability
- Maintenance difficulties
- Payment of penalties or liquidated damages
- Disputes with partners
- Poor market reputation
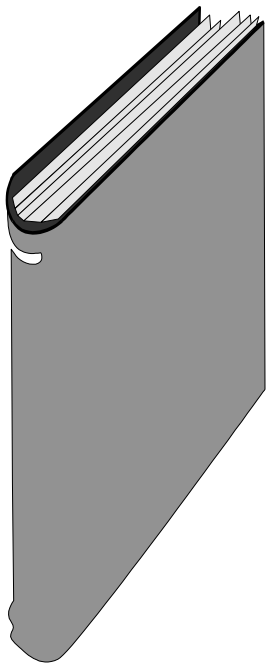
Risk: Use of contract programmers

Work too slowly

Time

Work not up to standard

Cost

More expensive

£

Quality / product
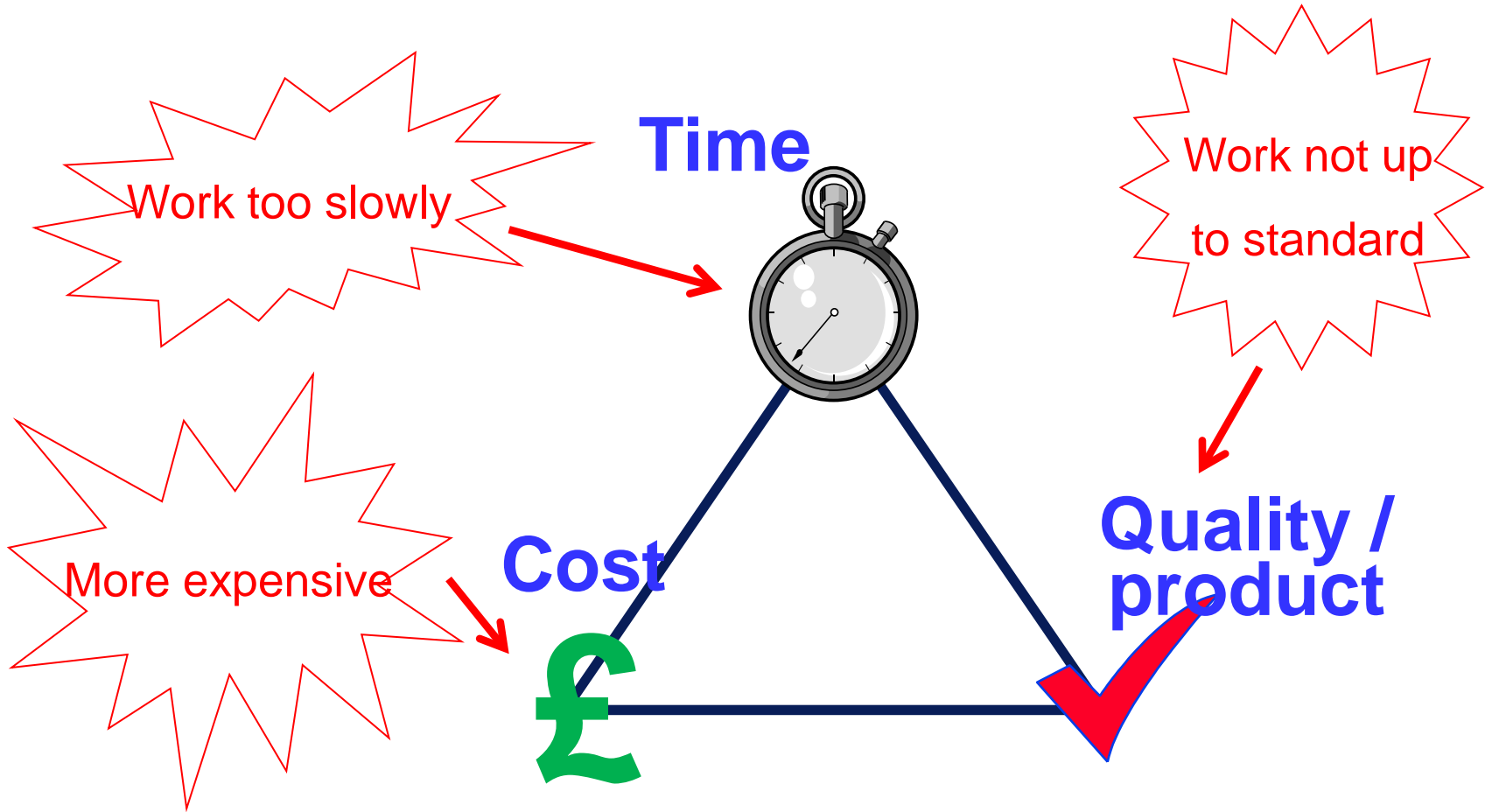
Risk assessment scales

- [Scale of impact:](#)
- Large
- Moderate
- Small

- [Probability of occurrence](#)
- High
- Medium
- Low

Also need to assess the urgency of the risk

The risk register (risk log)

- Reference
- Risk title and description
- Description of impact/s
- Scale of impact
- Probability of impact
- Urgency
- Actions:
  - Avoidance
  - Mitigation
- Risk owner
- (Action history)

Risk map (heat map)
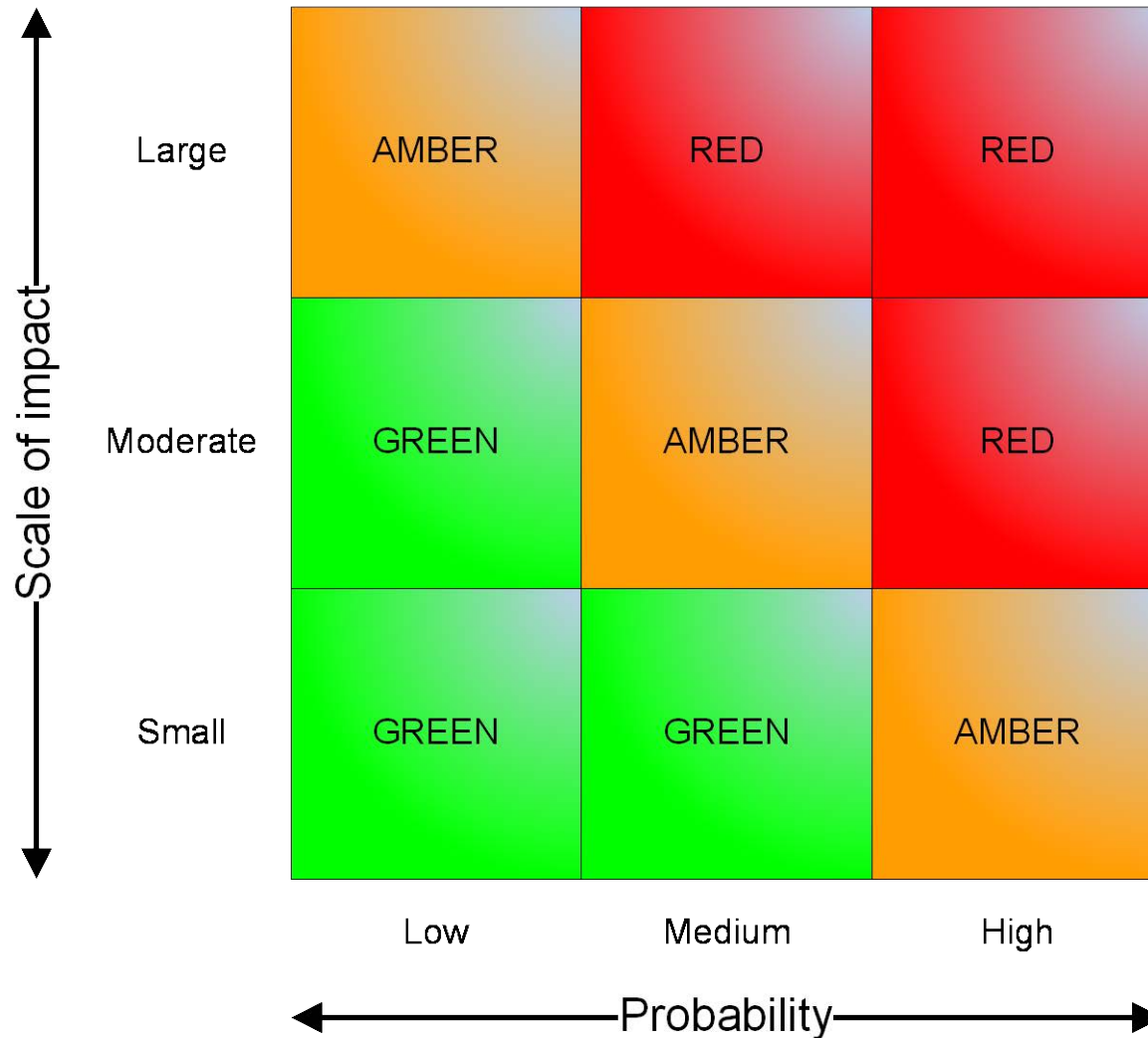
Possible responses to risk

- **Acceptance** - allow the risk to occur

- **Risk reduction** actions:

  - **Avoidance** - reducing the likelihood

  - **Mitigation** - reducing the impact

  - **Contingency** - having alternative actions available

  - **Transference** - making the impact bear on someone else – includes **escalation**

  - **Sharing** - the risk with the customer

# Sharing project risk
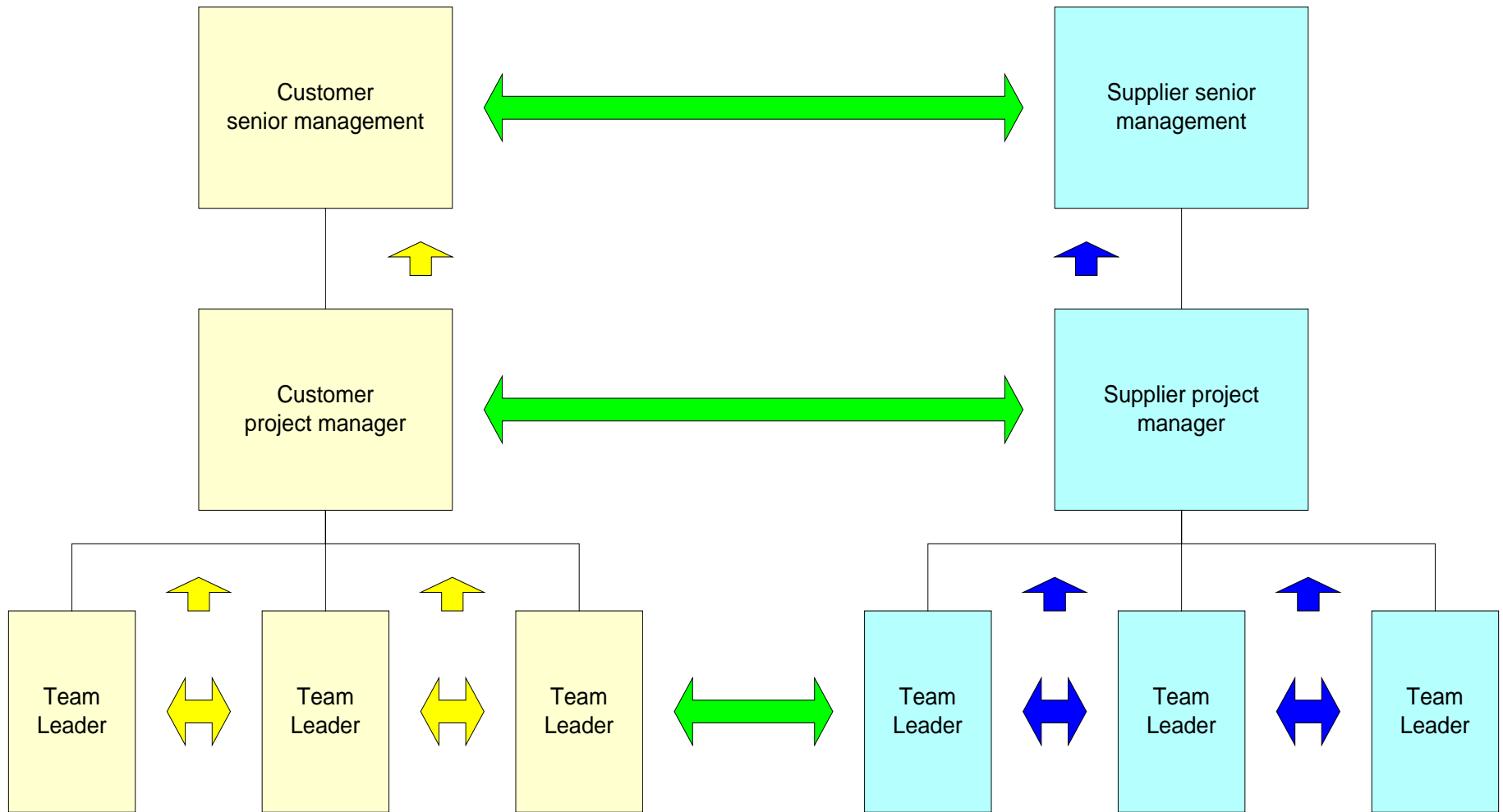
Risk: Use of contract programmers

- **Work too slowly**

  – Avoidance: Only use known contractors

  – Avoidance: Set test before employing

  – Mitigation: Keep off the 'critical path'

- **Work not up to standard**

  – Avoidance: Only use known contractors

  – Avoidance: Set test before employing

  – Mitigation: Regular monitoring - terminate if unsatisfactory

- **More expensive**

  – Avoidance: None except possible tough bargaining over fees

  – Mitigation: Ensure sufficient contingency funds in budget

Risk owner - characteristics

Information

Resources

Risk owner

?

Authority
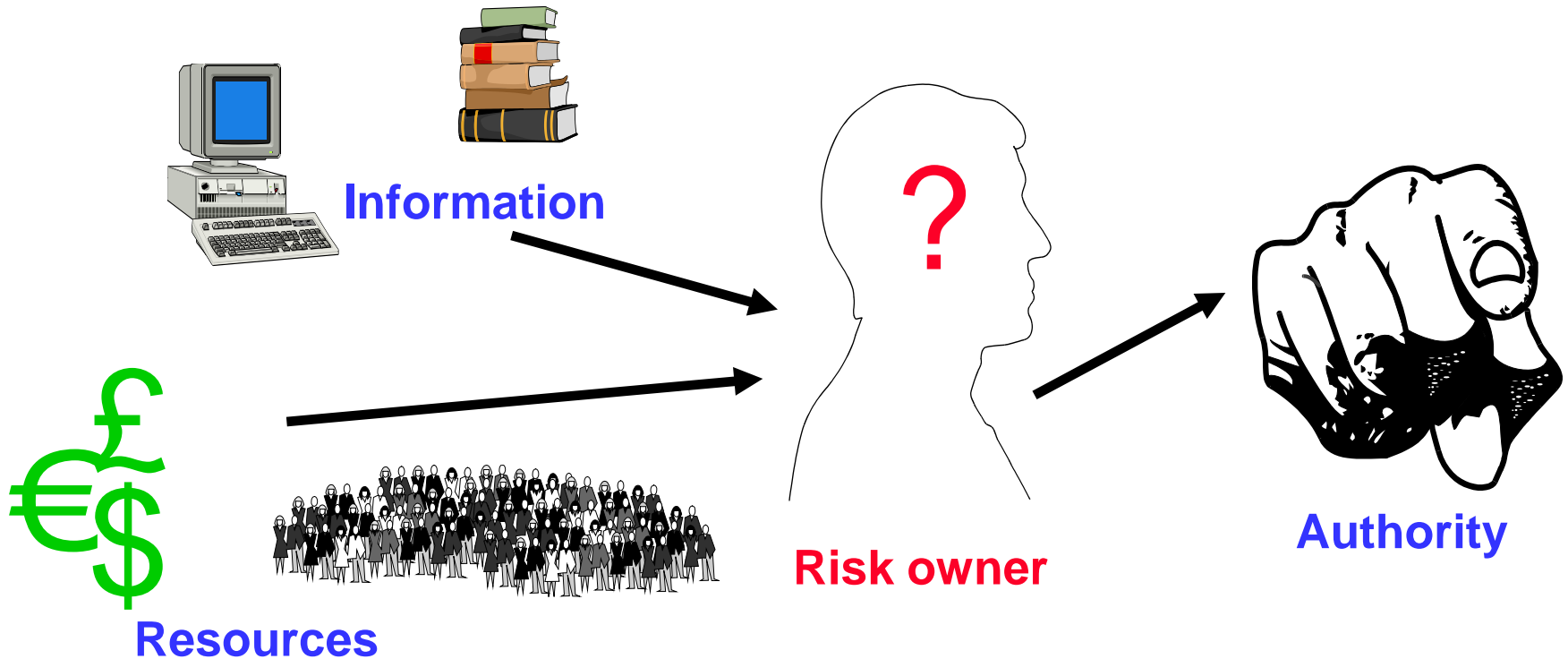
But the risk owner is not on their own!

Risk management process
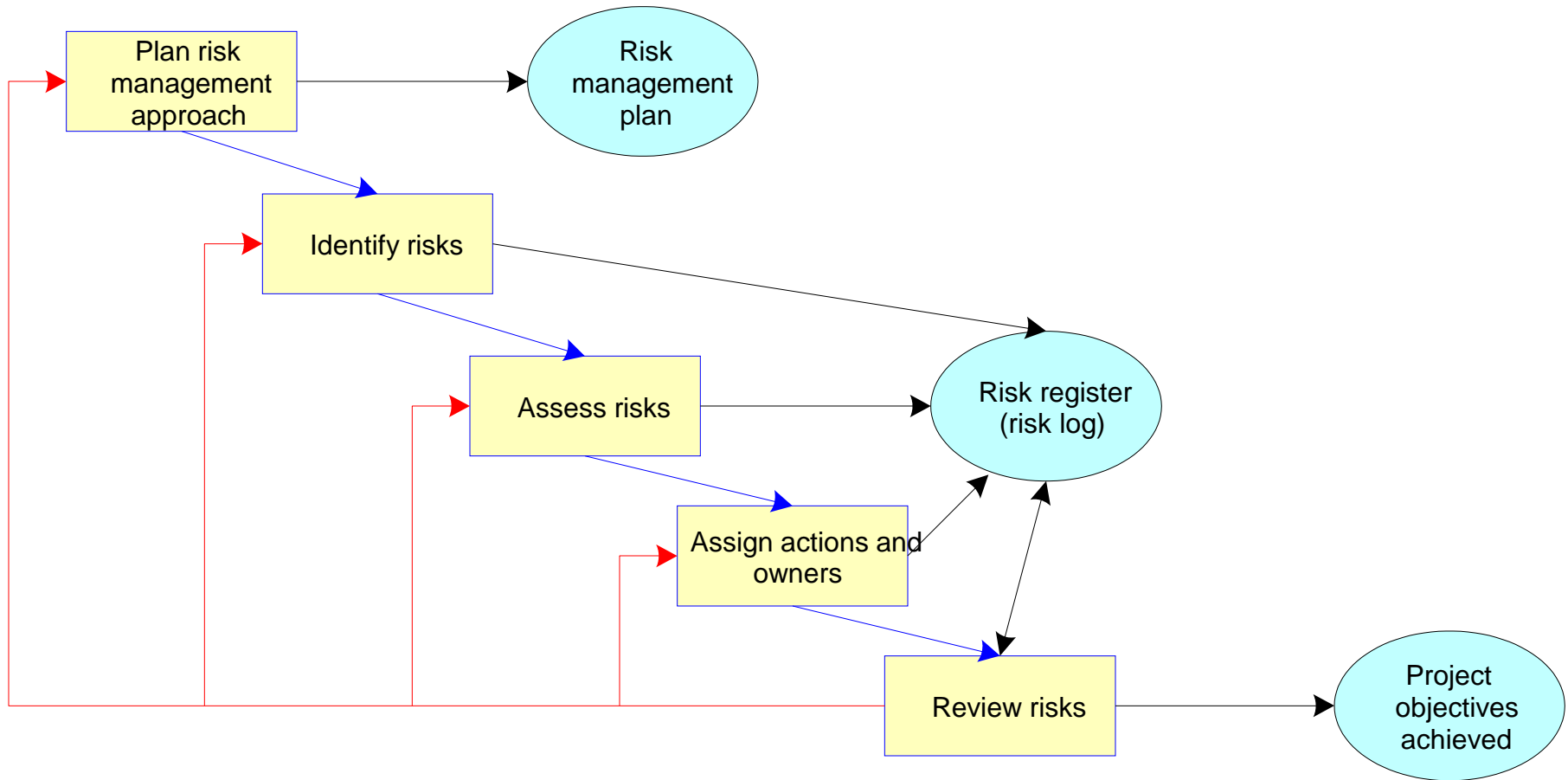
Purpose of the risk review

- Check on existing risks:
    - More or less likely?
    - More or less severe?
    - Actions effective?
    - New actions needed?
    - Any secondary effects?
- Examine new risks:
    - Identify impact and likelihood
    - Assign actions and owners
- Review the process - is it working?

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