# IV. Problems with Information System Projects

**Different perspectives on IS problems**
**User's perspective**
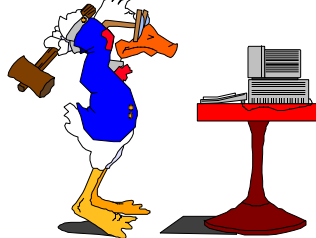**Client's perspective**
**Developer's perspective**
**Stakeholder analysis**
**Ethical and professional reponsibility**
**ACM/IEEE code of ethics**

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## Perspectives on Problems

- Consequences of failure are severe: over $ 81B in the USA alone (1995.)
- Problems range from cancelling a project altogether (no system!), to delivering a system that supports only some of the requirements and/or is never actually used.
- What can go wrong?
- Answer depends on who gives it.
  - ✓ End user perspective
  - ✓ Client perspective
  - ✓ Developer perspective

# *End User´s Perspective*

- **No system:** What system? I haven´t seen a new system...

  ...30% of large IT projects are cancelled before completion
- **Unusable:** It might work, but it´s dreadful to use...
- **No engine under the hood:** It´s very pretty – but does it do anything useful?

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# *Client´s Perspective*

- **Too expensive:** If I´d known the real price, I´d never have agreed...

  Typical project is one year late and 100% over-budget!
- **Too late:** It´s no use delivering it now – we needed it last December ! (e.g., Y2K)
- **Bad press:** OK, so it works – but the installation was such a mess that my staff will never trust it.
- **Change of mind:** I didn´t want it in the first place...
- **Change of requirements:** Everything´s changed now – we need a completely different system...

# *Developer´s Perspective*

- **Wrong requirements:** We built what they *said* they wanted...
- **Unsufficient resources:** There wasn´t enough time to do it any better...
- **Incomplete requirements:** How can I fix it? I don´t know how it´s supposed to work
- **Impossible requirements:** We said it was impossible, but no-one listened...
- **Blame the others:** The system´s fine – the users are the problem

# *Why Do Things Go Wrong?*

| Type of failure | Reason for failure | Comment |
|---|---|---|
| Quality problems | The wrong problem is addressed. | System conflicts with business strategy. |
| | Wider influences are neglected. | Organization culture may be ignored. |
| | Analysis is carried out incorrectly. | Team is poorly skilled, or inadequately resourced. |
| | Project undertaken for wrong reason. | Technology pull or political push. |
| Productivity problems | Users change their minds. | |
| | External events change the environment. | New legislation. |
| | Implementation is not feasible. | May not be known until the project has started. |
| | Poor project control. | Inexperienced project manager. |

*Causes of IS project failure (adapted from Flynn, 1998).*

# *Stakeholder Analysis*

- The person who has the problem is not necessarily the developer of systems, its user or its client.
- ***Stakeholder* analysis** determines impact that a new information system on different groups, e.g., stakeholders for a new bank IS located in a supermarket:

| Stakeholder affected | Possible consequence of system | Nature of effect on stakeholder |
|---|---|---|
| Bank clerks. | Automation of bank activities currently carried out manually. | Reduced need for staff—redeployment or redundancies. |
| Bank customers. | More convenient access to bank services. | Improved service. |
| Supermarket customers. | More people using supermarket car park. | Reduction in service. |
| Bank shareholders. | More people attracted to use bank, so greater commercial success. | Increased dividends. |
| Supermarket shareholders. | More people attracted to use supermarket, so greater commercial success. | Increased dividends. |
| Local citizens. | More journeys to supermarket to use ATM. | Increased pollution. |

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# *Professional and Ethical Responsibility*

- System analysis and design involves wider responsibilities than simply the application of technical skills.
- Analysts and designers must behave in an honest and ethically responsible way if they are to be respected as professionals.
- Ethical behaviour is more than simply upholding the law.

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## *Issues of Professional Responsibility*

- ***Confidentiality*** -- Analysts and designers should normally respect the confidentiality of their employers or clients irrespective of whether or not a formal confidentiality agreement has been signed.
- ***Competence*** -- Analysts and designers should not misrepresent their level of competence; they should not knowingly accept work which is demands skills that go beyond their competence.
- ***Intellectual property rights*** -- Analysts and designers should be aware of local laws governing the use of intellectual property such as patents, copyright, etc. They should be careful to ensure that the intellectual property of employers and clients is protected.
- ***Computer misuse*** -- Analysts and designers should not use their technical skills to misuse other people's computers; computer misuse ranges from relatively trivial (game playing on an employer's machine, say) to extremely serious (dissemination of viruses).

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# *ACM/IEEE Code of Ethics*

- The professional societies in the North America have cooperated to produce a code of ethical practice.
- Members of these organisations sign up to the code of practice when they join.
- The code contains eight principles related to the behaviour of and decisions made by professionals, including practitioners, educators, managers, supervisors and policy makers, as well as trainees and students of the profession.

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# *Hidden Costs of Poor Design*

| Design aspect | Example | Immediate effects | Other consequences |
|---|---|---|---|
| User Interface. | Illogical screen layout. Difficult to read screens. Unhelpful help messages. | Wasted time. Increased frustration. Increased error-rate. | Loss of confidence in system. Increased sickness. Increased absenteeism. Greater staff turnover. |
| Program Execution. | System response is slow. | As above. | Increased operating costs. |
| Data storage. | Lost data. Inaccurate outputs. | Extra work re-entering data. Extra work checking outputs. | Reduced income. Loss of customer confidence. Lost sales. |