Management Information Systems

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1. Introducing Bead Bar

Today's date

Agenda

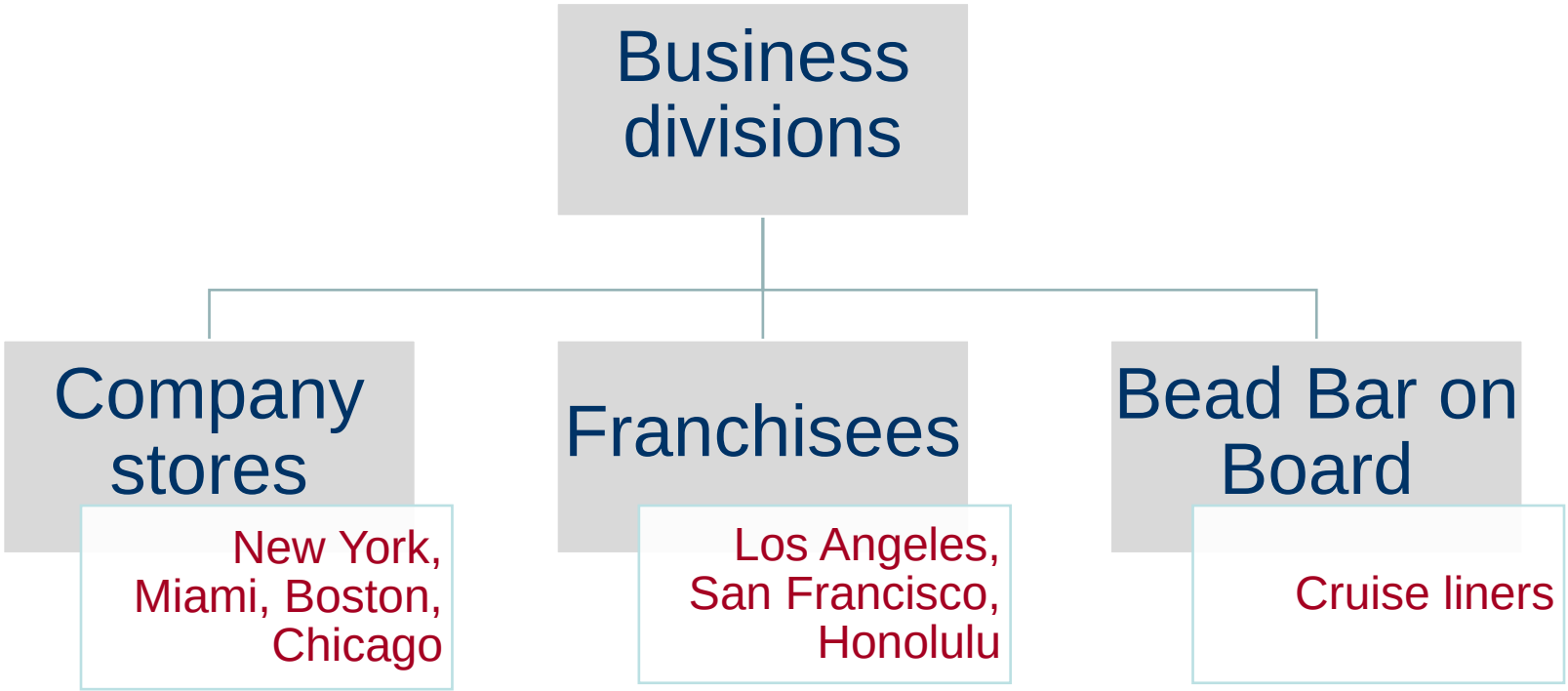
- How do information technologies (IT) impact organizations ?
- Congratulations! Your first consulting assignment

Your consulting brief

The Bead Bar Co.

- We are Aegean Consulting Group
- Bead Bar is a new client, seeking advice about the design and deployment of information technologies within the firm
- The company “helps its customers unleash their creativity in jewelry design”
  - A customer walks in a Bead Bar store
  - The store is organized as a workshop, comprised of designer workbenches, drawers with semi-precious gemstones and other material for creating “your own faux-bijoux”

The operating units

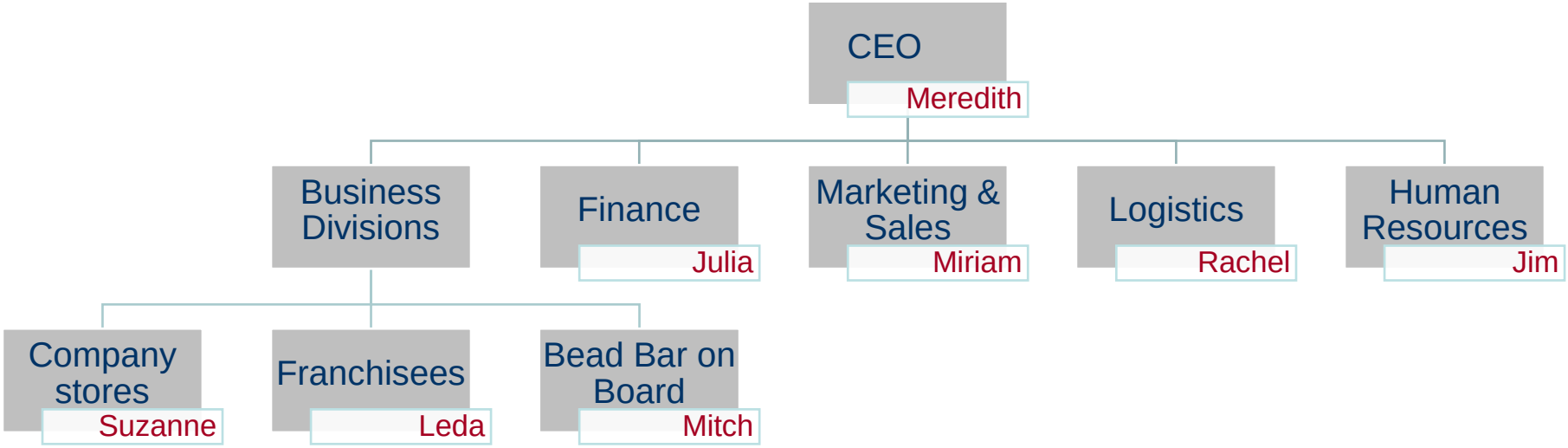


The hard facts

- Personnel
  - 15 full-time employees
  - 20 part-time employees (mostly in frontline activities)

- Revenues
  - $ 1.5 m per year (stagnant growth for the last three years)

The management team



The reason they called us in

- The firm has non-existent IT infrastructure/culture/know-how
- The firm has grown a lot and issues continuously arise on the day-to-day operations that may have an adverse effect on the future of Bead Bar:
  - Increased number of incorrect orders (they are basically handwritten notes)
  - No sales forecasting and difficulty in tracking historical order flows
  - Pricing is an unknown, exotic activity
- The management team is debating whether IT investments will help it grow further

… is the reason we are all here !

- IT is the majority component of capital investments in modern organizations
  - Positive impact of IT on productivity
- Technological progress continuously opens new business opportunities and challenges
  - Strong demand for those who combine business and IT skills and specializations

Let's define our space

Why do we care about data and information ?

- People need them
  - Individuals, for entertainment, enlightenment, etc.
  - Businesses, for decision making, problem solving and control

- Data vs information
  - Data
    - A “given,” or fact; a number, a statement, or a picture
    - Represents something in the real world
    - The raw materials in the production of information
  - Information
    - Data that have meaning within a context
    - Data after processing activities

Management information systems

- **“Any telecommunications and/or computer related equipment or interconnected system or subsystems of equipment**
- **that is used in the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of voice and/or data,**
- **and includes software, firmware, and hardware”**

Source: US Security Telecommunications and Information Systems Committee

Our viewpoint

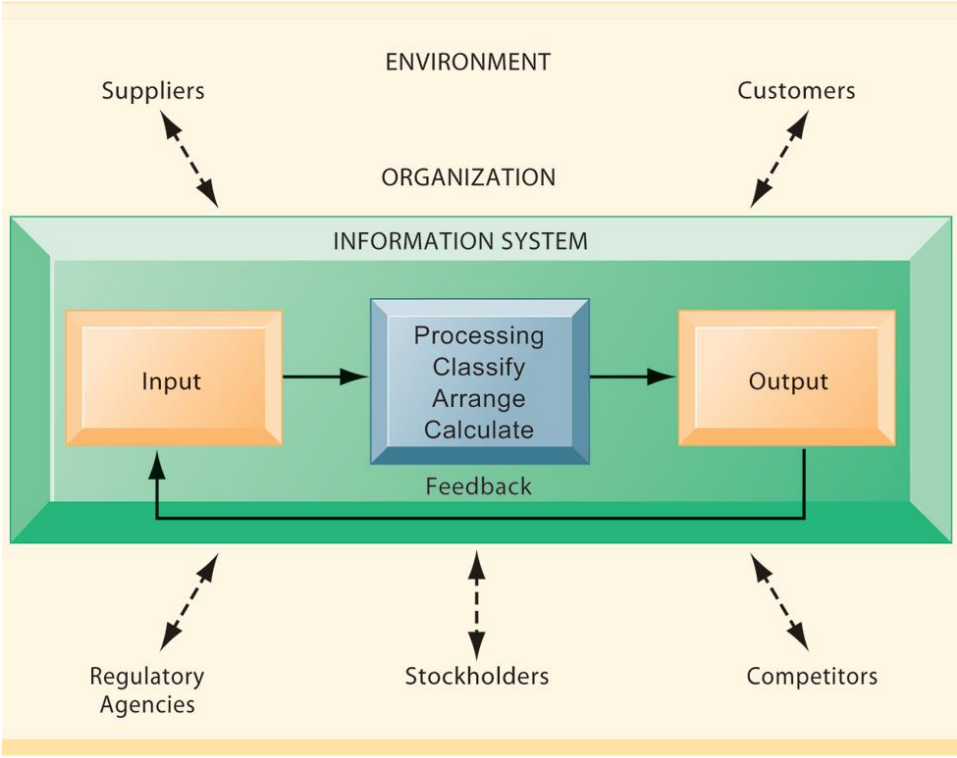
- **"A set of interrelated components**
- **For collecting and managing data**
- **In order to use them for improving decision making and the control of an organization"**

Source: Kenneth Laudon, Stern Business School, NYU

The basis of our thinking

Functions of an Information System

- An information system contains information about an organization and its surrounding environment.
- Three basic activities—input, processing, and output—produce the information organizations need. Feedback is output returned to appropriate people or activities in the organization to evaluate and refine the input.
- Environmental actors, such as customers, suppliers, competitors, stockholders, and regulatory agencies, interact with the organization and its information systems



A real life example

The BBC case

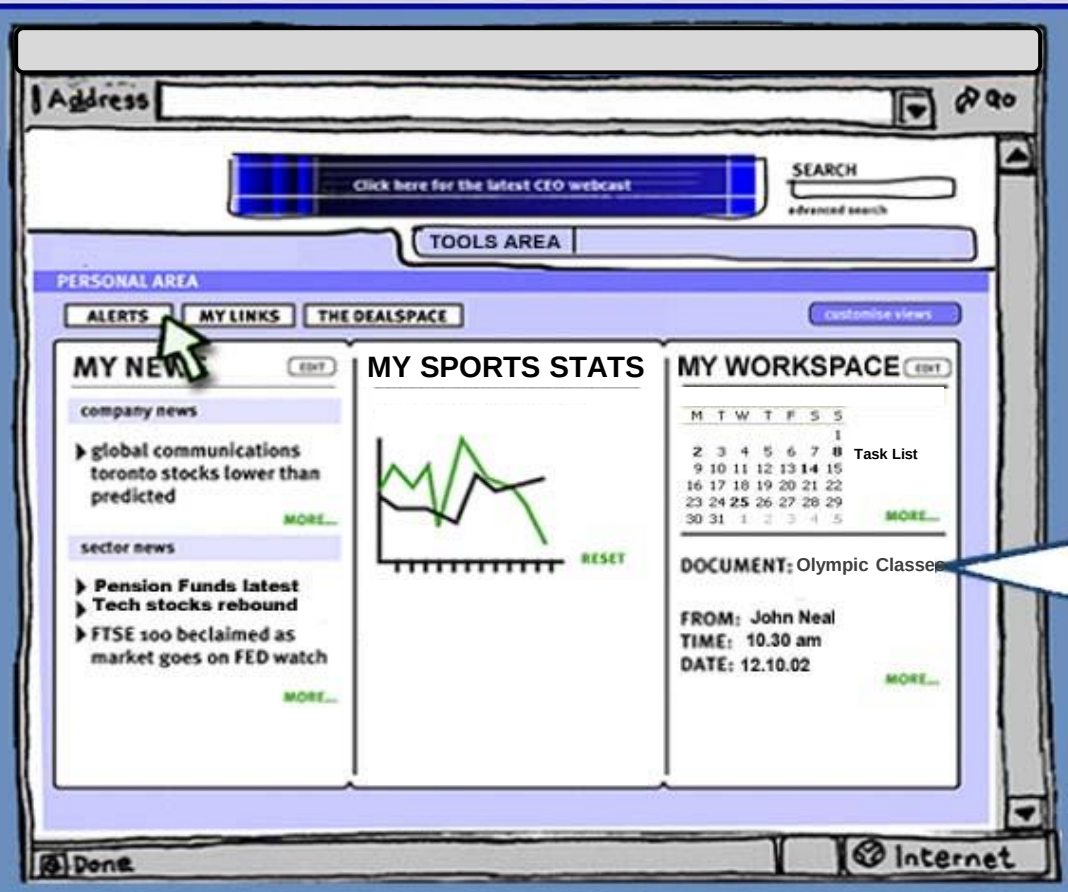
Introducing Nick

Nick is a 32 year-old, associate producer specialising in sports documentaries.

He is currently working on a film about Olympic sailing competitions and is looking for video footage and commentaries from previous Olympic sailing events that will raise the quality of the documentary.

Profile

- Newspapers: New York Times, Village Voice
- Journals: The Director's Guild
- Apps: Facebook, Twitter, Instagram



THE OLYMPIC CLASSES/EVENTS

Eight one-design class boats have been chosen for the 10 Olympic events:

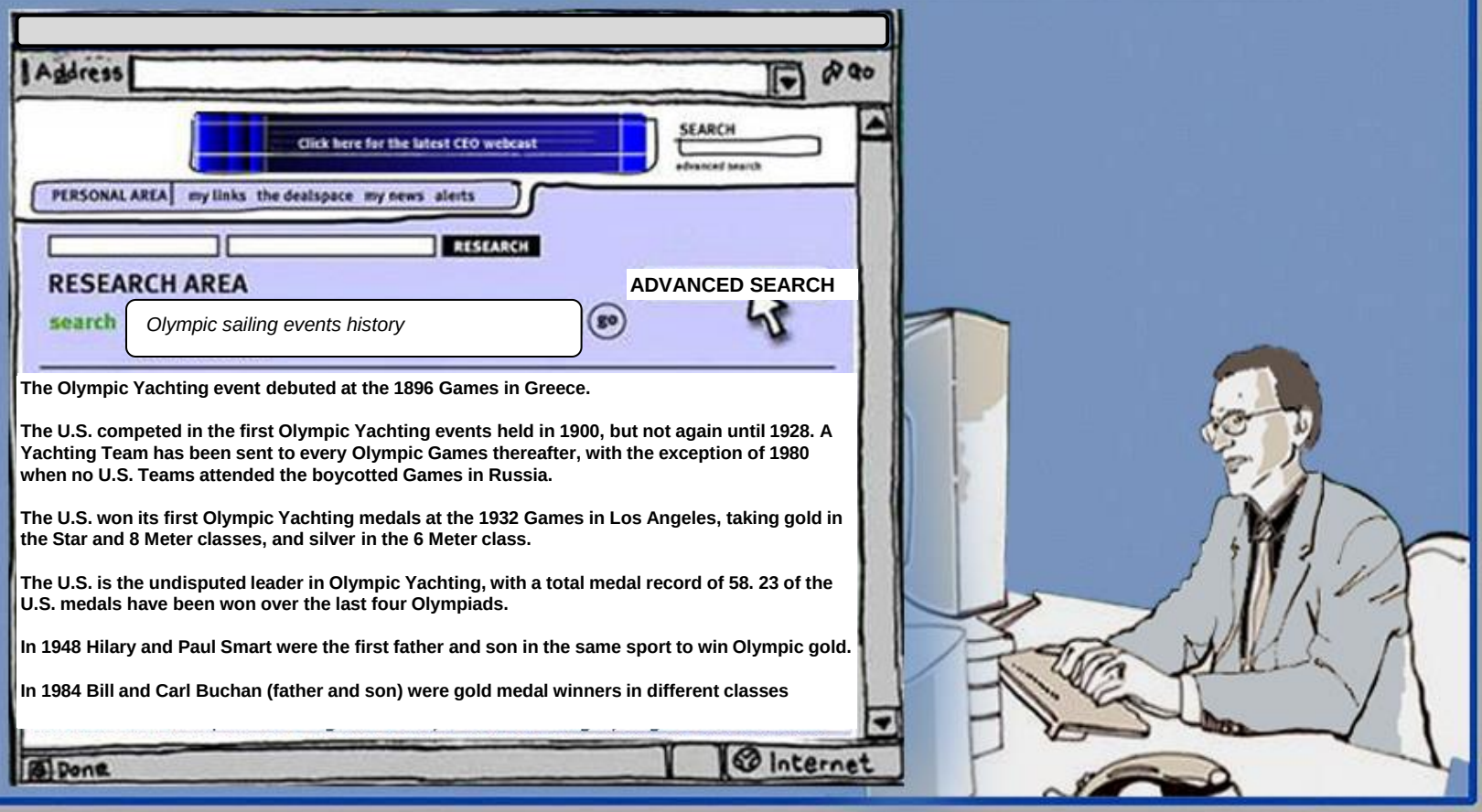
Europe: Women's Singlehanded Dinghy

Finn: Men's Singlehanded Dinghy

470: Women's Two-Person Dinghy

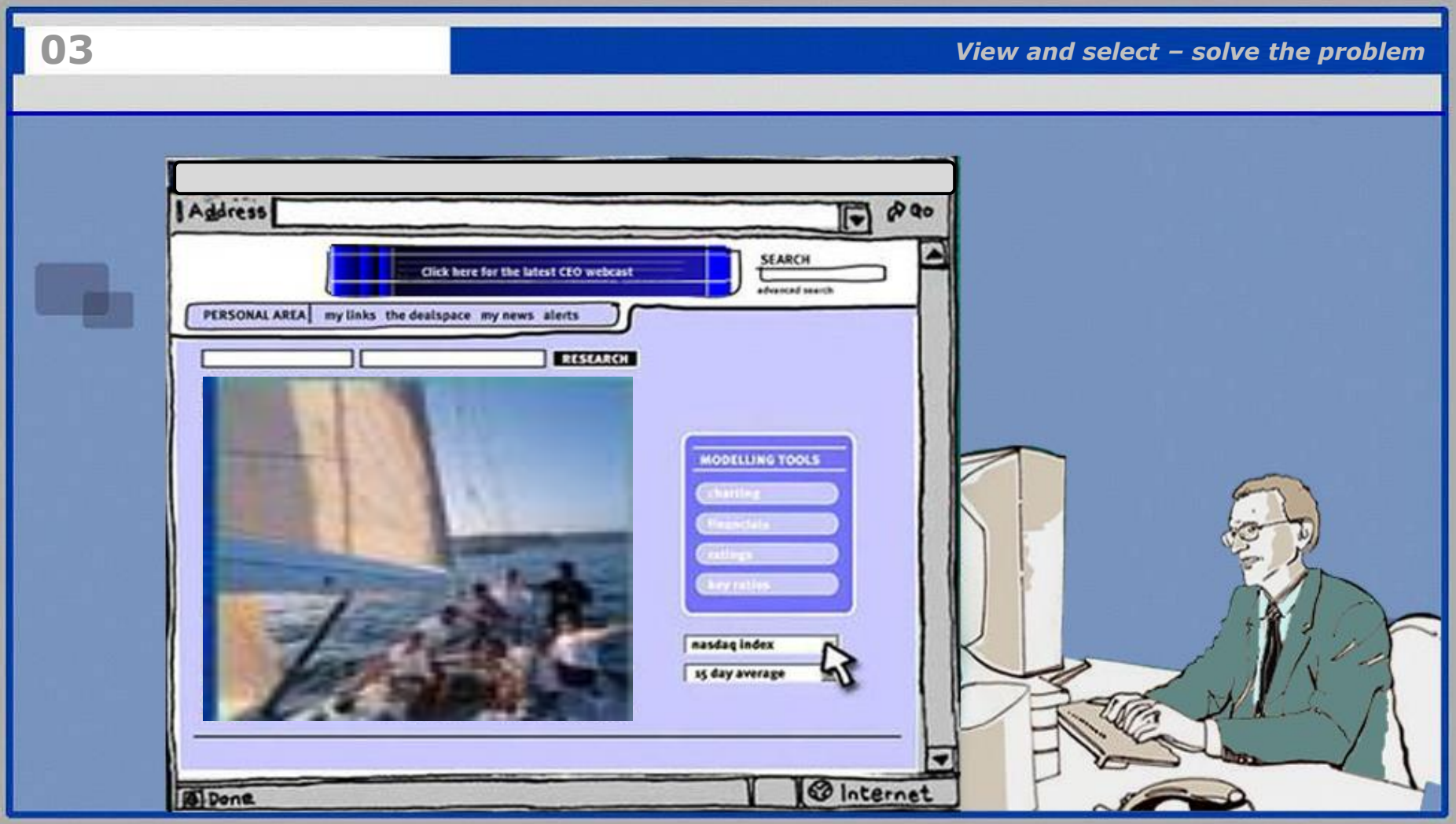
Laser: Open Centerboard Dinghy

Nick logs into his 'Personal Dashboard' at the company's intranet system



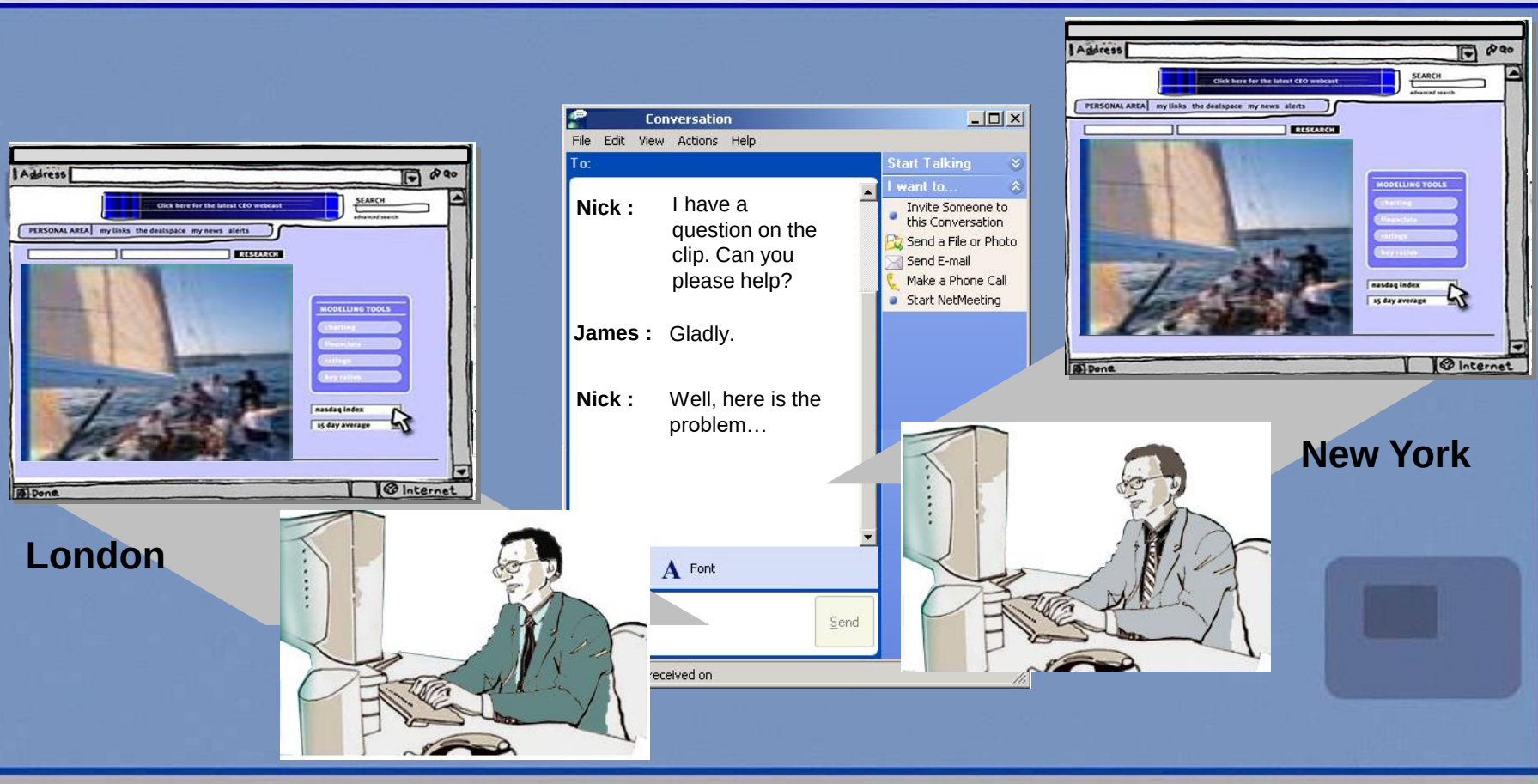
Nick is browsing the multimedia content indexed and stored in the system

View and select – solve the problem

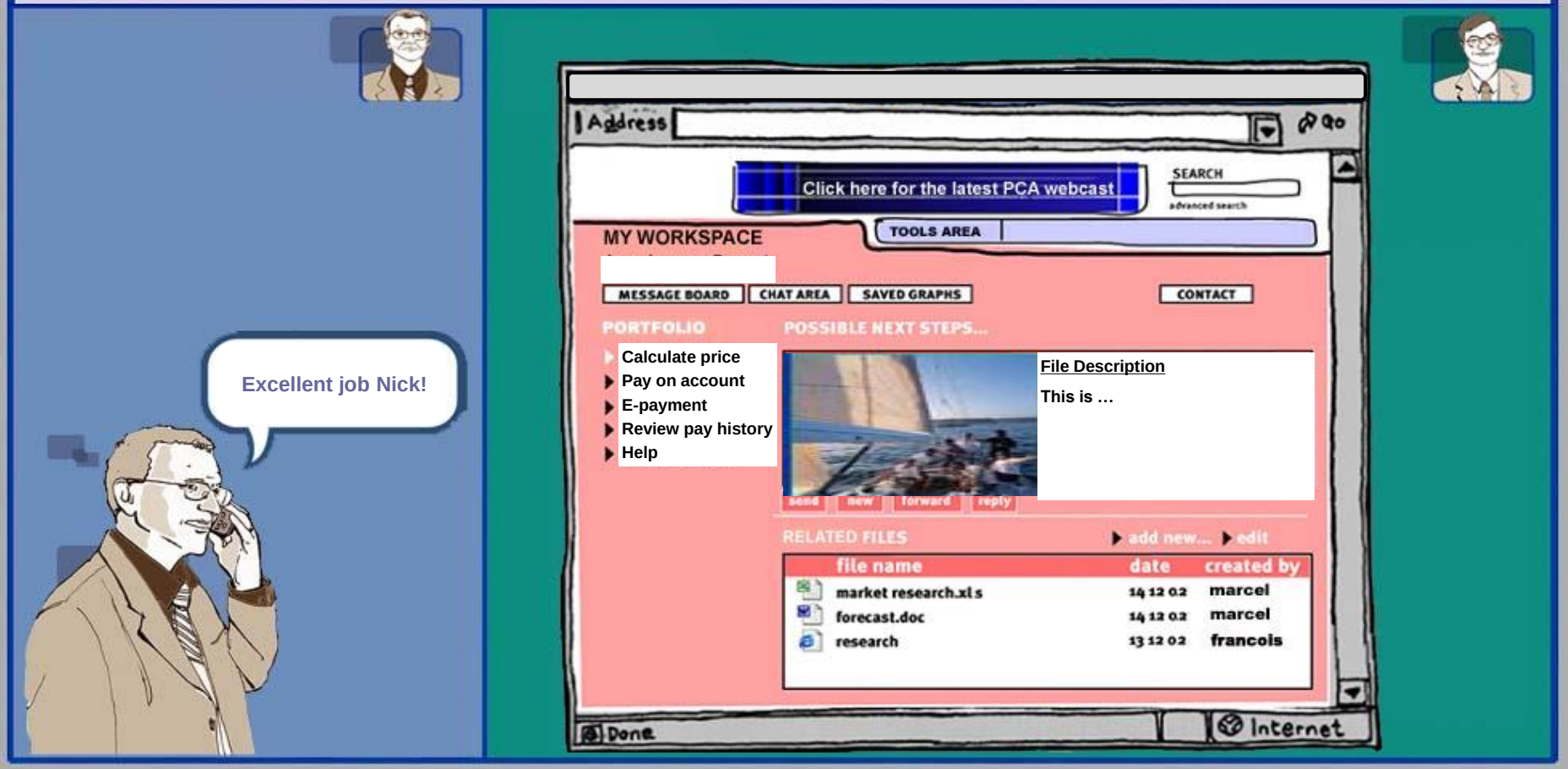


Nick is viewing, compiling and selecting multimedia clips relevant to his research project

Help via collaborative technologies



Nick is assisted by a colleagues via application sharing and text/video chat



Nick is ending his online session by collating the selected footage

Lessons learnt

The good news

- Faster calculations and less paperwork
- Separating work from location
- Reorganizing workflows
- Redefining organizational boundaries
- Instant global distribution of information

The bad news

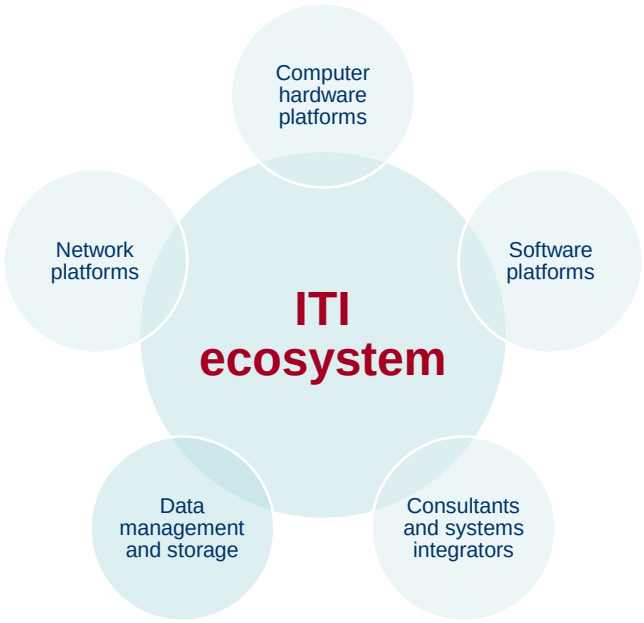
- System outages and shutdowns
- Illegal distribution of intellectual property

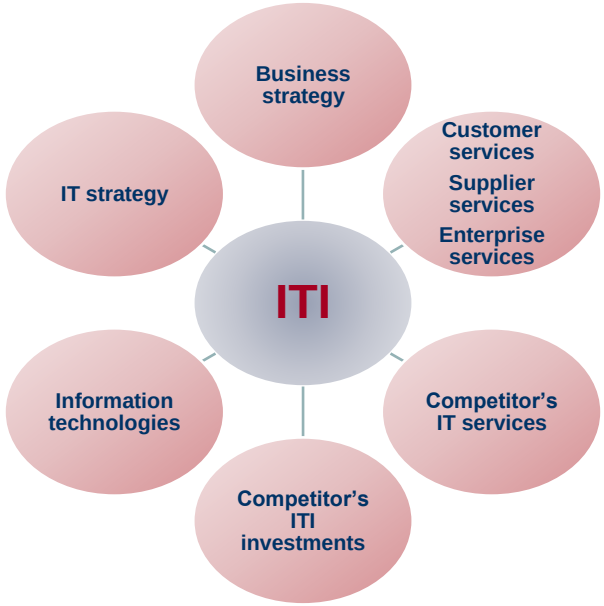
How we will work

Context


Market pressures
Technology pressures
Cultural/ethical pressures

This is the overarching challenge





Total Cost of Ownership (TCO)

Definitions

General

Estimate of all direct and indirect costs associated with an asset or acquisition over its entire life cycle.

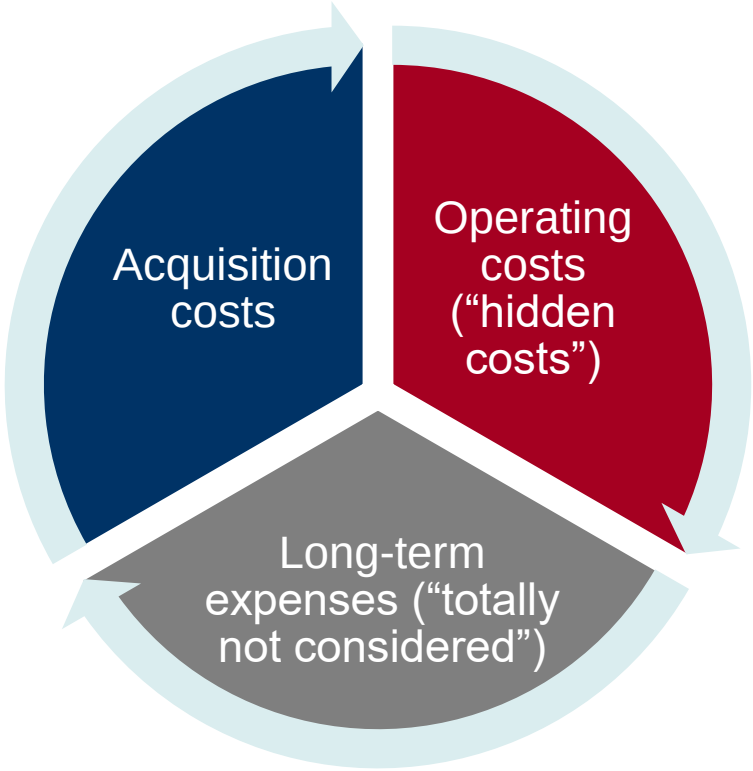
Information Systems

Total of direct capital investment in hardware and software plus indirect costs of installation, training, repairs, downtime, technical support, and upgrading.

Benefits of TCO

- Provides a consistent, systematic framework for comparing IT alternatives
- Establishes a standardized way to track and compare IT costs over time
- Educates and raises awareness about the full costs of IT, showing that the initial IT procurement cost is a relatively small part of the full cost of ownership

Major components of TCO



Major TCO components

Acquisition costs: categories

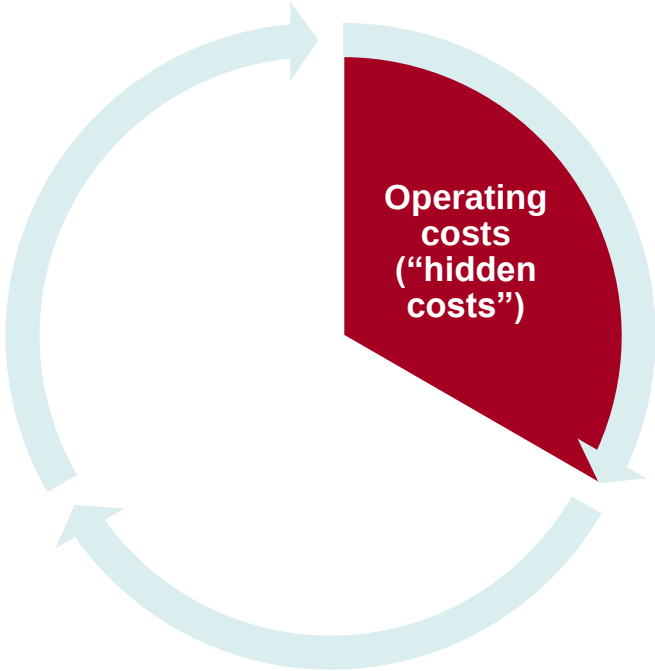
- Network hardware and software
- Server hardware and software
- Workstation hardware and software
- Installation and integration of hardware and software
- Purchasing research
- System design
- Warranties and licenses
- License tracking - compliance
- Other migration expenses

- Hardware and software acquisitions often account for only 20% of the total cost of ownership (source: PA Consulting Group)

Major components of TCO

Operating costs: categories

- Infrastructure (floor space)
- Electricity (for related equipment, cooling, back-up power)
- Security (including breaches, loss of reputation, recovery, and prevention)
- Back-up and recovery process
- Technology training
- Audit (internal and external)
- Insurance
- Administration and support
- Information Technology related personnel
- Corporate level management time
- Downtime, outage and failure expenses (Price tag on lost productivity)

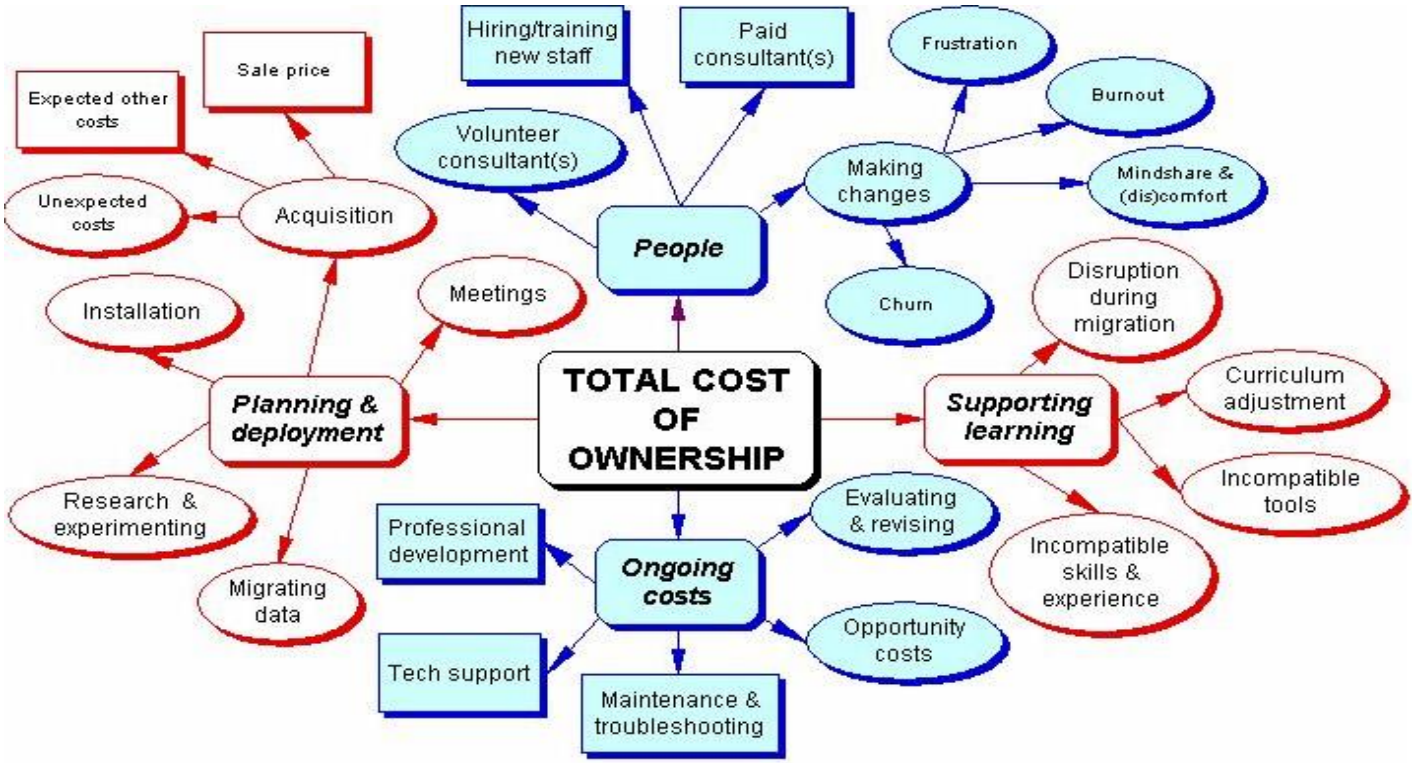


Business pressures

Long-term expenses: categories

- Replacement
- Future upgrade or scalability expenses
- Decommissioning / Disposal

Major components of TCO



All together now !

1. *Understand As-Is position*	2. *Specify future requirements*	3. *Develop technology & service options*	4. *Define strategy*
• Understand business drivers and IT strategy • Review current technology base • Review current governance and service management approach • Review current sourcing approach • Review current technology cost base • Review any available service performance data	• Determine future service requirements (ideally by working with business representatives) • Assess current infrastructure • Determine where current infrastructure and future requirements do not match • Produce future requirements specification and build a demand model	• Examine technology futures for key infrastructure components • Analyse the service market place • Define technology, governance, service management and sourcing options • Build a cost model for assessing options • Assess options and select elements of the strategy (ideally involving businesses where appropriate)	• Define IT Infrastructure Strategy options • Prepare business case for implementation programme • Prepare implementation plan

Project Management