CABLE & WIRELESS

Project Collaboration & Economics
SubOptic 2004 Tutorial 3

Katherine Edwards & Keith Schofield

Overview

- Essential ingredients to the mix
- Who to invite to the party?
- The recipe for success
- How to get on?
- Slicing the cake
- Influences over project timeline
- Role play
- Case studies
- Conclusions
- Q&A

Essential ingredients in the mix

Structuring a project

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Essential ingredients in the mix

What do you need to structure a project?

- A great idea
  - Business
  - Technology
- A need that has to be fulfilled (customers)
- Realistic expectations
- Good business sense
  - Avoid the herd instinct
  - Choose your partners wisely

Essential ingredients in the mix

What do you need to structure a project? (continued)

- A way of making the idea happen
  - Proven methodology
- Money to fund the initiative
- Good Operator relationships
- Suitable Regulatory Framework
- Cultural sensitivity / awareness
- A great business plan
  - Would your Granny invest in it?

Essential ingredients in the mix

What do you need to structure a project? (continued)

- Good planning
  - Adaptive planning
  - Terms of reference
  - Structure
  - Communication
- Good management team
  - Good personal relationships
  - Good judgement
- Flexible and appropriate decision making
- Good contracts

Who to invite to the party?

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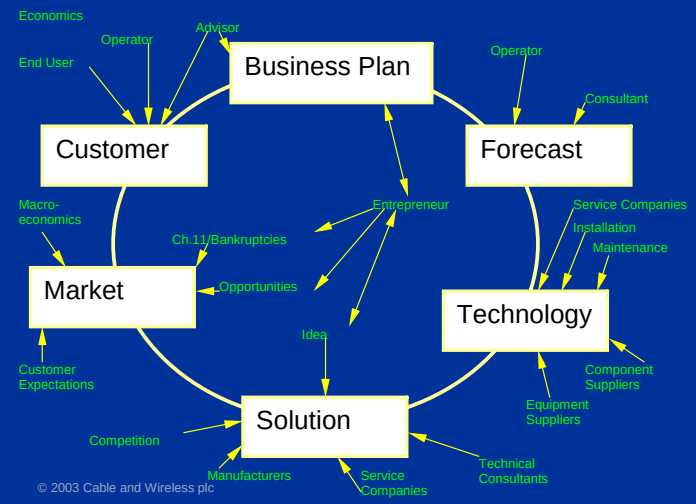
Who to invite to the party?



Who to invite to the party?

- Entrepreneur
- Operator(s)
  - Established or new?
- Finance
  - Are the days of non-recourse finance over?
- Technology
- Supply
- Customers

Who to invite to the party? (continued)

- Project management and implementation
- Operation & Maintenance
- External consultants / specialists
  - All stages

Recipe for success

Recipe for success

Ways of organising a project:-

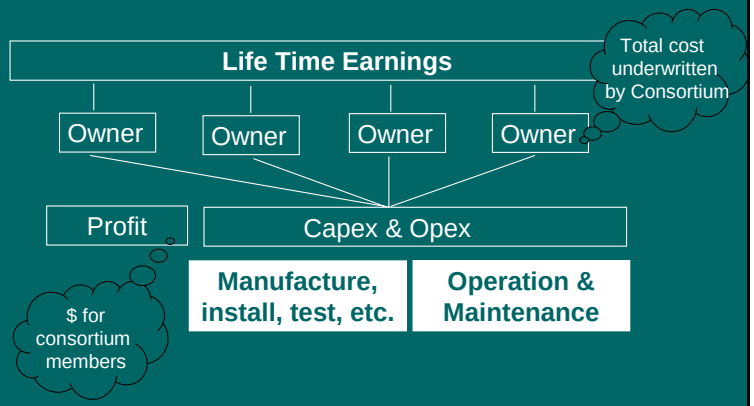
- Consortium
- Joint Venture
- Finance led - new project
- Finance led - asset purchase
- Supplier led
- Entrepreneur led - new project
- Customer led?
- Others, e.g. Hybrid

How to get on

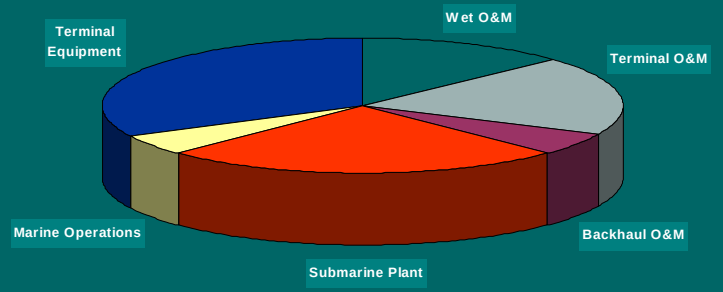
- Clear accountability
- Flexible, brave decision making
- Dedicated effort
- Clear communication to senior managers
- Good upward management
- Good planning
- Clear communication between interested parties
- Mutual understanding

Economics - slicing the cake

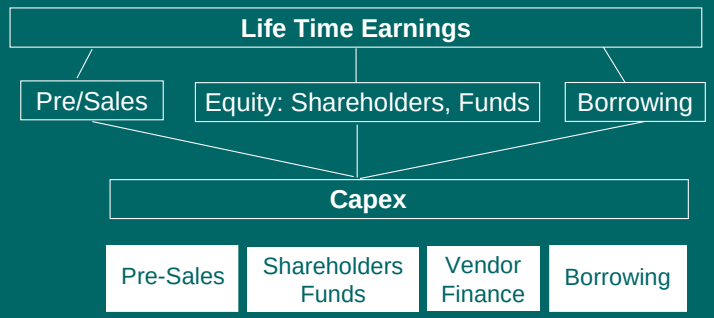
Investment - Consortium Model



Consortium Model: Capex & Opex

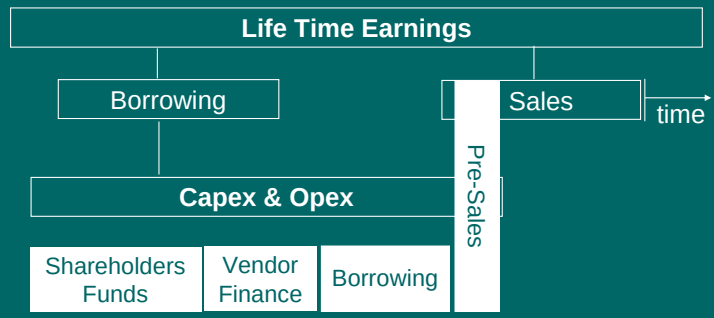


Investment - Private System



Start of System Life $t = t_0$

Investment - Private System



During Operation of the System $t = t_0 + t_1$

Influences through project life cycle

Idea
↓
Develop
↓
Procure
↓
Build
↓
Test
↓
Operate
↓
Upgrade
↓
Retire

$$$$$

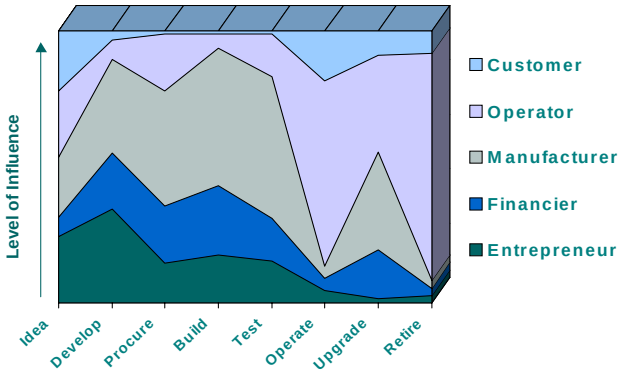
Operator

Developer / Manufacturer

Financier

Entrepreneur

Influence vs. life cycle



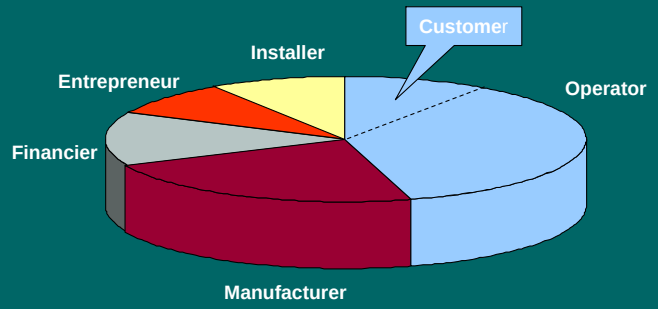
Influences & investment

Size of stake not necessarily proportional to influence on the success of the project

Examples:

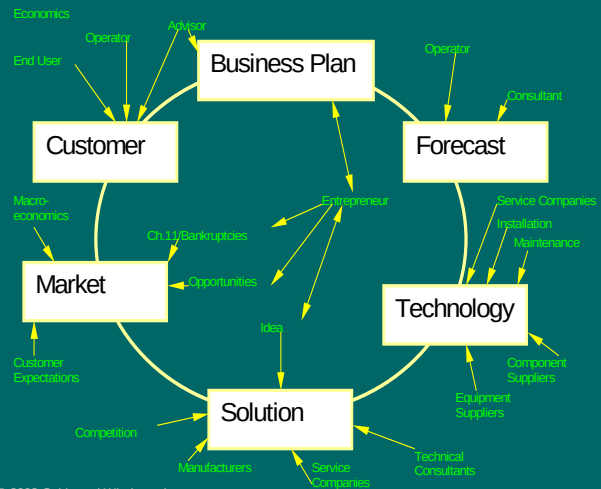
- Small percentage holding; Consortium System
- Single Interest Groups; Permitting
- Inappropriate involvement in areas of project outside area of expertise

Financial stakeholders



Influencing the environment

Influencing the economic environment



Influencing the environment

Politics:-

- Being savvy about the international political environment
- Lobbyists
- Talking to special interest groups
- Building bridges
- Environmental considerations

Influencing the environment

- **Idea**
  - Provision of sound technical advice to financier
- **Develop**
  - Identify clearly the customers requirements
  - Strong and realistic development & qualification programme in place
- **Procure**
  - Good process; clear and complete Request for Proposal document, thorough tender evaluation process and Contract Negotiations
  - Good contracts in place
  - Good faith
- **Build**
  - Get independent assistance; auditors, purchaser on-site representatives, etc
  - Flexible plan of work, allow for workaround plans

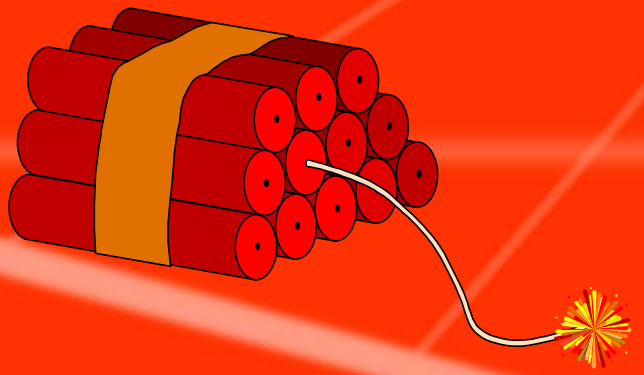
Influencing the Environment

- **Test**
  - Perform thorough and complete testing which both proves the system and provides useful information for the future (maintenance & upgrades).
  - Ensure thorough test specifications are used
  - Get independent assistance
- **Operate**
  - Listening to the customer
  - Continually looking for savings
  - Continually improving efficiency
- **Upgrade**
  - Good planning and timing
  - Ensuring accurate forecasting
  - Ensure that existing traffic will not be effected
- **Retire**
  - Assess costs of alternative systems (Capacity & O&M)

Role play

What did we learn?

What happens when projects go wrong…..



Getting it right

The secret to success

The secret to success - gourmet cooking

- Good communication
- Trustworthy business partners
- Realistic expectations
- Flexible management
- Timing
- Technology
- Market
- Money
- Good agreements
  - Technical
  - Commercial
  - Legal

Avoiding indigestion

- External market
- Preparation
- Politics vs. performance
- Technology
  - Time & expense
- Management performance
  - Terms of reference
- Financial Issues
  - Backing
- Contract management
- Inexperience and overconfidence
- Competitive pressures

Case studies

Case 1: Aquatica

- US$400m National submarine cable operator planned for Brazil
- Desk study, commercial development and fund raising work undertaken
- Vendor support to bring project to fruition
- External market conditions changed during the project planning phase
- Potential customers not in a position to commit
- Project put on hold until market conditions changed
- Advantage for shareholders and suppliers alike - avoided unnecessary spend

Case 2: Southern Cross Cable System

- 31,000km ring system in the Pacific
  Initial design capacity 16λ at 2.5Gbit/s
- Procured as a private system via a special purpose company;
  - Southern Cross Cables Ltd established to implement and operate the network
  - SCCL owned by three shareholders:
    Telecom New Zealand (50%), Optus (40%), MCI (10%)
- Business case drivers
  - High availability
  - Upgradeability
  - Time to market
  - Advent of next generation submarine cable systems

Case 2: SCCL Company Structure

- Private special purpose company established by three shareholders linked by a Shareholder Agreement
- Company board members comprise representative from shareholders
- SCCL Directors comprise personnel injected from the shareholder organisation
- SCCL project team comprised engineering & management expertise from shareholder organisations supplemented by external resource
- Many external contracts to provide landing party facilities, NOC, submersible plant maintenance, etc.

Case 2: Advantages of Company Structure

- Project team has common objective and strategy during implementation
  - All decisions taken in best interest of company
- Small efficient project team - reduces implementation cost
- Clear responsibility and accountability simplifies interaction with Supplier and other parts of organisation
- Use of external resource for specialist or short-term implementation activities:-
  - Retains control of project direction & technical design
  - Variabilises costs by adopting an 'expertise on demand' approach
  - Enables first class expertise and advice at each stage

Case 2: Project Financing

- Originally funded by non-recourse financing with a syndicate of banks headed up by a lead arranger
- Original drivers for this approach were:-
  - Desire of the shareholders not to carry the debt on their balance sheets
  - Expertise afforded by a lead arranger, manage the syndication arrangements & secure the capital in the shortest possible timescales
  - The Reality
  - Banks offering non-recourse finance expect their risk to be covered off with watertight contracts
  - Contracts typically do not fully specify the final cost e.g. provision for scope change

Case 2: Project Financing

The Consequences

- A significant delay to finalisation of the supply contract was incurred whilst the banks attempted to introduce clauses & constraints which limited their risk against all possible scope changes and the potential for delay
- Substantial legal costs were incurred by all parties (but ultimately paid for by the shareholders) in establishing contracts acceptable to the banks
- Ultimately the constraints and inflexibility built-in to the contracts by the banks to limit their risk made the working of the agreement untenable, leading to termination of the finance agreement and return of the project financing to the shareholders
- The project was subsequently refinanced under different terms

Case 3: Apollo Submarine Cable Network

- Two transatlantic submarine cables
- Private system
- One owner, however project risk shared with vendor
- Each cable initially supplied with 2fp each equipped with 16 x 10Gbit/s
- Design capacity is at least ten times greater than initial capacity
- Capacity upgrades fundamental part of the system design

Case 3: Apollo Submarine Cable Network

- Full turnkey supply contract for submarine system
- Secure non-recourse vendor financing
- Supply contract included cable landing stations and also acquisition of permits
- Supply contract includes priced options and mechanism for upgrades

Case 3: Apollo Submarine Cable Network

- Cost effective & efficient collaboration:-
  - Project structure - efficient forums for decision making
  - PMG - responsible for project plan and budget
    Inherent cost control mechanism within C&W and ASN
  - Permits - centralised responsibility to ensure permits available on time
  - Integrated technical and product assurance team
- Terms of reference developed for all working groups

Case 4: The Maya Upgrade

Background - Maya Cable System:-

- Collapsed ring connecting 7 countries in the Caribbean
- Procured as a consortium system
- 40 owners
- % ownership ranging from >12% to <0.1%
- Initially supplied as 2fp collapsed ring with 3 x 2.5Gbit/s λ per ring
- Design capacity at least 8 x 2.5Gbit/s λ per ring

Case 4: The Maya Upgrade

- Upgrade envisaged early in system life
- Taken into account in the C&MA
- Supply contract included priced options for upgrades:-
  - Advantage in rising market as project discount applies
  - Not good in falling market, thus ensure contract includes alternative option for market pricing
  - Option should be kept 'open' for several years
  - Eases negotiations as upgrade is CV to original contract hence original T&Cs apply

Case 4: The Maya Upgrade - Collaboration

- Cost effective & efficient collaboration:-
  - UWG made up of upgrade owners
  - UWG chair given power of attorney to sign CV (efficiency)
  - Implementation PM reported to UWG not PG
- Budget must allow for PM and owners cost
- Terms of reference should be developed for the PM
- Lessons learnt:-
  - Terms of reference should be developed for an on-site representation provided by upgrade parties
  - Clear differentiation should be made at the start of the upgrade between upgrade scope and issues relating to the original system e.g. installation & operation issues, outstanding deficiencies, etc.

Case 4: The Maya Upgrade - Economics

- C&MA required a majority of owners to participate which caused difficulty when getting approval:-
  - Over a year, each owner needed to get budget approval in the same period
- Difficulties experienced as not all Terminal parties participated in the upgrade
- Lessons learnt:-
  - C&MA should allow sufficient time and money for obtaining agreement amongst owners
  - Need to specify how additional equipment costs will be shared for the upgrade

Project Collaboration & Economics

Conclusions

Conclusions

- Essential ingredients: how to structure a project
- Who to invite to the party: which players?
- Recipe for success: how to get on
- Slicing the cake $: Consortium & Private Models
- Influencing the environment
- What happens when projects go wrong…..
- Getting it right: secret to successful projects
- Case Studies: Aquatica, SX, Apollo & Maya

Questions?

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