Improving supply chain performance

Level 5 – 03
Session 1

Aligning procurement activities with business objectives and managing suppliers
Learning outcomes

At the end of this session candidates will be able to:

- Explain the importance of linking the procurement function with business objectives
- Describe how the purchasing function can add value to the business
- Explain how strategic alignment must contain an element of flexibility
- Evaluate the importance of customer service within the supply chain function
- Explain the role of the purchasing function in managing supplier relationships
- Assess the potential for improving the management of supplier relationships
- Evaluate how leadership style can contribute to improved supplier development
- Recommend how purchasing should be configured within an organisation.
Porter’s value chain

M. Porter’s Value chain

Support

- Firm infrastructure
- Human resource management
- Technology development
- Procurement
- Inbound logistics
- Operations
- Outbound logistics
- Marketing and sales
- Services

Primary activities
'VMOS'

- Vision
- Mission
- Objectives
- Strategies.
Porter’s generic strategies

**STRATEGIC ADVANTAGE**

- Uniqueness perceived by customer
- Low cost position

**STRATEGIC TARGET**

- Industry-wide
- Segment only

**OVERALL COST LEADERSHIP**

**DIFFERENTIATION**

**FOCUS**

Source: Porter
Boston Consulting Group matrix (BCG)

- **STARS**
  - Modest + or - cash flow
  - High relative market share

- **QUESTION MARKS**
  - Large negative cash flow
  - (problem children)

- **CASH COWS**
  - Large positive cash flow
  - Optimum cash flow

- **DOGS**
  - Modest + or - cash flow

**SOURCE:** Adapted from Hedley (1977), p. 12
Product life cycle

Sales and profits (£)

Introduction | Growth | Maturity | Decline

Sales

Profit
Value flow to customer

Delivery of superior value product, quality and innovation – value flow to the customer

Supplier’s supplier  Supplier  Buyer  Customer

Demands for quality and low prices – integrated responsive supply chain

Value acquisition from suppliers  Value added in production  Value delivery to customers

Source: *Transform Your Supply Chain*, Hughes, Ralf and Michels (International Thomson Business Press, 1999.)
Activities in supply chain management

- Sourcing strategy
- Vendor assessment (surveys, site visits)
- Supplier rating and qualification
- Supplier award programmes
- Use of new technology (for example, computer-supported collaborative working, advanced planning and scheduling)
- Cross- or multi-disciplinary team working
- Supply base reduction
- Joint supplier problem-solving team
- Supplier development 1 (Kaizen teams)
- Supplier development 2 (redesign of internal processes).
Activities in supply chain management (continued)

- Electronic data interchange
- Supplier associations (Kyoryoku Kai)
- Longer-term contracts
- Partnership (win-win negotiation, partnering agreements)
- Lean supply (JIT, for example)
- Standards development
- Supplier tiering
- Cost analysis methods
- Cost management (VE, gain sharing, inventory management and re-engineering).
Elements of supplier development strategy

- Sourcing strategy
- Analysis strategy
- Communication strategy
- Infrastructure strategy
- Motivation strategy
- Standards strategy
- Development strategy.
Supplier award programmes

- Cost reduction
- Customer support
- Delivery
- Price
- Quality
- Technology
- Warranty.
Types and sources of power

- Positional power
- Expert power
- Referent power
- Reward power
- Coercive power.
Structuring for purchasing

Centralisation
- Economies of scale
- Consistency of practice
- Rationalisation of supply base
- Reduced total stock
- Expert (lead) buyer input
- Improved materials allocation.

Decentralisation
- Local market knowledge
- Responsiveness
- Point of use understanding
- Local support
- Transportation
- Relationships
- Communication.
Session 2

Getting results through performance measures and developing a competitive approach
Learning outcomes

At the end of this session candidates will be able to:

- Summarise the importance of establishing key performance indicators for supplier improvement
- Describe the function of benchmarking internally and externally and its relationship to KPI setting
- Demonstrate systematically how auditing applies to the procurement function
- Demonstrate analytically the value of the Kaplan and Norton balanced scorecard model
- Summarise the consequences of a supplier failing to meet KPI standards
- Assess the value of supplier selection and performance systems within the organisation
- Critically assess the impact on business competitiveness of supplier performance systems
- Give examples from TQM of its contribution to the achievement of business objectives within a competitive world
- Apply the concept of 6-Sigma to organisational improvement
- Explain how procurement planning might improve competitiveness.
Quantitative measures

- Orders placed
- Reduction in lead times
- Price savings
- Reduction in administration costs.
Qualitative measures

- The process of supplier development, and long-term collaborative relationships
- The introduction of JIT systems
- The observance of quality standards
- Implementation of e-procurement systems
- Financial performance from a total sales perspective.
Establishing KPIs

- **Acceptability** – to all parties involved
- **Achievability** – realistic standards of performance must be set
- **Appropriateness** – relevant to the current work, role and ethos
- **Flexibility** – methods can be changed as circumstances change
- **Continuity** – sustainable periods of measurement so that comparisons can be made
- **Comprehension** – are they understood by the parties?
- **Credible**
- **Cost** – should be proportionate.
Benchmarking

- Develop and analyze background information and secondary data
- Surveys
- Telephone interviews
- Teleconference meetings
- Site visits

Increasing execution time
The control cycle

Figure 13: The control cycle

- Objectives
- A map or model of the process that will lead to the objectives
- A method of closing any gap
- A method of assessing progress to objectives
Measuring relationships

- Price against target or against market assessment
- Rejected parts per thousands/tens of thousands/hundreds of thousands delivered
- Scrap and re-work costs
- Number of deliveries arriving within an agreed time window
- Order lead times
- Administration costs
- Levels of service expressed in terms of accessibility, courtesy, competence, for example
- Number of innovative suggestions per time period
- Range of stock-keeping units (SKUs)
- Mix of SKUs.
Common benchmarks of purchasing organisations

- Purchase dollars as a percentage of sales dollars
- Purchasing operating expenses as a percentage of sales dollars
- Cost to spend a dollar
- Purchasing employees as a percentage of company employees
- Sales dollars per purchasing employee
- Active suppliers per employee
- Active suppliers per professional purchasing employee
- Purchasing dollars spent per active supplier
- Purchasing operating expense dollars per active supplier
Common benchmarks of purchasing organisations (continued)

- Change in purchase dollars spent with minority-owned suppliers
- Percentage of dollars spent with women-owned suppliers
- Percentage of suppliers accounting for 90% of purchase dollars
- Purchase order cycle time
- Percentage of purchasing transactions transacted through electronic commerce
- Percentage of service purchases handled by the purchasing department
- Percentage of total purchases handled by the purchasing department
- Average annual training hours per professional purchasing department
- Percentage of purchase transactions processed via procurement card.
Stages in benchmarking

- **Stage 1** Decide what aspects of purchasing or logistics to benchmark
- **Stage 2** Plan the benchmarking project
- **Stage 3** Create a baseline for benchmarking comparisons
- **Stage 4** Decide who to benchmark against
- **Stage 5** How will we collect the information?
- **Stage 6** Analyse the information obtained
- **Stage 7** Use the findings.
Kaplan & Norton – balanced scorecard
Sources of new & potential suppliers

- **Catalogues** – both paper and electronic. These are often a good source of material as they often provide easy information that is also technical.
- **Trade directories** – such as Kompass, Ryland’s, and Buyer’s Guide and so on are especially useful for new items or unusual products. Often used in an emergency.
- **Yellow pages**
- **Databases** – these have substituted the need for large paper-based reference sections. There are a number of commercial databases dealing with different supply items such as Reuters, Kompass, and Pergamon Infolin. In addition, the business support agencies such as Business Link and the Chambers of Commerce have information that may be valuable.
Performance system criteria

- Accurate
- Complete
- Augmentative
- Timely
- Credible
- Relevant
- Usable
- Scalable
- Predictive
- Cost-effective.
Organisations and processes

Processes are horizontal

Functions are vertical

Processes are horizontal
Process management

INPUTS
- Materials
- Procedures
- Methods
- Information
- (including spec.)
- People
- Knowledge
- Training
- Plant/equipment

PROCESS

OUTPUTS
- Products
- Services
- Information

9.1
The Deming 14 point philosophy

1. Constancy of purpose
2. A new philosophy
3. Away with mass inspection
4. Reliability of supplier
5. Forever improving
6. Train and train and train
7. Leadership
8. Drive out fear
9. Pull down barriers
10. Eliminate sloganising
11. Get rid of quotas
12. Pride of workmanship
13. Self-improvement
14. Transformation is everybody’s job.
Business excellence model

© 1999 EFQM. The Model is a registered trademark of the EFQM
Contribution of quality systems to supplier development

Six sigma –
- DMADV (new processes and products)
  - Define
  - Measure
  - Analyse
  - Define
  - Verify

- DMAIC (incremental improvement to existing)
  - Define
  - Measure
  - Analyse
  - Improve
  - Control.
Contribution of quality systems to supplier development

Quality circles –
- Reduction of errors and the improvement of quality
- Problem prevention rather than detection and correction
- Reduction in product or service costs
- Improved productivity
- Increased employee involvement, motivation, job satisfaction, and commitment
- Improved teamwork and working relationships
- Development of employee problem-solving ability.
Contribution of quality systems to supplier development

- Re-engineering – examination and change of 5 parts of the business –
  - Strategy
  - Processes
  - Technology
  - Organisation
  - Culture
Contribution of quality systems to supplier development

Incentivisation –

- Lower cost, faster or timelier, delivery of service with no compromise on quality;
- Full understanding of the relationship cost, the quality of service delivery, and the ability to deal more effectively with changes during the contract;
- Increased service levels;
- Greater price stability;
- Enhanced achievement of the desired outcome;
- Better utilisation of services;
- Improved management information; and
- Improved management, control and Monitoring of contract deliverables.
SERVQUAL service dimensions

- Reliability – delivery of the service on time and to promise
- Responsiveness – adaptation to user’s needs
- Competence
- Empathy – to the needs of the user
- Accessibility – can the service be reached when required?
- Courtesy – are the users valued?
- Communication – are the users kept informed of the service?
- Credibility – do they know their job?
- Security – is the risk managed effectively?
- Tangibles – do the premises and staff appearance communicate the desired effect?
### Twelve primary sources of risk

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<td>5. Financial.</td>
<td>11. Strategic.</td>
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Session 3

Selecting and sustaining effective suppliers and retrieving Information from the supply chain
Learning outcomes

At the end of this session candidates will be able to:

- Evaluate essential criteria for supplier selection and appraisal
- Assess the contribution to the function of vendor rating systems
- Give examples of how vendor rating systems can contribute to overall value of the function
- Demonstrate the circumstances when supplier switching will be considered
- Describe the process of new supplier adoption
- Describe the methods by which external contacts and relationships can be developed to gain market intelligence
- Evaluate the process for engaging external contacts within the supply market as a source of market intelligence
- Give examples of specific external information that could be valuable to the procurement business
- Describe the process of the adoption of a supplier innovation.
Transforming the supply chain

Delivery of superior value product, quality and innovation – value flow to the customer

Supplier’s supplier → Supplier → Buyer → Customer

Demands for quality and low prices – integrated responsive supply chain

→ Value acquisition from suppliers
→ Value added in production
→ Value delivery to customers

Source: Transform Your Supply Chain, Hughes, Ralf and Michels (International Thomson Business Press, 1999.)
Carter’s 10 Cs for supplier selection

- Original 7 Cs for supplier selection were:
  - **Competency**: all staff, all the time (requires evidence)
  - **Capacity**: sufficient and flexible
  - **Commitment**: to quality (quality systems)
  - **Control**: control of process
  - **Cash**: sufficient funds for the business
  - **Cost**: cost/price relationships and total cost of ownership
  - **Consistency**: consistent production of goods or services (ISO 9000).

- Three additional Cs
  - **Culture**: compatible with similar values
  - **Clean**: environmentally sound (conforming with legislative requirements)
  - **Communications**: the supplier is fully integrated with information and communication technology (ICT).
Attributes of a good supplier

- Delivers on time
- Provides consistent quality
- Gives a good price
- Has a stable background
- Provides a good service backup
- Is responsive to needs
- Keeps promises
- Provides technical support
- Keeps the buyer informed on progress.

Vendor audit factors – large projects

- Quality assurance and control procedures
- Incoming and outgoing quality checks
- Management capability
- Plant capacity and vintage
- Morale/employee attitudes
- Housekeeping
- Environmental procedures and conformance with environmental legislation.
Vendor audit factors – large projects (continued)

- Planned maintenance
- Tooling procedures/capability
- Understanding of requirements
- Samples
- Order book
- Corrective action procedures
- Training and skill levels.
ESI

- Are we involving suppliers early in product and process development?

  - Early involvement recognises that competent suppliers have more to offer a purchaser than simply producing an item according to buyer-provided specifications.

  - What is the logic behind early supplier involvement?
    - Expertise
    - Buy-in
    - Shared risk
    - Time.
New product/service development process

1. Idea generation: voice of the customer
2. Preliminary business/technical assessment
3. Product/service concept development
4. Product/service engineering and design
5. Prototype build, test and pilot/ramp-up

POSSIBLE SUPPLIER INTEGRATION POINTS
## Spectrum of supplier integration

<table>
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<tr>
<th>None</th>
<th>“White Box”</th>
<th>“Gray Box”</th>
<th>“Black Box”</th>
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**Supplier Responsibility**
The structure of an information system

- **Technology infrastructure**
  - Hardware
  - Systems software
  - Applications software
  - Communications

- **Data infrastructure**
  - Databases
  - Database management
  - Archiving

- **Personnel**
  - Technology developers
  - Systems operators
  - Systems maintainers
  - Users
  - User support
Information Providers

Internal

External

List brokers/profilers

Full service

Specialist service

Field agency

Data analysis services

Independent consultants

Market

Technique

Reporting
Internal sources of data

- Sales figures
- Operational data – stock levels, and so on
- Customer satisfaction results
- Advertising spend
- Customer complaints records
- Effectiveness data from promotional campaigns
- Marketing research reports from past studies.
External sources of data

- Internet – single-search engines, and multiple-search engines
- Directories
- Country information
- Published marketing research reports
- News sources
- Newsgroups and discussion lists.
Enablers of supply chain relationships

- *Common interest* – both parties have a stake in the outcome of the collaboration to ensure ongoing commitment.
- *Openness* – collaboration partners must openly discuss their practices and processes. Sometimes this means sharing information that is traditionally considered proprietary and confidential.
- *Mutual help* – when addressing supply chain problems or opportunities, look for cross company solutions.
- *Clear expectations* – all parties need to understand what is expected of them and the others in the relationship.
- *Leadership* – without a champion, collaboration will never be accomplished.
- *Co-operation, not punishment* – focus on jointly solving problems, not looking for someone to blame.
Financial benefits of established supply chain relationships

- Reduced inventory
- Improved customer service
- More efficient use of human resources and
- Better delivery through reduced cycle times.
Non-financial benefits of established supply chain relationships

- Faster speed to market of new products;
- Stronger focus on core competencies;
- Enhanced public image;
- Greater trust and interdependence;
- Increased sharing of information, ideas and technology;
- Stronger emphasis on the supply chain as a whole;
- Improved shareholder value;
- Competitive advantage over other supply chains.
Session 4

Identifying supplier capability and communicating effectively
Learning outcomes

At the end of this session candidates will be able to:

- Evaluate the effectiveness of supplier performance systems that segment the supply base
- Describe the importance of effective communications with suppliers
- Assess how specification issues are effectively communicated
- Explain the techniques for ensuring compliance with the buyer’s specification.
Responsibilities of first-tier suppliers

- The management of sub-contractors
- Adopting a JIT philosophy
- Customer-dedicated staff who work in conjunction with the design and production team of the supplier
- Responsibility for warranty and end-user customer claims
- Research and development into technologies that are being applied to the supplier’s product.
Aims of supplier associations

- To improve the abilities of the suppliers especially in techniques such as JIT, TQM, SPC and so on
- To produce uniformity in the supply system
- To facilitate the flow of information and strategy formulation between the parties
- To increase trust between the parties
- To keep suppliers and customers in touch with market developments and therefore aiding the translation of the voice of the customer
- To enhance the reputation of the customer as someone the suppliers should do business with
- To increase the length of relations
- To allow the sharing of development benefits
- To provide an example to sub-contractors of how to co-ordinate and develop their own suppliers.
World class organisations

- Commitment to total quality management
- Commitment to just-in-time
- Commitment to total cycle time reduction
- Multidimensional and integrative strategic plans
- Supplier relationships
- Strategic cost management
- Performance measurements
- Training and professional development
- Service excellence
- Corporate social responsibility
- Learning
- Management and leadership
- A push for world class status requires suppliers of a similar stature.
Qualities of desirable suppliers

- Deliver on key KPIs
- Competitive prices
- Quality
- Lead times
- A commitment to continuous improvement
- A commitment to being leaders in their industry in terms of technology and innovation
- Adaptability and the ability to invest in new areas and technologies.
Supplier characteristics for lean supply

- Strong team emphasis
- JIT system in place
- Total quality management systems in place
- Waste reduction teams
- Electronic data interchange (EDI)
- Extensive forecasting and modelling capacity
- Order status tracking capability
- Vendor managed inventory
- Product development cost tracking.
Key functions of a specification

- It should indicate the fitness for purpose and use
- It should clearly communicate the requirements of the user or purchaser to the supplier
- It should provide the basis of what is actually supplied with the purpose, quality and performance stated in the specification
- Provides evidence in case of dispute as to what the performance standard should have been.
Presenting a specification – BS7373

- Identification – title and so on
- Issue number
- Contents list
- Forward
- Introduction
- Scope
- Definitions
- Requirements/guidance/methods/statements – the main body of the specification
- Index – cross references
- References to organisational, national, international standards.
Examples of SLAs

- Delivery to due date and time
- Adherence to agreed cost
- Adherence to agreed reliability standards
- Adherence to agreed standards of consistency
- Ability to change in response to changing conditions or requirements
- Ability to innovate and improve in design or production
- Quality of service in delivery.
Session 5

Managing costs, improving value and involving suppliers
Learning outcomes

At the end of this session candidates will be able to:

- Explain how cost-reduction programmes are a normal part of business strategy
- Evaluate the techniques for delivery of acceptable price changes
- Describe how contracts are used to produce price decreases
- Give examples of how the customer can contribute to cost reductions
- Assess the importance of introducing tighter stock control systems
- Describe and evaluate JIT and stockless purchasing models
- Compare joint performance systems with standard vendor assessments.
- Explain how more complex feedback systems can improve performance of suppliers
- Evaluate the effectiveness of supplier risk management.
Discounts

Can be negotiated by buyers as -

- Recognition of prompt payment
- Quantity discounts, although there is some risk in taking additional quantities if they are to be stored, and this has to be compared with the benefits of possible additional production at marginal costs. If a contract is extended beyond the typical twelve months (subject to acceptable termination or option clauses), it may be possible to secure an additional discount for the longevity of the contract.
- Discounts for technical breakthrough by the supplier. It would be expected that some of the benefits will be passed down the supply chain.
- Discounts can be given to intermediaries, where stockists or agents take responsibility for the distribution down the supply chain.
- Special discounts are possible for seasonal variations in demand, promotional offers, a desire to increase brand recognition or market share.
Opportunities for innovation

- Scientific invention
- Adjusting products to anticipated customer needs
- Redefining the product so that further market segments are reached
- Applying existing techniques and technologies in new sectors
- Eliminating a link in the supply chain
- Revamping products in mature markets.

(Doole & Lowe, 2005)
Buyer’s contribution to new product’s success

- Quality assurance or defect prevention
- Value engineering and value analysis
- Discussion with the design department about the availability and cost of materials
- Evaluation of cheaper alternative methods
- Agreement of alternatives when specified materials are not available
- Importance of buying complete systems rather than individual components
- Discussions about buying rather than making
- Building co-makership/designership relationships
- Creation of an information centre surrounding the design and development.
Why manage inventory?

- The provision of a quality service to customers
- The avoidance of overstocking and bottlenecks
- Keeping costs to a minimum by variety reduction, economical lot sizes and cost analysis of carrying inventories. Variety reduction can make substantial cost savings on the inventory if there is both rationalising and standardisation of components and parts kept in stock.
Objectives of Just-in-time (JIT)

- Zero defects so that the quality expectations of the customer is exceeded
- Zero set-up time
- Zero inventories
- Zero handling – wherever possible eliminate all non-value added handling
- Zero lead time – impossible in some industries but the aim is to use small batches of components or assemblies
- Lot size of one, which enables speedy adaptation if the market changes.
Advantages of JIT

- Reduced stock levels of purchased supplies
- Enhanced product quality and reduction of scrap and waste
- Greater productivity and less re-work
- Shorter manufacturing lead times
- Greater flexibility in changing the production mix
- Faster design response
- Smoother production flow and fewer disruptions through late deliveries
- Greater workplace participation
- Higher productivity
- Reduced space relationships
- Improved relationships with suppliers.
Potential organisational problems caused by JIT

- Adequate systems must be in place to allow effective communication down the supply chain.
- Forecasting must not be faulty.
- Suppliers do not always perform to specification.
- Failure to hold any buffer stocks can be a considerable risk, and this includes the class C goods which can on occasions cause major disruption if not available.
- Short life-cycle goods do not fit well with JIT systems because of the pace of change.
- JIT is more suitable with flow production lines rather than batch production.
- It may not always be possible to negotiate the necessary savings with JIT contracts.
- Transportation disruptions are a feature of congested economies.
Partnerships make sense when...

- Synergy, where customers and suppliers seek to identify opportunities that arise from joint activities
- Collaborative strategy development
- Risk and gain sharing
- Joint problem-solving activity
- Mutual incentive to improve products and processes
- Creation of common goals
- Trust
- A long-term commitment
- Increased information sharing
- Increased communication.
Collaborative alliances make sense when....

- There is a possibility of adding value to a product
- Strengthening operations by lowering systems costs
- Adding technological strength
- Enhancing strategic growth
- Enhancing organisational skills
- Building financial strength.

(Lewis, 1990)
Objectives for cross-functional teams:

- Quality?
- Customer service?
- Innovation in product or service design or delivery?
- Cost reduction?
- Delivery improvement?
- Improvements in product or service flexibility?
Activities to ensure effective supply chain management

- Sourcing strategy
- Vendor assessment (surveys, site visits)
- Supplier rating and qualification
- Supplier award programmes
- Use of new technology (for example, computer-supported collaborative working, advanced planning and scheduling)
- Cross or multi-disciplinary team working
- Supply base reduction.
Activities to ensure effective supply chain management (continued)

- Joint supplier problem-solving team
- Supplier development 1 (Kaizen teams)
- Supplier development 2 (re-design of internal processes)
- Electronic data interchange
- Supplier associations (Kyoryoku Kai)
- Longer-term contracts.
Activities to ensure effective supply chain management (continued)

- Partnership (win-win negotiation, partnering agreements)
- Lean supply (JIT, for example)
- Standards development
- Supplier tiering
- Cost analysis methods (VA, ABC, WLC, TCO)
- Cost management.
Responsibilities of first-tier suppliers

- The management of sub-contractors
- Adopting a JIT philosophy
- Customer-dedicated staff who work in conjunction with the design and production team of the supplier
- Responsibility for warranty and end-user customer claims
- Research and development into technologies that are being applied to the supplier’s product.
Session 6

Doing research and using technology
Learning outcomes

At the end of this session candidates will be able to:

- Assess the contribution that research can make to the organisation
- Give examples of the potential for research into supply markets
- Demonstrate the link to ongoing research and improvements in logistics
- Evaluate the potential for major business process improvements in organisations
- Give examples of improvements to the procurement function
- Make recommendations for the application of techniques to improve business process performance.
Sources of Secondary Data

- Catalogues
- Trade directories
- Databases
- The Internet
- Trade journals
- Chambers of Commerce
- Government sources such as the Department of Trade and Industry, the Office for National Statistics.
- Banks
- Importers
- The Journal of the European Union
- Competitors’ annual reports
- News items
- Competitors’ promotional material
- Research centres, for example universities, professional institutions such as the CIPS, consultants.
Major research areas of interest

- Purchased materials, products or services
- Major purchased commodities
- Vendors
- The purchasing system.
Relevant research areas (Miles, 1972)

- Materials, commodities and services
- Purchasing policies and procedures
- Economic aspects
- Purchasing organisation
- Human resource aspects of purchasing
- Suppliers
- Inventory
- Negotiation
- Support tools
- Purchasing performance.
Information processing

Input
DATA

Output/input
INFORMATION

Value added

Output
INTELLIGENCE

Value added

Uninformed
Minimum cost
Total uncertainty

Informed
Maximum cost
Less uncertainty

Source: Hines
The knowledge age

- Huge volumes of information now available
- Managers need to be selective and systematic
- As data is drawn from multiple sources, needs to be combined and analysed for it to be of value.
The Management Information System (MIS)

“A system within an organisation that supplies information and communication services and resources to meet organisation needs.”
Stages of system development

- Business needs analysis
- Specification of needs
- Design & development
- System testing
- Implementation
- Acceptance & ‘go live’
Criteria for assessing the effectiveness of an IS

- Information outputs (the benefits):
  - Relevance to managers’ needs
  - Accurate (or known accuracy)
  - Supports decision making
  - Timeliness
- Costs involved in running and maintaining the system.
The marketing research process

1. Identification of problems and opportunities
2. Formulation of research needs/ brief
3a. Selection of research agency/provider
3b. Creation of research design/choice of method
4. Collection of secondary data
5. Collection of primary data
6. Analysis of data
7. Preparation and presentation of research findings and recommendations

Research brief

- Background –
  - the organisation, its products and its markets
- Rationale –
  - Origin and development of research needed
  - Decision areas to be addressed by research
- Objectives –
  - Definition of areas of problem/opportunity to be explored
- Outline of possible method
- Reporting and presentational requirements
- Time scales.
Research proposal - content

- Background
- Objectives
- Approach and method
- Reporting/presentation procedures
- Timing
- Fees
- CVs
- Related experience and references
- Contact details
- Contract details.
Quantitative methods

- Face-to-face surveys
- Telephone surveys
- Self-administered surveys
- Omnibus surveys
- Hall tests
- Placement tests
- Simulated test markets
- Panels.
Qualitative methods

Used mainly for –

- Exploratory research
- New product development research
- Creative development research

- Depth interviews
- Group discussions
- Projective techniques.
Benefits of e-business

- The potential to be available on a 24-hour basis – the timeless availability of information may be critical to business operations.
- Allows for the aggregation of information from several sources and permits access from a single point of contact.
- Collects information on all products throughout the supply chain process.
- Allows managers to track transactions through audit trails and seek areas of greatest efficiency and cost savings.
- Enables the business to customise its information flows.
- Allows collaboration with supply chain partners and helps to manage risk and uncertainty.
Examples of automated systems

- Production focussed processes which include electronic links with suppliers, includes Manufacturing Resource Planning (MRPII),
- Enterprise Resource Planning (ERP). The growth of collaborative relationships has transformed ERP into ERPII as the whole supply chain becomes involved and the system has moved from an internal system to an open web-based system.
- Advanced Planning and Scheduling (APS)
- Customer focussed process including Customer Relationship Management (CRM)
- The provision of internal employee services through the intranet.
Computer driven capabilities enable…..

- Intranet portals which allow employees to access all the information they need to do their job via a desktop application.
- Email
- Data exchange, including EDI
- Transportation product tracking
- Supply chain management
- Exchange platforms to share information and trade with supply chain partners
- Databases.
Benefits of procurement software

- **Cost reduction** -- as a result of operational efficiencies through the reduction of search and process management. Integrates systems such as those used by major retailers enable goods to be re-ordered from the cash till of the retailer.

- **Speed and efficiency** -- in terms of ordering, delivery, reductions in inventory levels, improvements in warehousing and distribution logistics, and information flow that assists demand forecasting.

- **Quality improvements** -- because of the greater access to suppliers through the automated systems.
Levels of electronic commerce

- Level one: One-way communication
  - Email, file transfers and browsing.

- Level two: Database access
  - Data-entry forms
  - Status enquiries and purchases can be made via the Internet
  - Data on suppliers and problem reports.
  - Internet sites to match buyers and sellers.
  - There has been some development of commercial e-marketplaces:
    - Vertical e-marketplaces - specific industry
    - Horizontal marketplaces - range of organisations in different market segments
    - Supplier marketplaces - controlled by a particular supplier.
Levels of electronic commerce (continued)

- Level three: Data Exchange
  - EDI

- Level four: Sharing processes
  - Supplier relationship management (SRM)
  - Customer relationship management (CRM)
  - Strategic supply management
  - Supply chain collaboration
  - Direct materials procurement execution
  - Collaborative planning, forecasting and replenishment systems.
Business re-engineering

Rebuilding the whole organisation around processes as opposed to functional specialities. Begins with strategic review, then definition of core processes, re-evaluation of competencies, skills and working practices.

Dramatic, demanding and risky. Takes time.
Re-engineering versus continuous improvement

- Step change improvements through re-engineering
- Continuous improvement
What is Benchmarking?

- Analysis of your current position
- Identification of others who are performing better than yourself
- Learning how they achieve that performance
- Adapting your methods and practices to reflect what has been learned
- Implementation of change to achieve similar or superior performance

*Benchmarking*. Sylvia Codling
What to benchmark

Three important questions
1. What do we need to be good at?
2. What would significantly improve customer satisfaction?
3. What would significantly improve profitability?
Session 7

Negotiation
Learning outcomes

At the end of this session candidates will be able to:

- Describe the negotiation process in commercial situations
- Compare and contrast different approaches to negotiation
- Identify cultural issues that would have to be taken into account in international transactions
- Assess examples of approaches that maximise the reward in negotiation
- Assess the risk in negotiations
- Design a negotiation campaign in line with business strategy
- Apply negotiating tactics to specific organisational objectives
- Relate negotiating strategies with ethical policy.
Steps to making negotiation easier

- Paying attention to preparation
- Structuring the negotiation
- Managing the time-line
- Managing the information exchange
- Understanding the process taking place and the way that process links to other processes.
Considerations in planning

- The supply market in terms of:
  - Competition
  - Growth
  - Geography
  - Power

- The procurement decision in terms of:
  - Purchasing risk
  - Complexity

- The relationship between the parties in terms of:
  - History and time-line
  - The skill base of the negotiating parties
Critical variables in a negotiation

- Power
- Time
- Information
Negotiation styles

- Competitive
- Accommodation
- Avoidance
- Compromise
- Collaboration.
The meeting

- Focus
- Empathise
- Make it easy for them to agree
- Work towards a win-win agreement.
Dealing with ‘Tactics’

- Tactics that may be used include:
  - ‘Good guy/bad guy’
  - Highball and lowball
  - Bogey
  - The nibble
  - Chicken
  - Intimidation
  - Aggressive behaviour.

- Options include:
  - Ignore tactics
  - Discuss tactics
  - Respond in kind
  - Co-opt the other party.
Standard negotiating approach

- Opening
- Exploring issues and inventing options
- Making offers
- Offering concessions
- Reaching closure
- Documentation.
Post-negotiation evaluation

- How good was our preparation?
- Were our entry and exit points realistic?
- Did we follow and achieve our MILs? (Must-Intend-Like)
- Did we make too many concessions?
- Did we maintain relationships?
- Did we close correctly and at the right time?
- Are all parties happy with the deal?
- Did the team perform well – if not, what did we do wrong?
- How did we perform in the face-to-face sense; did we handle the situation well?
Impact on decision making

- Market adaptability
- Taking on the competition
- Adding value through enhanced performance or value
- Achieving low costs through manufacture
- Delivering human resource objectives
- Establishing a link between manufacturing and marketing.
Ethics for purchasing

- Purchasing staff are the representatives of the organisation in its dealings with suppliers.
- Sound ethical conduct in dealing with suppliers is essential to the creation of long-term relationships and the establishment of supplier goodwill.
- Purchasing staff are probably more exposed to the temptation to act unethically than most other employees.
- It is impossible to claim professional status for purchasing without reference to a consideration of its ethical aspects.
CIPS Code of Conduct

The general benefits of having a code are the following:

- It provides guidance as to the cultural values of the business and the expected style of managers and employees
- It signals expectations of proper conduct to those dealing with the organisation
- It nurtures a business environment of open communications which is essential in building the sort of relationships necessary for flexible supplier response
- It prevents possible legal proceedings.
Session 8

Advanced negotiation techniques and developing supplier relationships
Learning outcomes

At the end of this session candidates will be able to:

- Assess the contribution of transactional analysis to negotiating styles
- Evaluate the psychology behind game theory
- Explain the techniques behind influencing skills
- Describe the importance of developing relationships within the organisation
- Give examples of how inter-organisational relationships can be meaningfully developed
- Explain the theory behind the establishment of collaborative and partnership agreements with suppliers
- Describe how a sound negotiating and influencing style can contribute to positive supplier relationships
- Demonstrate how skilled and effective negotiating can influence the outcome of minor disputes between suppliers
- Describe how a sound negotiating and influencing style can contribute to positive supplier relationships
- Give examples of how outside agencies can contribute to dispute resolution
Transactional analysis (Berne, 1966)

- Parent-ego state
- Adult-ego state
- Child-ego state.
Contractual approach

Transactional analysis is a contractual approach. All need to agree:

- Why they want to do something
- With whom
- What they are going to do
- By when
- Any fees, payment or exchanges there will be.
BATNA

- Best Alternative to Negotiated Agreement
- Also known as ‘Fallback’

MIL
Game theory

Definition –

Game theory is the study of the ways in which strategic interactions among rational players produce outcomes with respect to the preferences (or utilities) of those players, none of which might have been intended by any of them.

It is the mathematical theory of bargaining.
Game theory

- In many situations, you will have to determine your strategy without knowledge of what your rival is doing at the same time
  - Product design
  - Pricing and marketing some new product
  - Contract negotiation

- Even if the moves are not literally taking place at the same moment, if your move is in ignorance of your rival’s, the game is classed as a ‘simultaneous game’. 
Game theory – first move always an advantage?

Example:

Procurement contracts:

- Two firms are bidding for a procurement contract, which will be awarded to the low bidder
- There is a cost to preparing a bid
- Firm 1 chooses its bid followed by firm 2
- Clearly it pays to go second and undercut the bid of the first firm.
Body language

- Leaning forward when making a point - interested, wants to emphasise a point
- Avoiding eye contact - may be embarrassed, not telling the truth
- Arms folded, body turned away - defensive, no compromise, not interested
- Body turned towards you, leaning forward - interested, warming towards your comments
- Looking at a watch or window - wants to leave or avoid any further discussion
- Hands supporting head and leaning back - confidence
- Stroking nose regularly avoiding eye contact - may be lying
- Good eye contact, fingers stroking face - interested in what you are saying

(Baily et al)
Influencing skills

Good influencers can –

- Work collaboratively in changing environments, respond to pressure and achieve goals and objectives
- Establish rapport and gain buy-in, support, and commitment
- Motivate others to ‘do more with less’
- Dissolve or overcome resistance
- Create positive partnerships critical for success in the future.
Influencing skills model (Margerison-McCann)

- Pacing
- Inquiry
- Diagnosis
- Summarising
- Leading
- Proposing
- Directing.
Collaborative working

- Collaborative working tools
- Communities of practice
- Service level agreements
- Training.
Communities of practice

- Communities of practice share information, insights, experience and tools about an area of common interest. This could be:
  - A professional discipline such as production engineering
  - A skill such as machine repair
  - A topic such as a technology, an industry or a segment of a production process.
Dealing with conflict

Conflict can be a problem:
- If it becomes disruptive
- If it takes away time and energy from the real task at hand
- Altered judgment if emotions run high
- Loser effects, if one party feels they are being exploited
- Future cooperation may suffer.
Potential benefits of conflict

- Motivating energy
- Making underlying issues explicit
- Sharpening people’s understanding of real goals and interests
- Enhancing mutual understanding
- Stimulating a sense of urgency
- Discouraging engagement in avoidance behaviour
- Preventing dangerous and premature resolution problems.
Win-win strategies
(Johnson et al, 1975)

- Define the conflict as a mutual problem
- Pursue joint outcomes
- Find creative agreements that satisfy both groups
- Use open, honest and accurate communication of group needs, goals and proposals
- Avoid threats
- Communicate flexibility of position.
Understanding the context of a negotiation

- The supply market in terms of:
  - Competition
  - Growth
  - Geography

- Power:
  - Who owns the suppliers?
  - What level of turnover do the suppliers have?
  - What is their financial status?
  - What proportion of their turnover does this contract represent?
Understanding the context of a negotiation (continued)

- The **procurement decision** in terms of:
  
  - **Purchasing risk:**
    - What is the nature of the purchase you are making in terms of its level of risk, and level of expenditure?
  
  - **Complexity:**
    - How complex is the good or service that is being purchased?
Techniques to assist dispute resolution

- Mediation
- Conciliation
- Adjudication
- Arbitration.
Session 9

Information flows and competitive advantage
Learning outcomes

At the end of this session candidates will be able to:

- Assess the contribution to business efficiency of improved information and knowledge systems
- Show diagrammatically models of communication flows and the reduction of 'noise'
- Give examples of how computer technology contributes to speedier business solution flows internally and externally
- Evaluate the contribution of knowledge sharing to the long-term benefit of the business.
Achieving a competitive advantage through knowledge

- Knowledge is contained in an organisation’s human capital
- When an employee leaves the organisation their knowledge leaves with them
- Knowledge management seeks to create a system for sharing knowledge and storing it for future use
- Explicit knowledge can be captured and protected – patents and copyright
- Tacit knowledge is more difficult to manage.
Knowledge management
Adding value throughout the supply chain

- *Innovation* which requires all those in the supply chain as well as the specialists within the organisation to be able to relate scientific discoveries with customer demands and expectations.
- *Quality* involves everyone in the supply chain playing their part and understanding its importance to customer value and cost reduction.
- *Delivery* requires everyone communicating about orders, capacity and potential bottlenecks.
- The removal of *waste* needs good communication systems.
Coding a message
(Heltriegel & Slocum, 1988)

- **Relevancy** -- Make the message meaningful and significant with careful selection of words, symbols and gestures
- **Simplicity** -- Put the message in the simplest possible terms, reducing the number of words, symbols or gestures
- **Organisation** -- Organise the message as a series of points to aid understanding
- **Repetition** -- Restate the key parts of the message at least twice
- **Focus** -- Concentrate on the essential aspects of the message.
Technology-driven systems

- Supplier management relationship software
- E-procurement
- E-marketplaces
- E-tendering
- Reverse auctions
- Tracking contracts.
Session 10

Developing suppliers and a technological strategy
Learning outcomes

At the end of this session candidates will be able to:

- Explain the importance of sophisticated extranets as an aid to information flows
- Give examples from organisational life of e-sourcing and e-ordering
- Assess the value to the efficiency of the organisation of automated payment and accounting systems
- Determine the contribution of technology to planning, monitoring and control of organisational operations
- Explain the contribution of ICT to specific operational advances within the supply chain.
- Specify areas of ICT contribution to knowledge management
- Explore the rationale for joint development of systems with suppliers.
Features of an extranet

- The use of internet technologies and standards
- The use of web browsers
- Security
- Central server/repository.
E-procurement - benefits

- Improved information flow and service
- Reduced transaction costs
- Increased speed and efficiency
- Removal of ‘maverick’ purchases made outside the organisational contractual arrangements
- The ability to aggregate purchasing across the organisation.
E-procurement – key elements

- E-procurement now accounts for a significant amount of MRO (maintenance, repair and operating systems).
- Hubs, where several networks can be connected together
- Exchanges, a B2B website where buyers and sellers meet to transact business
- Marketplaces, vertical or horizontal e-markets, either supplier/purchaser owned or neutral
- E-catalogues facilitate real-time, two-way communication between buyers and suppliers and allow for improved vendor relationships through improved vendor services and information to purchasers
- E-auctions
- Reverse auctions.
Automated processes

- EDI – Electronic Data Interchange
- Bar-coding
- EPOS – Electronic Point of Sale
- Automated payment schemes – for example BACS, CHAPS.
Using technology to collaborate

- Video teleconferencing
- Data sharing
- Document sharing
- Shared whiteboards
- Chat
- Instant messaging
- On-line presence (for example, ICQ, Ding)
- Bulletin boards
- Threaded news and discussion group systems
- Email
- Mailing lists
- Voting/polling
- Virtual communities
- Virtual reality
- Voice over Internet protocol (VoIP).
Shared systems

Benefits
- Control
- Communications
- Risk
- Understanding
- Buy-in
- Planning.

Concerns
- Locked-in
- Implementation
- Areas of responsibility
- Flexibility.