INDUSTRAT

The Strategic Industrial Marketing Simulation

Jean-Claude Larréché & David Weinstein
Objectives

Features of the INDUSTRAT world

Administrative structure of the INDUSTRAT firm

The simulation process

First period decisions
Objectives of INDUSTRA

Review of strategic concepts

Application in an industrial marketing context

Focus on prime industrial marketing issues
Long term perspective

Marketing as a profit centre

Marketing strategy based on segmentation, positioning and portfolio approach

Marketing mix decisions secondary to strategic decisions

Competitive environment
INDUSTRAT Features

Industrial Context
Product/non product needs
Choice of macrosegmentation schemes
Microsegmentation - DMU concept
Industrial adoption process
Corporate communication
Salesforce management
Technical support
Distinction between research and development
Licensing and joint ventures
Market segmentation research
The Pedagogical Approach

A Simulated Environment
The Economic Environment

Population: 250 million
## Korex Products

### Strategic Product Attributes

- **Resistance:** Ohms ($\Omega$)
- **Suspension:** Micro-seconds (Msc)
- **Frequency:** Kilo-hertz (KHz)
- **Density:** Micro-grams per cubic millimeter (MGC)

### Non Strategic Product Attributes, e.g.

- Liquid
- Powder
- Fibre
- Solid
Strategic Attributes

Convexity: Degrees (De)
Conductivity: Micro-Seconds (MSc)
Purity: Percent (%)
Maximum Energy: Micro Watts (MW)
The "Competition"
INDUSTRAT’s Competitors

Firm 1: KARR
Firm 2: KERR
Firm 3: KIRR
Firm 4: KORR
Firm 5: KURR
Account Size

Small

Medium

Large
End-Product Applications

Communication  Instrumentation  Consumer Goods
Korex Market
Macrosegmentation

- communication
- instrumentation
- consumer goods

- large
- medium
- small

- east
- central
- west
The Adoption Process

Awareness

Supplementary Supplier

KARR

Testing

Major Supplier
Purchasing Process Dynamics
Korex Market Microsegmentation

General Manager

Production  Engineering  Purchasing
Dynamics of the Purchasing Process

Awareness ➔ Testing ➔ Supplementary ➔ Major

General
Production
Purchasing
Engineering
Industry Dynamics

Market growth

- Korex

Competition

- No new competitors
- Introduction of Lomex
- Collaboration

Technology

- No further scientific innovation expected
- Four Korex technologies
- One Lomex technology

Economic environment

- Growing GNP
- Inflation
- Antritrust intervention
Direct Selling and Distribution
Administrative Structure

Corporate Resource Allocation

Marketing = Profit Center

Marketing Expenditure Budget \[\rightarrow\] Marketing = Profit Center \[\rightarrow\] Net Marketing Contribution
Administrative Structure

Internal Transactions


Manufacturing Costs → Inventory Holding Costs → R&D Expenditure → Salesforce Expenditure → Technical Support → Corporate Communication Expenses

Marketing = Profit Center
Administrative Structure

External Transactions

Marketing = Profit Center

- Sales Revenue
- Client Companies
- Advertising Agency
- Advertising Expenditure
- Promotional House
- Promotional Expenditure
- Market Research Firm
- Market Research
- Licensing Fees
- Licensor
- Licensing Revenues
- Licensee
Administrative Structure

External Transactions

Marketing = Profit Center

- Joint R&D Funds
  - Partners
- Obsolete Inventory Sales
  - Exporters
- Loans
  - Loans Repayments + Interest
    - The Bank
## Internal Documents

### Sales forecast

**Input for budgeting**

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### Budgeting form

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### Strategic planning form


### Forecast resulting from strategic planning

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Objectives:
- Understanding Markets
- Monitoring
- Identifying threats & opportunities
- Forecasting

Methodology:
- Analysis of Survey Data

Market Segmentation:
- None, Specified or Statistical Optimum
Decisions for your First Period

No market research available
No R&D allowed
No licensing allowed
Avoid radical changes
Familiarization
Gather information
Organize your team (pick a name)
Three hours per decision

Attention: Fines!!!
Additional Decisions for the Second Period

Technology research
Product development
Financial support
Collaboration
### Feasible Ranges of Physical Characteristics

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<td>Purity (%)</td>
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<td>4</td>
<td>Maximum Energy (MW)</td>
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Technology Research

Gestation Period → Minimum number of years

Critical Mass → Minimum annual investment

Prototype of Related Systems → Additional Investment

Know How

Infrastructure
Research

Technology

Cumulative investment

Years above minimum investment

Status

Minimum total investment

Proposed total investment

Minimum annual investment
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**Development Prototype = First Development Project**

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<td>Base cost</td>
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Research and Development
Product Development

Period T: Project Specification:
• Project name
• Technology
• Budget
• 4 Physical characteristics
• Production base cost

Period T+1: Message from Development:
• Project status
• Feasibility of base cost
• Additional budget necessary
“Feasibility” study
Fast experience
Technology
Various characteristics = different problems
Uncertainty
Minimum according to industry experts
Production Costs

Production (transfer cost)

Cumulative Production

Base cost specified to R&D
Production Costs

- Production (transfer cost)
- Actual Base Cost
- New Base Cost Specified to R&D
- Actual Manufacturing Method
- New Manufacturing Method

Cumulative Production
Brand Modification

Period T
Product KIDD

Period T + 1

Modified KIDD

Automatic payment to production department at transfer cost (exceptional loss)
Loans are available
See the "administrator"!!
Loans

For R&D only, line of credit, equal annual payments interest on outstanding balance
## Loan Repayment Schedule

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Total Debt: 6020
Collaboration

- **Negotiations**: Only within approved periods
- **Outcome**: Licensing and/or joint research
- **Terms**: Royalties: historically 3%, but deregulated now
  - Negotiated annual minimum royalties
  - Other fund transfers
- **Process**: Written contract and approval (arbitration in case of violation)
- **Implementation**: Compatible decisions entered by both parties
- **Risk**: Government invalidates contract in case of antitrust action