B8217-001

Tools and Principles for Managing in the Information Economy and Media Sector

Prof. Eli Noam
Course Syllabus

Fall Semester 2019
Wednesdays 2:15pm-5:30pm
Uris 307

I. Overview
This course covers a subject that is important in the present and crucial for management success in the future: how to manage in the emerging Information Economy? And what are the differences to more traditional approaches in industry and finance? The course does so by focusing on and projecting the lessons from the sector furthest along in its transformation, that of digital media, information, and communications -- where activities are based on bit-based intangibles and knowledge assets, and are globally internetworked.

The course takes an innovative approach, bringing together many of the strands of the entire MBA program and applying them to the digital sector. In doing so, it is also an integrative “capstone course” for the business curriculum and thus useful for future entrepreneurs, investors, creators, marketers, and advertisers, even if they do not aim for a career in this sector.

The course covers a digital company's major functions (and, by extension, of most companies):
1. The Producing function, including financing, HRM, technology management, and production management.
2. The Harvesting function, including demand analysis, marketing, distribution, pricing, and intellectual asset management.
3. The Control function, including accounting, law and strategy.

For each of these functions we assemble:
• A set of MBA tools and analyses for producers, distributors, investors, and buyers
• A set of societal perspectives on drivers, impacts, and issues.
• Topics include:
  – Media and startup finance
  – Content production and valuation
  – HRM for creatives
  – Marketing, pricing, and distribution of digital products
  – Intellectual asset management
  – Online strategies
  – Portfolio diversification for content and products
  – Optimal capital structure
  – Technology project selection and budgeting
  – Technology convergence and regulatory policy
  – Valuation of intangibles
  – Demand estimation and analysis
  – Productivity measurement
  – Standards strategies
  – National culture and global media
  – Strategies for competing with free
  – Advertising budgeting

We discuss these topics across various media, communications, and digital technology industries.

What does it take for success in the media business? Creativity, innovation, and performance, of course. Plus experience and good judgment. However, it also requires an understanding of the principles and tools of management. This book summarizes the major dimensions of a business school curriculum and applies them to the entire media, media-tech, and digital sectors. Its chapters cover—in a jargonless, non-technical way—the major management functions.

The course’s interdisciplinary approach goes beyond an industry-by-industry coverage and centers around management functions.

In the process, this course becomes an indispensable resource for those aiming for a career in the media and digital field, both in startups and established organizations.

It is designed to help those joining the sector to become creative managers and managerial creatives. It aims to make managers in this field more knowledgeable, less blinded by hype, more effective, more productive, and more responsible.

• Applies dimensions of the MBA curriculum directly relevant to the entirety of the sector
• Provides a comprehensive view of the functions of management across the media, communications, and information sector
• Utilizes case studies, models, and overviews to offer an entire MBA capstone course

II. People

• Prof. Eli Noam:
  – noam@columbia.edu
  – 212-854-8332
  – Office hours: Wednesday 1-2 PM, and by appointment, 1-A Uris Hall

Eli Noam is Professor of Economics and Finance at the Columbia Business School and its Garrett Chair of Public Policy and Business Responsibility. He served for three years as a Commissioner for Public Services of New York State, and was appointed by the White House to the President’s IT Advisory Committee. He recently served as President of the International Media Management Academic Association. He is the Director of the Columbia Institute for Tele-Information, a research center focusing on management and policy issues in communications, Internet, and media. He has also taught at Columbia Law School, Princeton University’s Economics Department and Woodrow Wilson School, the Swiss universities of St. Gallen and Fribourg, and the University of Pennsylvania, and he is active in the development of electronic distance education. Noam has published 30 books and over 300 articles in economics journals, law reviews, and interdisciplinary journals, and served as a regular columnist for the Financial Times online edition. His recent books and projects include: Who Owns the World’s Media? (Oxford); Media Ownership and Concentration in America (Oxford); Peer-to-Peer Video (Springer); Media Management (2-volumes, forthcoming); and the project: A National Initiative for Next Generation Video.

Noam has been a member of advisory boards for the Federal government’s telecommunications network, and of the IRS computer system, of the National Computer Systems Laboratory, the National Commission on the Status of Women in Computing, the Governor’s Task Force on New Media, and of the Intek Corporation. His academic, advisory, and non-profit board and trustee memberships include the Nexus Mundi Foundation (Chairman), Oxford Internet Institute, Jones International University (the first accredited online university), the Electronic Privacy Information Center, the Minority Media Council, and several committees of the National Research Council. He served on advisory boards for the governments of Ireland and Sweden, and is a member of the Council on Foreign Relations. He is a commercially rated pilot, served in the Israel Air Force in the 1967 and 1973 wars, and is currently a search and rescue pilot with the Civil Air Patrol (1st Lt.). He is married to Nadine Strossen, a law professor and national president of the American Civil Liberties Union for 18 years. He received the degrees of BA, MA, Ph.D (Economics)
and JD from Harvard University, and honorary doctorates from the University of Munich (2006) and the University of Marseilles/Aix-en-Provence (2008).

Course Teaching Assistant
- **Jason Adam Buckweitz**
  jab2322@columbia.edu

### III. Course Websites
The primary administrative access point to the course is the B-School’s Canvas site. Go to canvas.gsb.columbia.edu and select the course. On that site you can find the Required Readings and the non-required Background Readings. Cross-registrants will receive by email instructions on how to access Canvas from the Student Affairs Office.

### III. Course Schedule

1. September 4\(^{th}\), 2019
   - A. The Information Environment
   - B. Production of Content and Information Products
2. September 11\(^{th}\), 2019
   - Technology Management
3. September 18\(^{th}\), 2019
   - Human Resource Management in Creative Industries
4. September 25\(^{th}\), 2019
   - Financing Media and Technology
5. October 2\(^{nd}\), 2019
   - Intellectual Asset and their Commercialization
6. October 9\(^{th}\), 2019
   - Managing Law and Regulation
7. October 23\(^{rd}\), 2019
   - Demand Measurement and Analysis
8. October 30\(^{th}\), 2019
   - Marketing of Media and Information Products
9. November 6\(^{th}\), 2019
   - Distribution Networks
10. November 13\(^{th}\), 2019
    - Pricing of Information Products
11. November 20\(^{th}\), 2019
    - Accounting and Valuation for Media and Information Activities
12. December 4\(^{th}\), 2019
Strategies for Media and Information Firms

IV. Lectures
Lectures are presented in class and are available online soon thereafter in
- PowerPoint
- Word text chapters
- Video of lecture

Electronic Quizzes:
- Each chapter has a brief online quiz.
- The quizzes are self-grading (as a feedback to the student), with answers, and do not count for the final grade. However, you are expected to take them, as part of class participation.

V. Cases
The cases are short business situations, with discussion tracking the lectures

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Case Discussion</th>
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<tbody>
<tr>
<td>• Production of Media Content</td>
<td>• Vivendi vs. the Hollywood Advantage</td>
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<td>• Technology Management</td>
<td>• Sony as a Convergence Firm</td>
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<td>• Human Resources Management</td>
<td>• Disney’s Creative Workforce in Rebellion</td>
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<td>• Financing Media</td>
<td>• Time Warner vs digital startup venture in Internet TV</td>
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<td>• Intellectual Asset Management</td>
<td>• GE manages its Intellectual Assets</td>
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<td>• Entertainment Law and Regulation</td>
<td>• Comcast vs. Google</td>
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<td>• Demand and Market Research</td>
<td>• Viacom’s Golden Years Media</td>
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<td>• Marketing of Media Products</td>
<td>• Condé Nast’s Print and Electronic Magazine “Fly &amp; Sky”</td>
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<td>• Networks and Distribution</td>
<td>• Bertelsmann Distribution</td>
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<td>• Pricing of Information Products</td>
<td>• Encyclopedia Britannica vs. Wikipedia</td>
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<td>• Media Accounting and</td>
<td>• Disney’s Mickey Mouse</td>
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VI. Course Readings

• The “Required Readings” are sections from Professor Noam’s just issued new textbook, *Managing Media and Digital Organizations*.
• Readings are located on the course website.
• “Background Readings” are provided on Canvas and the special website for the use of students who want to study topics in greater detail.

Additional Resources
  – The course website also provides several RSS feeds to continuously update news on the media industries:
    • TV, Film, Internet, Telecom, Book Publishing, Newspapers, Theater

VII. Exams

• No final exam, but Final Paper Project

VIII. Final Paper Project

• The paper’s theme: *A Business Plan for a Media or Media Tech Project Utilizing 5G Mobile Networks*
  – 5G operates at speeds of about 1 Gigabit per second, about 40 times current speeds. It is based on fiber networks, and has started to reach the consumer and small business market.
  – 5G could be used, for example for:
    o Entertainment and sports
    o Internet of Things
    o Rural connectivity
    o Artificial Intelligence
    o Virtual and augmented reality
    o Immersive meetings and their applications
    o Live events
    o 3-D and super-HD (4K)
    o Marketing tools
    o Telemedicine and online shopping
• Telecommuting
• Virtual reality and simulated environments
• Mobile location-based applications
• Interactive Games

• Your paper should be a business plan to provide a new service or product utilizing ultra-high speed 5G. Any media, e-commerce, or tech project operating on that platform (rather than on current broadband with its lower speed) is acceptable as a paper topic.
  – Explain how you would operationalize your strategy in the company in 13 pages or more.
  – Other paper formats and topics, including those with a more traditionally academic orientation, are possible subject to professor’s consent
  – Some topic ideas are listed on the course website
  – The Paper should be organized with distinct sections, each covering one of the 12 functions discussed in the chapters of this course (Finance, HR, etc), as they relate to the business project.
  – Paper topic proposal must be e-mailed to TA by the 3rd class session.

Grading Composition

Grades will be determined as follows:

• Final Paper 45%
• Class Participation 40%
• Completion of quizzes and submission of reading feedback (scores do not matter) 5%

IX. Course Culture

As is the case for all courses at the Columbia Business School, the School’s stated principles of its educational culture are the following:

Attendance: To be in the class, you must be present, on time, and arrive prepared. Given that the discussions are central to the learning, missing any of the sessions without an excuse will lower your grade

Participation: We expect you to contribute to the learning of your classmates, both through class discussion and feedback during the breakout sessions. Expect cold calling. Good participation is defined as:
• Actively participate in class discussions, pulling in insights from readings.
• When guests are in the room, be respectful and prepared with thoughtful questions.
• Device usage (phones, laptops) will take away from your participation grade

X. Relation to the Core and Pre-Requisites
There are no pre-requisites to the course. The course is multi-disciplinary in approach and exposition, deriving materials and concepts, and refreshing them, from core courses including Marketing, Strategy Formulation, Global Economic Environment, Managerial Economics, and People Leadership.

XI. Outline of Classes

1. THE INFORMATION ENVIRONMENT
   I. INTRODUCTION
      • History
      • Is Media Management Different?
   II. MACROECONOMICS OF THE INFORMATION ECONOMY
      • The Information Society
      • Drivers of Change
   III. MICROECONOMICS OF THE NEW MEDIA ECONOMY
      • New Business Models
      • Economic Properties of Media
   IV. CONCLUSIONS

2. PRODUCTION OF CONTENT AND INFORMATION PRODUCTS
   I. THE PRODUCTION PROCESS
      • Special Aspects of Content Production
      • Content Production Worldwide
      • Case Discussion: Vivendi vs. The Hollywood Advantage
   II. CONVENTIONAL EXPLANATIONS OF SUCCESS FACTORS IN CONTENT PRODUCTION
   III. SUCCESS FACTORS IN CONTENT PRODUCTION
      • Organizational Structure
      • Risk Reduction
      • Funding
   IV. PRODUCT DEVELOPMENT AS A KEY FACTOR
      • Productivity
      • Style
      • Product Selection
      • Production Planning
   IV. CONCLUSIONS
      • Elements of Success for Content Production
      • Future of Organizational Structure

3. TECHNOLOGY MANAGEMENT
I. **WHAT IS DIFFERENT IN DIGITAL TECHNOLOGY DEVELOPMENT?**
   - Technology Drivers of Change in Media Industries
   - Case Discussion: Sony as a Convergence Firm

II. **HOW IS R&D MANAGED?**

III. The Chief Technology Officer
   - Selection of technology and R&D
   - Budgeting R&D
   - Management of innovation
   - Role of CIO
   - The standards process

IV. **THE 1st CONVERGENCE: COMPUTERS (1C)**

V. **THE 2nd CONVERGENCE: COMMUNICATIONS HARDWARE AND COMPUTERS (2C)**
   - Network Infrastructure

VI. **CONVERGENCE WITH CONTENT**

VII. **COMMUNITY AND COGNITION**

VIII. **THE FUTURE OF THE CONSUMER ELECTRONICS AND IT INDUSTRIES**

4. **HUMAN RESOURCE MANAGEMENT IN CREATIVE INDUSTRIES**

I. **THE HRM FUNCTION AND ITS ORGANIZATION**
   - Case discussion: Disney’s Creative Workforce in Rebellion
   - What is special about Media HRM

II. **“HARD HRM”**
   - Human Capital Theory
   - Internal Labor Markets
   - Contract Theory

III. **“TOUGH LABOR”**
   - Industrial workforce
   - Craft workforce
   - Media workforce
   - Unions in the ‘New Economy’
   - Productivity in the media

IV. **THE CREATIVE WORKFORCE**

V. **“SOFT CONTROL”**

VI. **CONCLUSIONS**
   - The Info workforce of the Future

5. **FINANCING MEDIA AND TECHNOLOGY**

I. **CORPORATE FINANCE & THEORY**

II. **SPECIAL ASPECTS OF MEDIA FINANCE**

III. **CASE DISCUSSION - TIME WARNER VS. DIGITAL STARTUP VENTURE IN INTERNET TV**
IV. **INTERNAL FUNDING**

V. **DEBT FINANCING**
   - Types of Debt

VI. **OTHER TYPES OF DEBT**
   - Securitization
   - Vendor and buyer finance
   - Government
   - Lease Finance
   - Risk Reduction Strategies

VII. **EQUITY FINANCING**
   - Partnerships
   - Private Equity
   - Venture Capital
   - Public Equity

VIII. **MODELS FOR OWNERSHIP**

IX. **CAPITAL STRUCTURE**
   - Optimal Capital Structure
   - Financial Life Cycle

X. **CONCLUSIONS**

6. **INTELLECTUAL ASSETS AND THEIR COMMERCIALIZATION**

I. **INTELLECTUAL PROPERTY**
   - History
   - Case Discussion: GE Manages its Intellectual Assets

II. **INTELLECTUAL ASSETS**
   - Trade Secrets
   - Patents
     - Infringements
     - Frontiers
   - Trademarks
   - Rights of Publicity
   - Copyrights
   - Copyright vs. Patent

III. **COMMERCIALIZATION OF IPRs**
   - Valuation Techniques
   - Securitization
   - Real Options
   - IP Management
   - IP Strategies
   - Licensing

IV. **CHALLENGES TO IPRs**

V. **PROTECTION STRATEGIES**

VI. **CONCLUSIONS**
7. MANAGING DIGITAL LAW & REGULATION

I. MANAGING NON-MARKET COMPETITION
II. LEGAL & PUBLIC AFFAIRS FUNCTIONS IN MEDIA FIRMS
   - Inside & Outside Case Discussion: Comcast vs. Google
   - Litigation Management
III. INFLUENCING GOVERNMENT AND THE PUBLIC
   - Lobbying
     - Organization
   - Public Relations
IV. THE REGULATORY PROCESS
   - Self Regulation
   - Direct Government Regulation
V. SUBSTANTIVE MEDIA LAW
   - Content Restrictions
   - Anti-Competitive Behavior
   - Profit Regulation
VI. GOVERNMENT INDUSTRIAL AND CULTURAL POLICY
VII. CONCLUSION

8. DEMAND MEASUREMENT AND ANALYSIS
I. WHY DEMAND ANALYSIS
II. DATA COLLECTION AT THE USER LEVEL
   - Empirical Sampling Of Audience/ Consumers
   - Demand Experiments-Biometrics-Audience Metering
   - Case Discussion: Viacom’s Golden Years Media
III. DATA COLLECTION AT THE PROVIDER LEVEL
   - Measuring Sales
   - Measuring Traffic
   - Self-Reporting
   - Internet Measurements
IV. ANALYZING THE DATA
   - Audience Metrics
   - Analytical/Statistical Models
   - AB Testing
   - Econometric Estimation
   - Conjoint Analysis
   - Diffusion Models
   - Data Mining
V. CONCLUSIONS
   - Challenges in Audience and Market Research

9. MARKETING OF MEDIA AND INFORMATION PRODUCTS
   - Structure and Organization
   - Products and Services
• The Attention Budget
• Case Discussion: Condé Nast’s Print and Electronic Magazine “Fly and Sky”

II. MARKET ANALYSIS
• Forecasting
• Product Design
• Positioning

III. BRAND CREATION
• Story as brand

IV. PROMOTION
• Viral Marketing

V. ADVERTISING
• Marketing to advertisers
• Budget
• Media effectiveness and mix
• ROI

VI. ONLINE TOOLS

VII. REGULATION OF MARKETING

VIII. ANALYSZING MARKETING PERFORMANCE

10. DISTRIBUTION NETWORKS
I. INTRODUCTION
II. DISTRIBUTION
• Physical Networks
• Informational Networks
• Case Discussion: Bertelsmann Distribution

III. THE NETWORK MODEL
• Architectures

IV. ECONOMIC CHARACTERISTICS OF DISTRIBUTION NETWORKS

V. ANALYTICAL TOOLS FOR DISTRIBUTION

VI. NETWORK MANAGEMENT

VII. PUSH VS. PULL DISTRIBUTION

VIII. TELECOM NETWORKS

IX. IP & BROADBAND DISTRIBUTION

X. WHOLESALE DISTRIBUTION

XI. RETAIL DISTRIBUTION

XII. CONCLUSIONS

11. PRICING OF INFORMATION PRODUCTS
I. SETTING A PRICE
• Special Problems in the Pricing of Information Products
• Case Discussion: Encyclopedia Britannica vs. Wikipedia

II. PRICING STRATEGIES
• Pricing of Cost
• Market-Based Pricing
• Dynamic Pricing
• Value Pricing

III. MEASURING PRICE SENSITIVITY
  • Hedonic Prices
  • Conjoint (Trade-Off) Analysis
  • Optimal Price Discrimination

IV. P>MC IN PRACTICE: MONOPOLY AND Oligopoly

V. LEADER PRICING

VI. STRATEGIC PRICING
  • Network Effect and Penetration Pricing

VII. STRATEGIES TO KEEP P>MC

VIII. OTHER TYPES OF PRICING
  • Protection from Price Variations: Hedging

IX. LEGAL ASPECTS OF PRICING

X. THE FUTURE OF PRICING: MICRO PRICING

XI. CONCLUSION

12. ACCOUNTING AND VALUATION FOR MEDIA AND DIGITAL ACTIVITIES

I. ACCOUNTING & MEDIA ACCOUNTING
  • Function of Accounting in Business
  • Is Media Accounting Special?
  • Special Problem: Post 2000 Scandals In Media Accounting
  • Types of Accounting
  • Case Discussion: Disney’s Mickey Mouse Accounting?

II. PROFIT ACCOUNTING

III. FINANCIAL ACCOUNTING
  • What Financial Documents Investors Look For
  • Auditing
  • Balance sheets, P & L, cashflow curves
  • Analyzing Financial Statements
  • Valuation of Media Properties

IV. TAX AND REGULATORY ACCOUNTING
  • Capitalization and Expensing
  • Depreciation and Annuitization
  • Stock options

V. MANAGERIAL ACCOUNTING
  • Profit Centers
  • Transfer Pricing

VI. MANAGEMENT INFORMATION SYSTEMS
  • MIS, ERP, RTA etc.

13. STRATEGIES FOR MEDIA AND INFORMATION FIRMS

I. THE STRATEGY FUNCTION IN BUSINESS- GENERAL
II.  WHAT IS DIFFERENT ABOUT THE STRATEGY FUNCTION OF MEDIA INDUSTRIES?

III. CASE DISCUSSION: COMCAST STRATEGIC PLANNING

IV.  THEORIES AND TOOLS OF BUSINESS STRATEGY
    •  Oligopoly analysis and game theory
    •  Competitive analysis approach
    •  Core competencies and RBV
    •  Adaptability approaches

V.  THE EMERGENCE OF THE GURU INDUSTRY

VI. THE STRATEGY PROCESS

VII. EXTERNAL ASSESSMENT

VIII. INTERNAL ASSESSMENT

IX. DEVELOPING STRATEGIES

X. HOW TO SELECT AMONG STRATEGIES

XI. IMPLEMENTATION OF STRATEGY
    •  Communication
    •  Budgeting
    •  Monitoring and assessment

XII. CONSTRAINTS TO STRATEGY

XIII. CONCLUSION ON CASE AND ON LECTURE

XIV. CONCLUSION ON COURSE

A. In what ways is management in the Information Age different?
B. The role and of managers
C. Conclusions on the New Management