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

Prof. Eli Noam
Course Syllabus

Fall Semester 2016
Thursdays 2:15pm-5:30pm
Uris 326

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 digital transformation, that of 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/EMBA program and applying them to the digital sector. In doing so, it is also a “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 managers, investors, and users
• 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 licensing
  – 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.

II. People

• Prof. Eli Noam:
  – noam@columbia.edu
  – 212-854-8332
  – Office hours: Tuesday 2-3 PM, and by appointment, 1-A Uris Hall

Eli Noam is Professor of Economics and Finance at the Columbia Business School and its Garrett Professor 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 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 University of St. Gallen, 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: Media Ownership and Concentration in America (Oxford); Peer-to-Peer Video (Springer);
Who Owns the Media (ed., Oxford); 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
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III. Course Websites
  1. 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.
  2. For additional course content, go to the special course website, either by linking through the Canvas page, or directly. The direct URL is: www.citicolumbia.org/B8217
    • Login: media
    • Password: management

The separate course website includes a variety of features such as feedback opportunities, RSS newsfeeds, lecture notes, etc. You can also access the course readings, including the Required Readings and the Background Readings.

III. Course Schedule

1. September 8, 2016
A. The Information Environment
B. Production of Content and Information Products

2. September 15, 2016
   Technology Management
   Human Resource Management in Creative Industries
   Financing Media and Technology
5. October 6, 2016
   Intellectual Asset and their Commercialization
6. October 13, 2016
   Managing Law and Regulation
7. October 27, 2016
   Demand Measurement and Analysis
   Marketing of Media and Information Products
   Distribution Networks
    Pricing of Information Products
11. December 1, 2016
    Accounting and Valuation for Media and Information Activities
12. December 8, 2016
    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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</thead>
<tbody>
<tr>
<td>• Production of Media Content</td>
<td>• CanalPlus and the Hollywood Advantage</td>
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<tr>
<td>• Technology Management</td>
<td>• Sony as a Convergence Firm</td>
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<tr>
<td>• Human Resources Management</td>
<td>• Disney and its Workforce</td>
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<tr>
<td>• Financing Media</td>
<td>• Time Warner and start up Internet TV</td>
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<tr>
<td>• Intellectual Asset Management</td>
<td>• GE manages its Intellectual Assets</td>
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<tr>
<td>• Entertainment Law and Regulation</td>
<td>• Comcast vs. Google</td>
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<tr>
<td>• Demand and Market Research</td>
<td>• Viacom’s Golden years Media</td>
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<tr>
<td>• Marketing of Media Products</td>
<td>• Condé Nast’s Physical and Electronic “Fly &amp; Sky” Magazine</td>
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<tr>
<td>• Networks and Distribution</td>
<td>• Bertelsmann Distribution</td>
</tr>
<tr>
<td>• Pricing of Information Products</td>
<td>• Encyclopedia Britannica vs. Wikipedia</td>
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<tr>
<td>• Media Accounting and Valuation</td>
<td>• Disney Mickey Mouse Accounting?</td>
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<tr>
<td>• Media Strategies</td>
<td>• Comcast’s strategy process</td>
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VI. Course Readings

- The “Required Readings” are sections from Professor Noam’s draft textbook “Media and Digital Management.”
- 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 Gigabit Speed Broadband*
  - Ultrabroadband operates at speeds above 1 Gigabit per second, about 10 times current speeds. It is based on fiber networks, and has started to reach the consumer and small business market.
  - Ultrabroadband could be used, for example for:
    - Entertainment and sports
    - Immersive meetings and their applications
    - Live events
    - 3-D and super-HD (4K)
    - Marketing tools
    - 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 broadband. 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 plus.
  - Other paper format and topics, including with a more traditionally academic orientation, are possible subject to professor’s consent
  - Some topic ideas are listed on the course website
  - Students will submit draft sections of sections of their paper in 2 installments. The first is due session # 7, and will cover the first 6 class topics as they relate to the project: Production, Tech, HR, Financing, Intellectual Assets, Regulation. Professor Noam will provide feedback. The Final paper, due one week after the last lecture, will add the additional 6 sections and incorporate the feedback on the first half.
  - The Paper should be organized with distinct sections covering the 12 functions discussed in the chapters of this course (Finance, HR, etc), as they relate to the project.
  - Paper topic proposal must be e-mailed to TA by the 3rd class session.
Grading Composition
Grades will be determined as follows:

- Paper Installments 25%
- Final Paper 35%
- Class Participation 35%
- 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:

- On time and present in each class
- 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: 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 MEDIA TECHNOLOGY DEVELOPMENT?
- Technology Drivers of Change in Media Industries
- Case Discussion: Sony

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. MEDIA HUMAN RESOURCE MANAGEMENT IN CREATIVE INDUSTRIES

I. THE HRM FUNCTION AND ITS ORGANIZATION
   • Case discussion: Disney
   • 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 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
6. INTELLECTUAL ASSETS AND THEIR COMMERCIALIZATION

I. INTELLECTUAL PROPERTY
   • History
   • Case Discussion: GE

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 LAW & REGULATION

I. MANAGING NON-MARKET COMPETITION

II. LEGAL & PUBLIC AFFAIRS FUNCTIONS IN MEDIA FIRMS
   • Inside & Outside Case Discussion: Time Warner Cable vs. AT&T
   • 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
8. DEMAND MEASUREMENT ESTIMATION AND ANALYSIS

I. WHY DEMAND ANALYSIS

II. DATA COLLECTION AT THE USER LEVEL
   - Empirical Sampling Of Audience/Consumers
   - Demand Experiments-Biometrics-Audience Metering

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

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
   I. INTRODUCTION
   II. DISTRIBUTION
      • Physical Networks
      • Informational Networks
      • Case Discussion: Bertelsmann
   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
   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 INFORMATION 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

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
   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