

iMDE: international Market-Driven Engineering

Lecture 1: Introduction
(as of 2012-08-26)



ZHEJIANG UNIVERSITY



LUND UNIVERSITY

Agenda

- 13.15-13.20: Opening speech by Foreign Affairs (if possible)
- 13.20-13.45: Present the course-overview (Charlotta)
- 13.45-14.00: Introduction of the teachers
- 14.00-14.10 Break for 10 minutes
- 14.10-14.50: Presentation by students of their universities, cities and countries
- 14.50-15.00: Break for 10 minutes
- 15.00-15.30: Presentation of the project-idea, theme, and the groups (Charlotta + film from ZJU by Luo)
- 15.30-15.45: Why Business and Technology (Charlotta+Yang)
- 15.45-16.00: Why Internationalization (JunJin)



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iMDE

iMDE – international Market Driven Engineering

“The world is becoming more international and cutting edge knowledge in marketing as well as engineering in a global world is becoming a valuable asset on the job-market. There is a lack of people with skills in both fields with the ability to connect market needs and innovations with product development, especially in an international context. International Market Driving Engineering is aimed at providing these knowledge and skills.”



iMDE

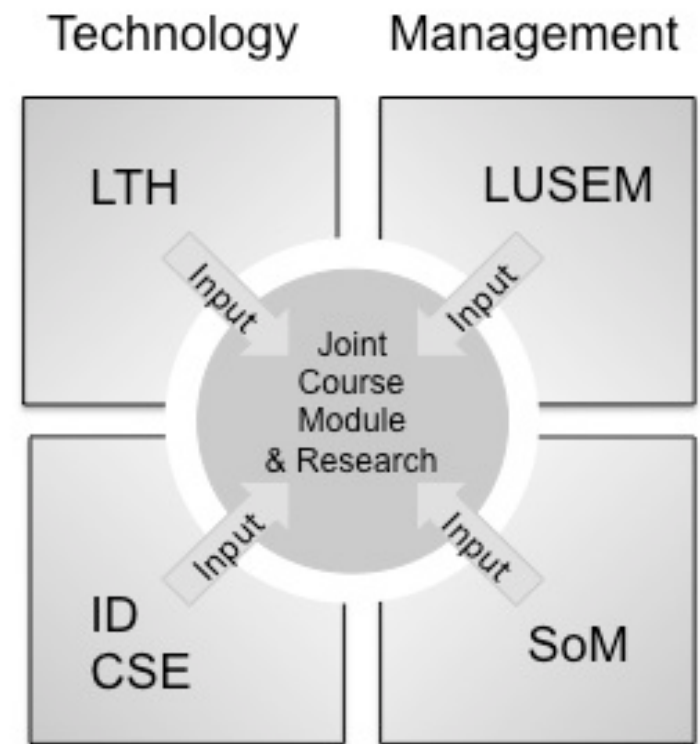
iMDE is a unique course!

It is a joint course that is truly international (Sweden and China) and cross disciplinary (Management and Engineering) .

-  **LUSEM:** Lund University School of Economics and Management
-  **LTH:** Lund University, faculty of Engineering
-  **SoM:** Zheijang University, School of Management
-  **ID and CSE:** Zheijang university, Industrial Design (ID) and Department of Control Science and Engineering (CSE).

Lund
University,
Sweden

Zheijang
University,
China



Input = Students, Teachers, Subjects and Cultures

iMDE

iMDE is a unique course!

iMDE is a joint course collaboration. It intertwines the two disciplines Technology and Management, in Sweden and in China, in four ways; Students, Teachers, Subjects and Cultures.

Students: 37 students from Sweden and X students from China.

18+x students from Management/Economics and 19+x students from Engineering

Teachers: 4-5 Swedish teachers and 4-5 Chinese teachers. A minimum of 2 teachers with different aspects of the subject matter will be present at each lecture. The course will contain both lectures and a project.

Subjects: Innovation and Product Development will be treated from the marketing/management perspective as well as from the Engineering perspective.

Cultures: China and Sweden. The cultural aspects of project management and business behavior will be treated in the course and practised in real life through the course project.

Course Content

Course start: Monday September 10th, 2012

The course will consist of:

- 10 Lectures
- 1 Project (performed in groups of 5+x student)
- 2 Company visits

The examination of the course will consist of:

- Written project report, oral project presentation, short film

Course termination: Friday October 19th, 2012



Course Schedule

Lectures:

- Mondays at 9:00am-12:00am
- Wednesday at 9:00am-12:00am
- Friday at 9:00am-12:00am
- The lectures are held at Xixi campus, room XXX

Project

- The project will be done as a groupwork. There will be 3 coaching sessions.

Company visit

- There will be 2 company visits as part of the course.



Lectures

- Lecture 1: Introduction
- Lecture 2: Innovation-1 (Inspiration)
- Lecture 3: Innovation-2 (Ideation)
- Lecture 4: Innovation-3 (Implementation)
- Lecture 5: Innovation-4 (Innovation climate and Examples)
- Lecture 6: Business plan
- Holliday
- Lecture 7: Product Development, Sourcing and Production
- Lecture 8: Marketing and Sales
- Lecture 9: final presentation
- Lecture 10: final presentation



Coaching

There will be 3 coaching sessions.

Time: 9:00am – 12:00am

All teachers available all the time.

Coaching-slots (20 min) for the project-groups to book.

The coaching-sessions should provide help to the project-groups for managing the project.



Project

- Projects to be performed in groups (5+x students)
- The project should focus on Innovation and product developement
- Project-theme "Helping everyday life"
- 1 group – 1 project – 1 innovation – 1 prototype
- Final presentation: written report, oral presentation, film
- More about the projects later



Company visits

2 company visits:

- Wednesday September 19th: Alipay
- Wednesday October 10th: Supcon



Course Schedule

<i>Week</i>	<i>Date</i>	<i>Lecture</i>	<i>Time</i>	<i>Content</i>
September 10-14	10/9	L1	13-16	Introduction + Why integrate Business and Technology + Internationalization. Introduction of project theme
	12/9	L2	9-12	Innovation-1 (Inspiration)
	14/9	Coaching	9-12	1 hour coaching per group
September 17-21	17/9	L3	9-12	Innovation-2 (Ideation)
	19/9	Company visit	afternoon	Ali-pay.
	21/9	L4	9-12	Innovation-3 (Implementation)
September 24-28	24/9	L5	9-12	Innovation-4 (Examples)
	26/9	Coaching	9-12	1 hour coaching per group
	28/9	L6	9-12	Business plans
October 1-5	1-5/10			Holiday in China
October 8-12	8/10	L7	9-12	Product Development, Sourcing and Production
	10/10	Visit to company.		Sup-Con.
	12/10	L8	9-12	Marketing and Sales
42	15/10	Coaching	9-12	1 hour coaching per group
	17/10	L9	9-13	Final presentations
	19/10	L10	9-13	Final presentations. End of course.

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Teachers

The Swedish troupe:

- Andreas Larsson
- Damien Motte
- Carl-Henric Nilsson
- Stein Kleppestö
- Charlotta Johnsson
- Gabriel Somesfalean

JCIE – joint centre for innovation and Entrepreneurship

- .



Andreas Larsson

- PhD, 2005, Computer Aided Design
- Associate Professor, Innovation Engineering
- Global Foresight Scholar at Stanford University
- Fiancee Lenita, daughter Ella
- Plays guitar & ice-hockey



Damien Motte



- Post-doc at the Department of Design Sciences LTH, Lund University
- MSc in Industrial Engineering, PhD in Machine Design
- Research interest: alternative engineering design and product development methodologies



Carl-Henric Nilsson

- Founder of Technology Management, 1997
- PhD Industrial Engineering
- Strategy, process-orientation, team-building and leadership
- Wife Guggy and three children
- Tennis, squash, sailing and golf
- Motto: Live, learn, deliver!



Charlotta Johnsson



- Responsible Technology Management Program 2008-present
- Ass.Prof. In Automatic Control (Ph.D. in 1999).
- Research interest: manufacturing operations, production control, process control and international standards
- Husband Hans and three kids (13, 11 and 5)

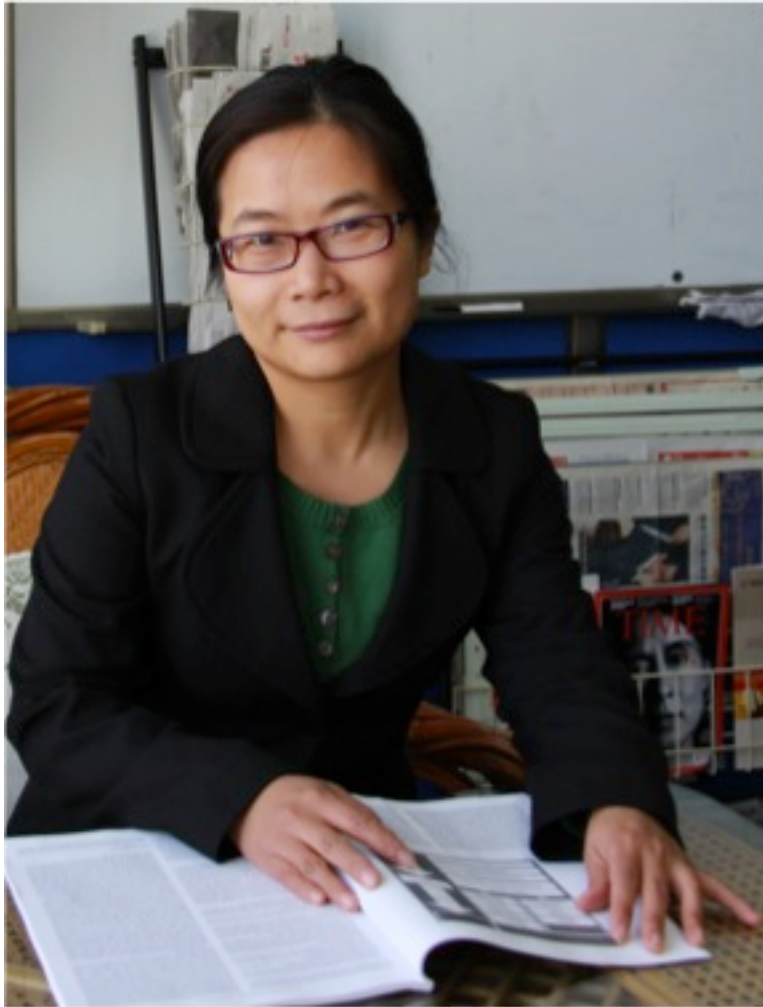
Teachers

The Chinese troupe:

- Jun Jin
- Qinmin Yang
- Shijian Luo
- Weiqing Xu
- Aiqi Wu (JCIE – joint centre for innovation and Entrepreneurship)



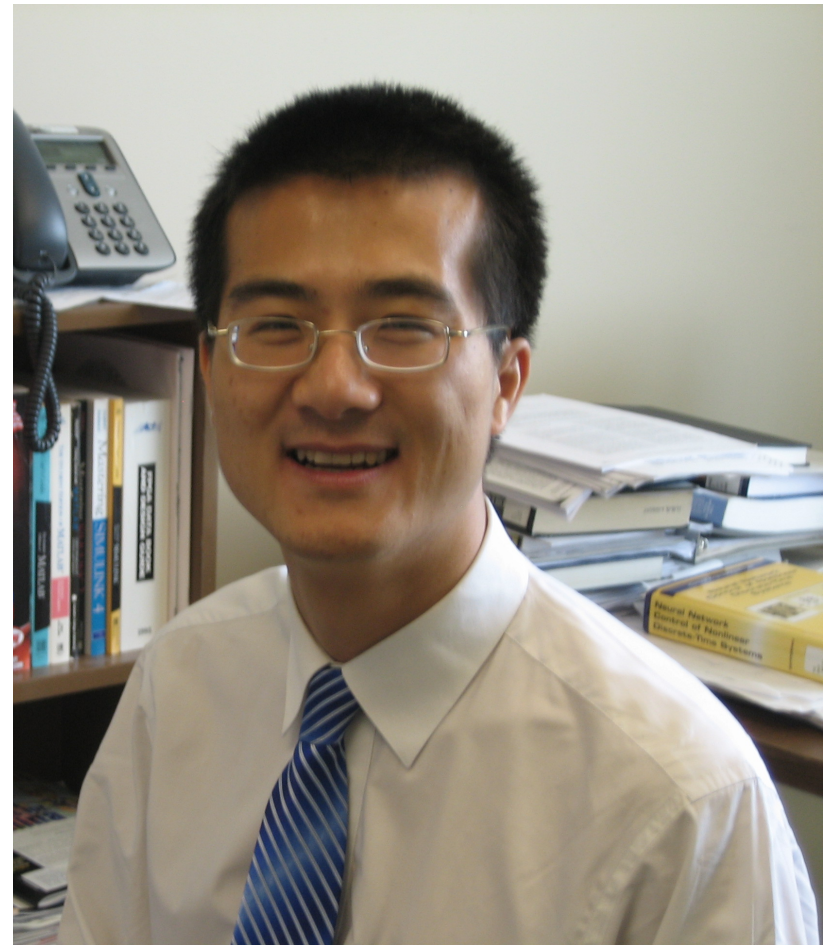
Jun Jin



- Ass.Prof. In Innovation and Technology Management (Ph.D. in 2005)
- Visiting Professor of UNU-MERIT (the Netherlands), PSU (US)
- Research interest: open innovation, reverse innovation, innovation capability, innovation and sustainable development

Qinmin Yang

- Ass. Prof. in Control Science and Engineering, ZJU
- Ph.D. in Electrical Engineering, 2007
- Co-Founder of ColTiTech Inc., 2003
- System Engineer, Caterpillar Inc., 2008
- Adaptive control theory, nano-robotics, wind power systems
- Hobbies: soccer, football, and zuqiu



Weiqing XU

- Ass. Prof. at School of Management, ZJU
- Ph.D. in Business Administration, 2005
- Deputy director of department of business administration, SOM, ZJU
- Research interest : services marketing, customer relationship management, user innovation



Aiqi WU

- Ass. Prof. at School of Management, ZJU
- Ph.D. in Business Administration, 2005
- Deputy director of department of business administration, SOM, ZJU
- **Deputy Director**
- Research interest : entrepreneurship and strategic management



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Sweden

20 minutes presentation by the Swedish students about:

- Lund, Sweden
- Lund University
- Technology Management



China

20 minutes presentation by the Chinese students about:

- CSE: the department (5 minutes)
- ID: the department (5 minutes)
- SoM: the department (5 minutes)
- Can someone present ZJU?? (5minutes)



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Groups

8 groups: 5 swedish and x chinese students

- Group-1
- Group-2
- Group-3
- Group-4
- Group-5
- Group-6
- Group-7
- Group-8



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Business, management and technology

"It is a great advantage to be able to employ people who are doubly qualified within technology and management. Connecting the technical aspects to the commercial ones is a very good basis on which to stand in order to contribute to the success of a company."

It is equally important for an engineer to master economics and management as it is for an economist to understand the underlying technical basis of a company's products."

Michael Treschow, Chairman of the board, Unilever



Business, management and Technology

If you are interested in building, developing and leading technical organizations and companies you need an understanding of

- 1) the technology that your company is working with
- 2) how to manage people and create successful environments
- 3) how you do business

In this course we will combine these three core aspects – business, management and technology.

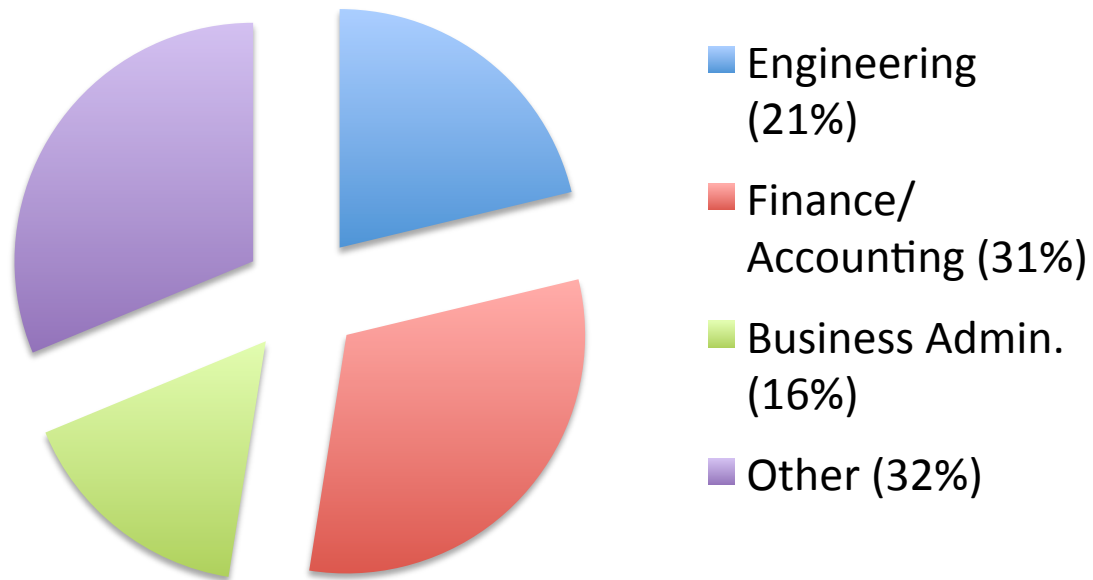
Our focus will be on Innovation and Product Development.



The education of Fortune 100 CEO

CEO = Chief Executive Officer

Education



More than 50% of Fortune 100 CEO's have an Engineering or Financial background

Referens:

<http://www.slideshare.net/sheilacurran/the-education-of-fortune-100-ce-os-sheet1>

The path to Fortune 500 CEO

How did CEOs become CEOs – what did they do?

1. Develop Financial Acumen

- Companies want a person that can create value for the company.
- A person that understands the financial drivers of the company.

2. Settle in – Eventually – and climb the ladder

- Most CEOs are recruited internally, but were not “lifers”.

3. Time to CEO appointment

- Nominal time to appointment is 18 years experience.
- Technology companies have shorter time to appointment (14 years)



The path to Fortune 500 CEO

4. Board experience

- 45% served as non-executive directors on public company boards before being CEO.

5. General observations

- More than 50% of the CEOs were recruited from COO position (Chief Operating Officer – i.e. Use the financial understanding to create excellence in operation

=> Financial and Technical understanding is important

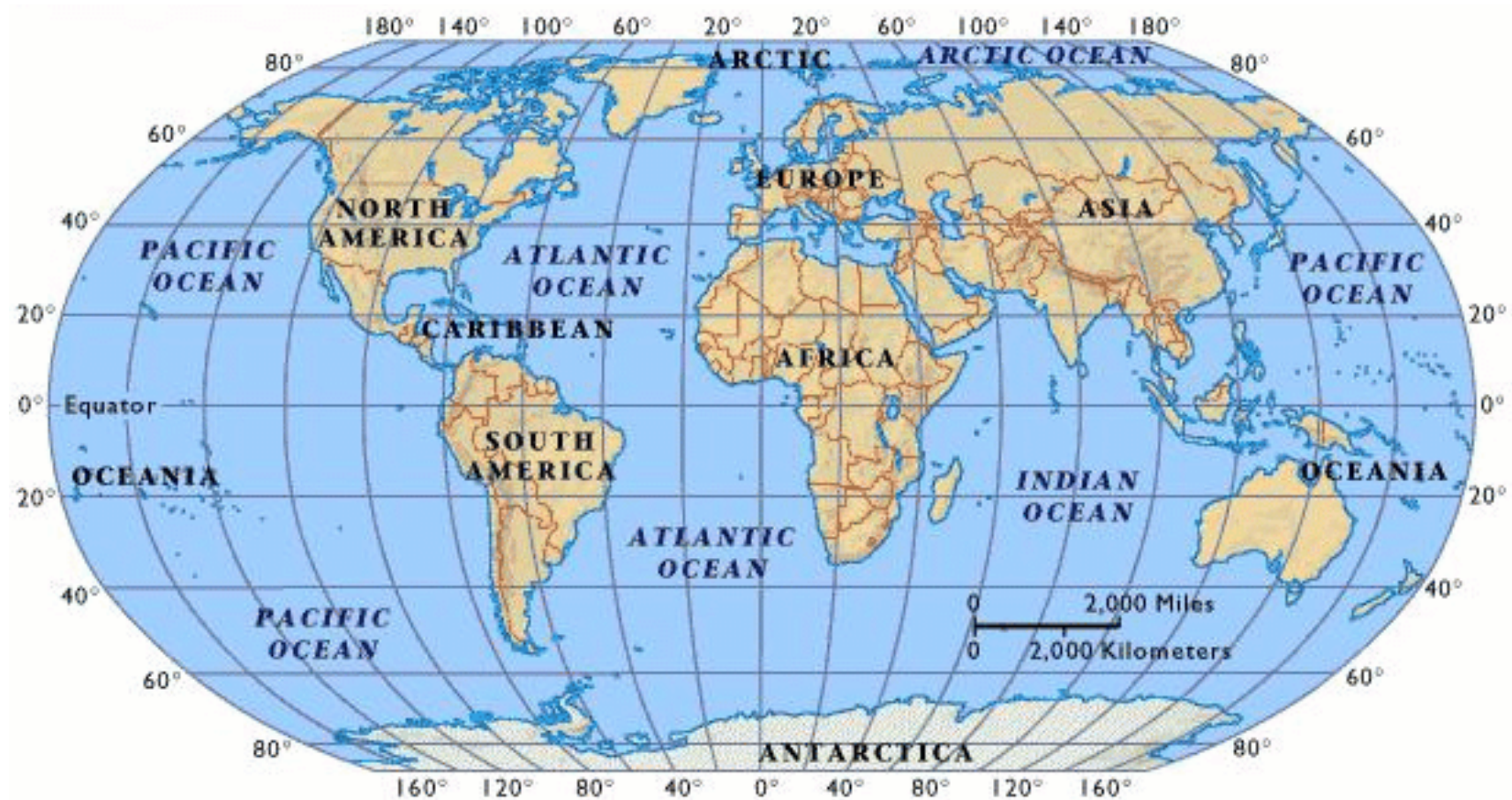
Reference: "The path to becoming a fortune 500 CEO" Forbes Magazine June 2011.
<http://www.forbes.com/sites/ciocentral/2011/12/05/the-path-to-becoming-a-fortune-500-ceo/>



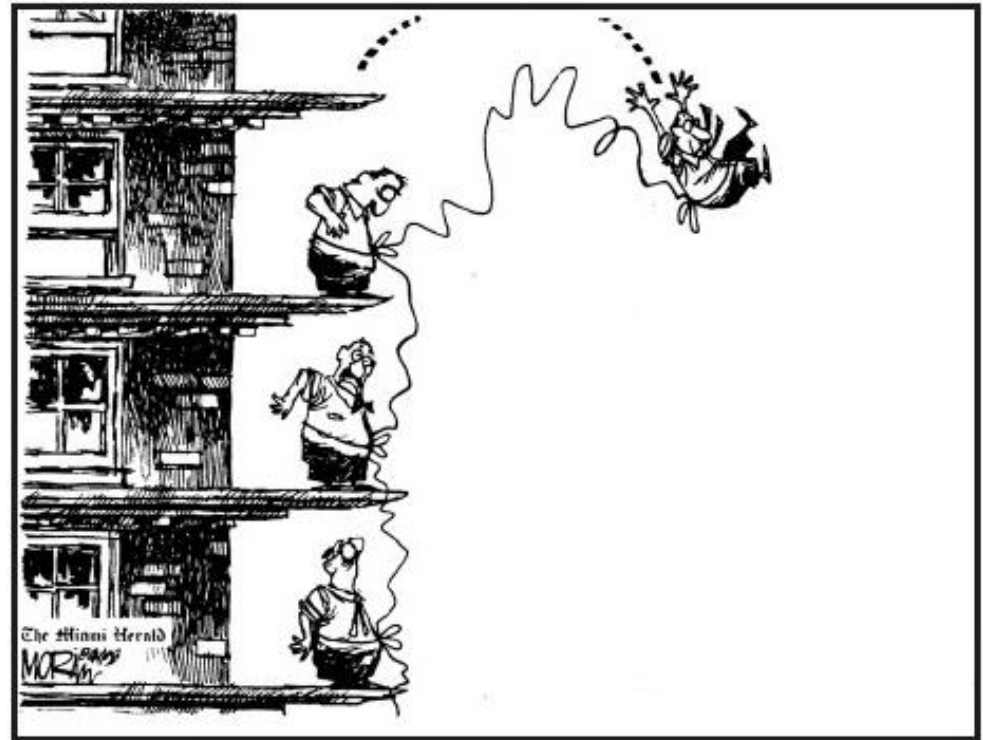
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Globalization and Interdependence



Local vs Global

Which country owns the brand?

Where a product is made?

Where a product is designed?

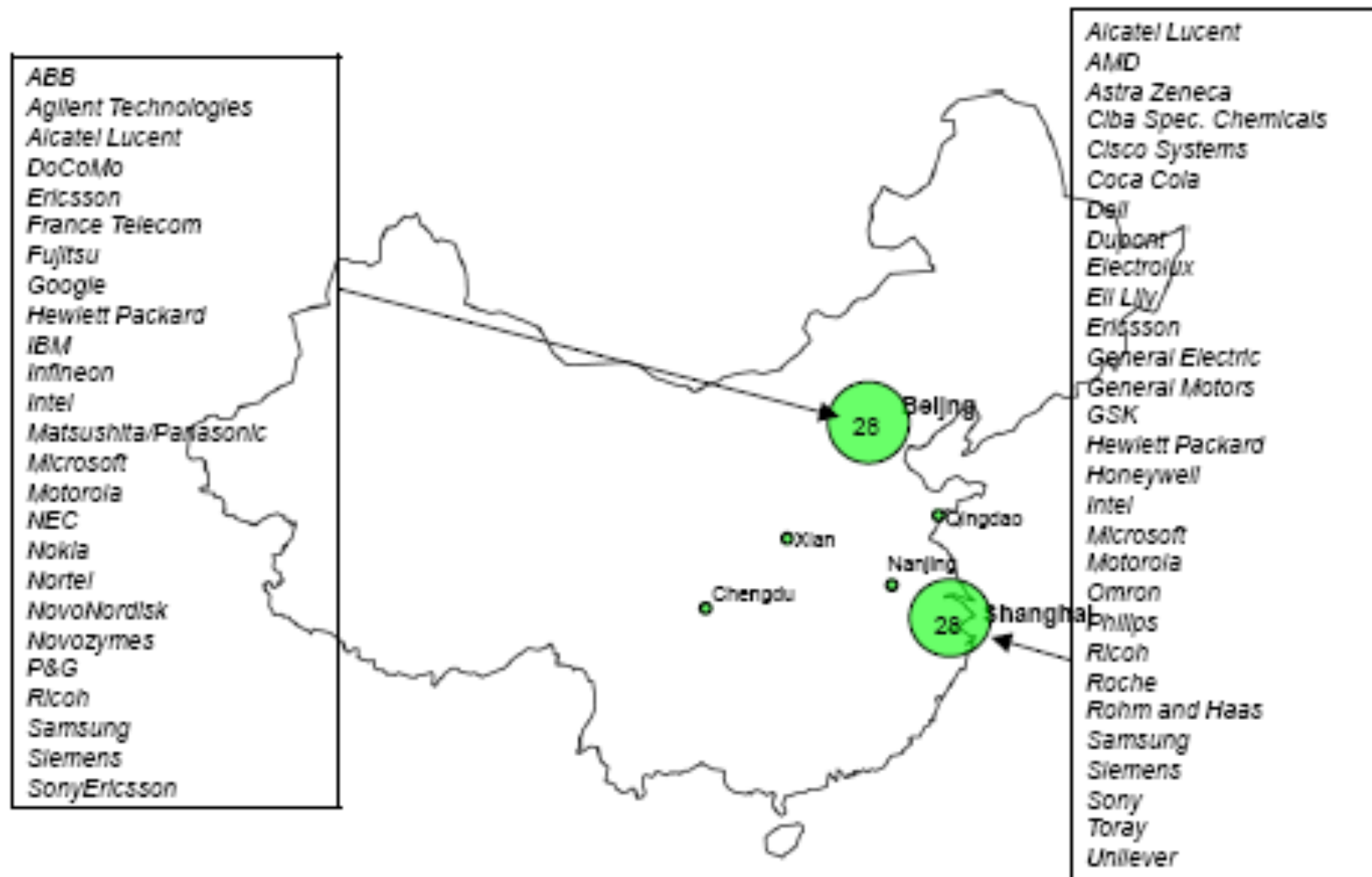
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lenovo

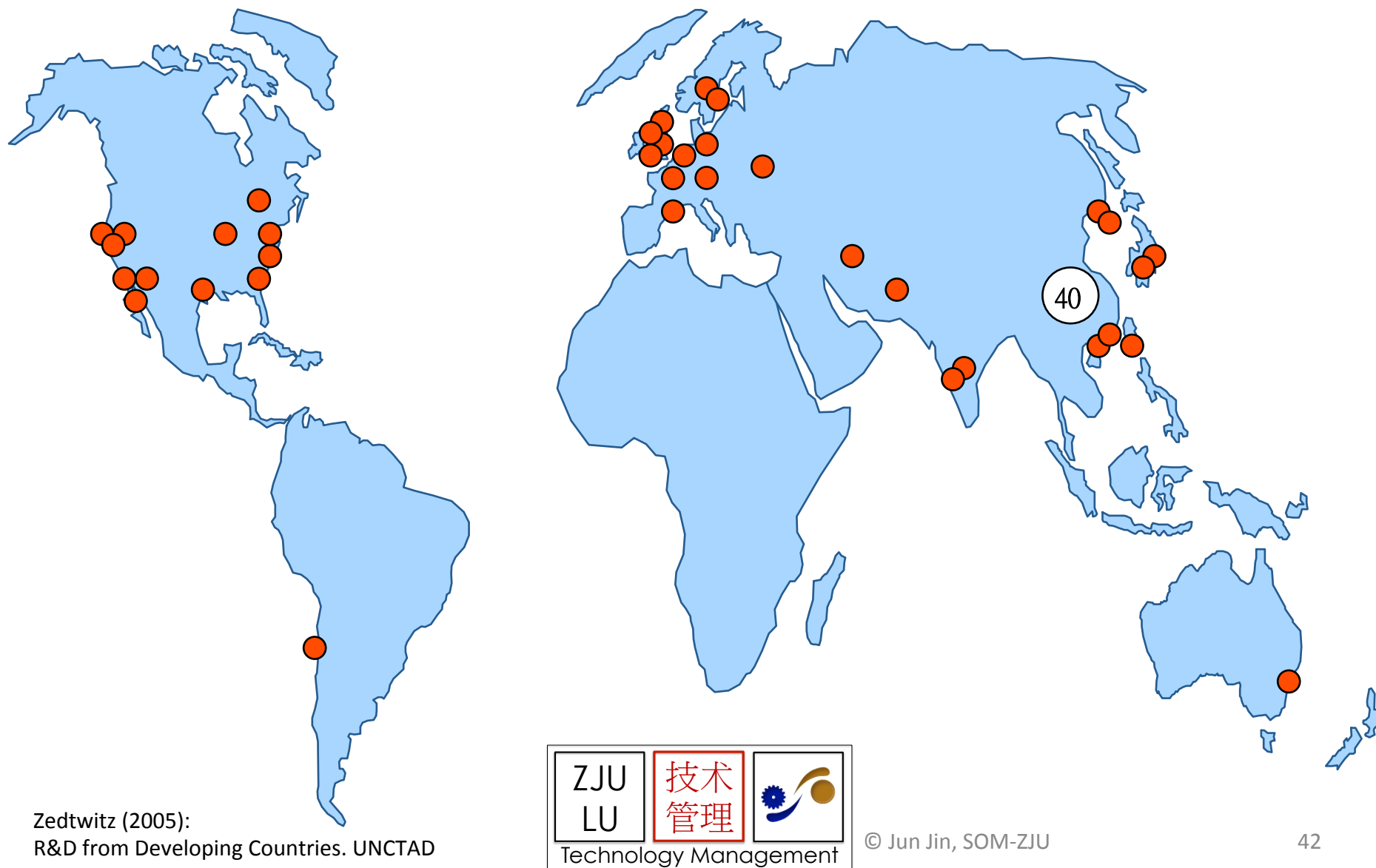


Global R&D centers in China



Schwaag Serger (2007) forthcoming

Chinese R&D in the World



Zedtwitz (2005):
R&D from Developing Countries. UNCTAD

© Jun Jin, SOM-ZJU

42

Huawei Worldwide

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Africa

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References

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- "The path to becoming a fortune 500 CEO", Forbes Magazine June 2011.
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- Zedtwitz (2005): R&D from Developing Countries. UNCTAD

