



DREXEL UNIVERSITY  
**LeBow**  
College of Business

# *Integrating Research and Teaching*

**MIS 347: Domestic and Global Outsourcing**

**Dr. Samir Shah, PMP, CSM**

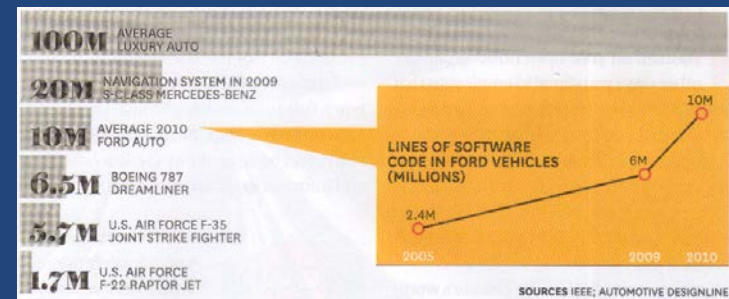
Associate Clinical Professor in MIS  
Provost Fellow – INDIA Partnerships

# Management Information Systems (MIS)

- **Concentration within LeBow**
- **Focus on - Power of Information Systems (IS) to solving business problems**



Gartner predicts that by 2014, there will be more than 70 billion mobile application downloads every year



- **Three important pillars (and alignment):**
  - **Information; People & Technology**
- **IS engagements are becoming “global”**

# Research – IS Outsourcing



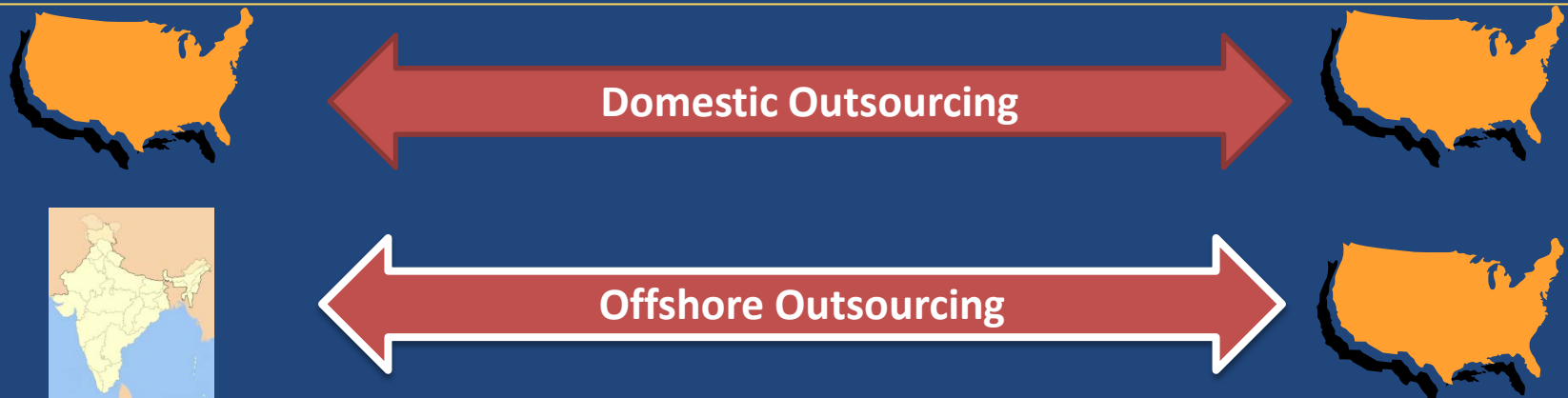
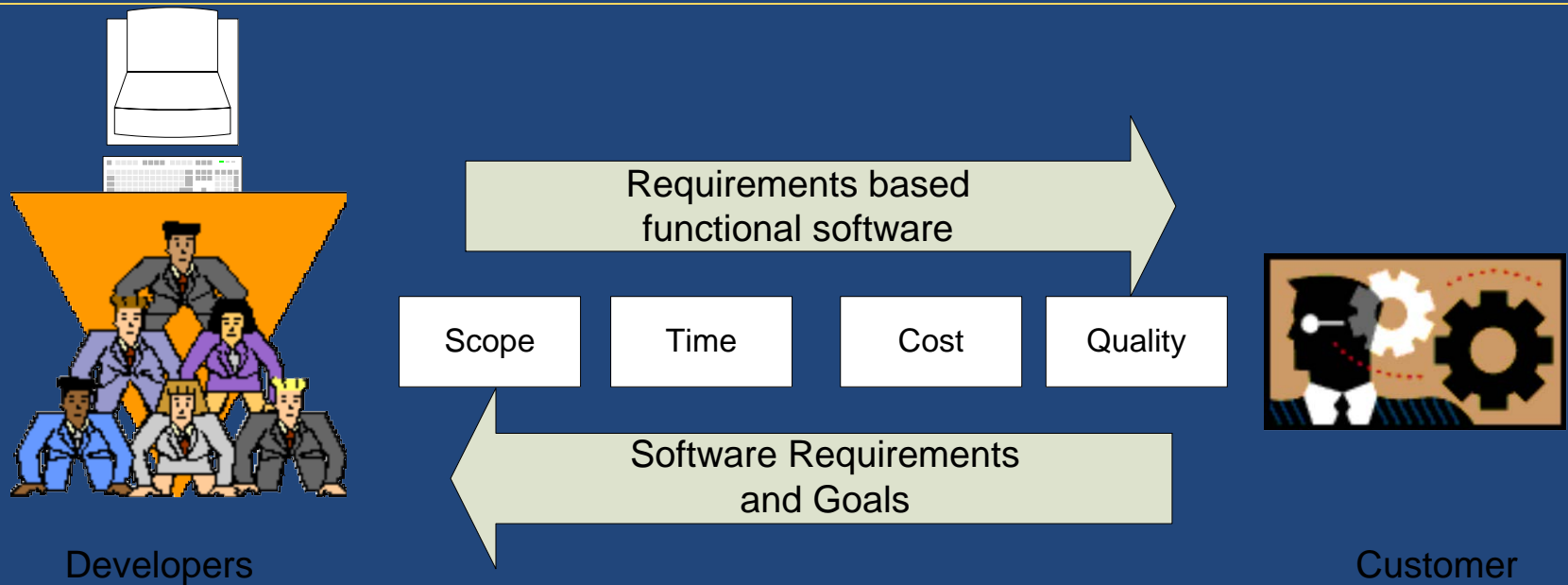
- ❑ World-wide IT spending continues to grow (**\$3.6 trillion in 2012\***)....

- ❑ IT Project Management is important...

**According to Gartner, only 36% IS projects are completed successfully**

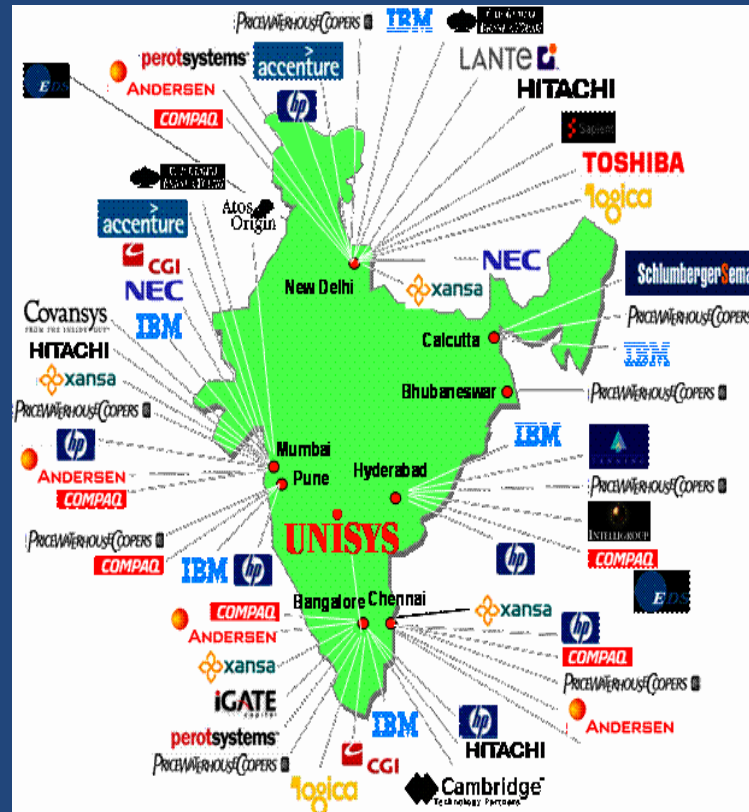
- ❑ Outsourcing of Information Systems has now become very popular....

# Typical IS Outsourcing Process



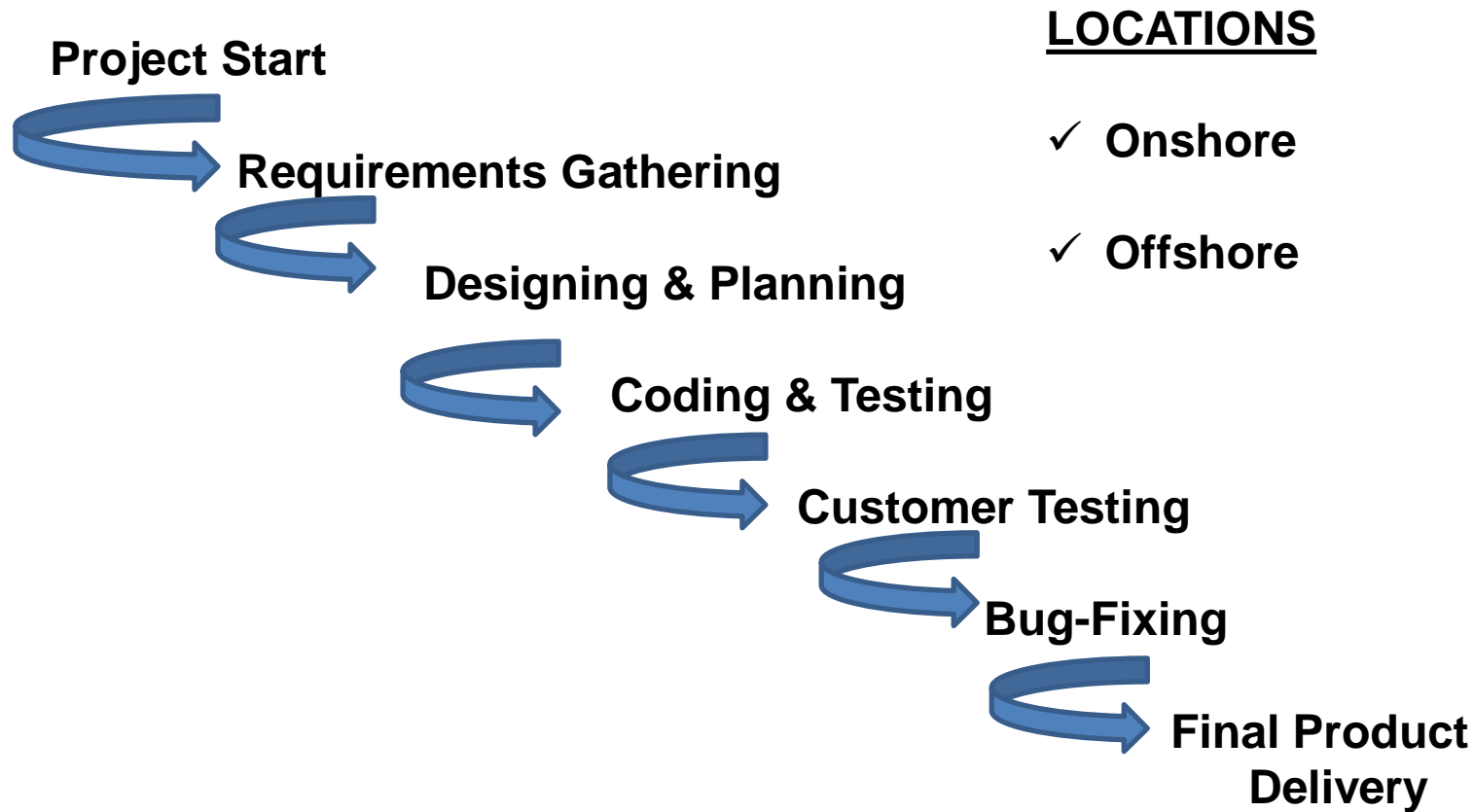
# Research suggests....

# Offshore Outsourcing is predicted to grow substantially over the next several years



Courtesy: Unisys Corporation

# Typical IS Offshore Outsourcing Process



# Why IS Offshore Outsourcing?

## Research suggests....

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- ✓ **Cost Savings**

- **Java Programmer**

**\$ 60,000/year in USA vs \$ 5,000/year in India**

[Source: The Outsourcing Revolution by Michael Corbett]

- ✓ **Rapid Access to various Technical Skills**

- ✓ **Availability of Standardized Packages (SAP)**

- ✓ **24-hour Software Development**





# Challenges of Offshore Outsourcing Research Suggests....

- ✓ **40% of offshore software development projects fail to deliver their expected benefits**

Source: S. Betz, R. Stephan and J. Makio, "Offshoring of Software Development – Methods and Tools for Risk Management", *International Conference on Global Software Engineering (ICGSE 2007)* pp. 280-281, IEEE, 2007.

Results:  
(Research)

for effort  
estimation

- ✓ **Cultural Differences**

- Do not ask questions – make assumptions

- ✓ **Time-Zone Difference**

- No immediate responses – incorrect assumptions

- ✓ **Language/Jargon Misunderstandings**

- Interpretations of requirements

☐ **Schedule  
delay**

☐ **Lower  
product  
quality**

☐ **Rework**

☐ **Lower  
customer  
satisfaction**





# Siemens Corporation (Harvard Case Study)

- **Global Software Development Project**  
Customer (Germany)  
Developers (India)
- **600,000 lines of code delivered**
- **Within 1<sup>st</sup> hour of testing**  
**700 Errors (100 critical) & software crashed**
- **Root cause Analysis**  
Developers in India made erroneous assumptions  
Lack of business knowledge  
Customer was not proactive

# Research Interest



**Assessment of  
project management  
and outsourcing techniques  
in  
overcoming challenges associated  
with Offshore Outsourcing of  
Information Systems Projects**

# Research Suggests...

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## **Use of Project Management tools and Outsourcing techniques can help...**

- ✓ **Better control of financial, physical, and human resources**
- ✓ **Improved customer relations**
- ✓ **Shorter development times**
- ✓ **Lower costs**
- ✓ **Higher quality and increased reliability**
- ✓ **Better internal coordination**
- ✓ **Higher worker morale**

# Integrating Research into Teaching

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**MIS 347: Domestic and Global IS Outsourcing**

**Credits: 4**

**Term: Winter & Summer (2013)**

This course is designed to introduce the basic concepts and practices in managing the outsourcing of Information Systems and help students understand how to plan and manage such projects successfully by exposing them to a mixture of **theory and practical.**

# MIS 347 Real-World Offshore Outsourcing Project Summer 2013

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**Business Problem:**

**To design & develop the website for YOACAP  
using web 3.0 technologies (Summer 2013)**

## Teams

### **USA**

**Customer Team (USA) - YOACAP**  
providing requirements and final product acceptance

**Management Team (USA) – 25 students**  
to gather requirements and manage the entire project

### **INDIA**

**Technical Team (INDIA) – 20 students**  
to write and test the code



**Management Team  
MIS 347 Students  
Drexel University**



**Customer  
YOACAP**



# Real-World Offshore Outsourcing Setup



**Technical Students  
Amity University, Delhi**

# Project Measurements (based upon research)

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## Communication, Cultural, Interpersonal Relationships & Trust

### ✓ **Communication**

Frequency of Communication  
Number of email exchanges

### ✓ **Managing & Communicating Project Requirements**

Number of questions asked (cultural)  
Number of clarifications provided  
Number of estimated vs actual hours worked (schedule)

### ✓ **Trust & Interpersonal Relationships**

Average response time  
Number of assumptions made



# Final Product Link (5 different versions)



<http://yoacap.org>

# Project Findings vs Research Findings

## SUCCESS STORY

Type of Communication (Onshore & Offshore)	Duration
Video Conference/Face-to-Face Meetings	250+ hrs
Instant Messages	3000 +
Emails exchanged	1000 +

Technologies: Skype, Google Hangout, IM

# Project Findings vs Research Findings

Teams who lack in communication do NOT typically complete the project successfully and ultimately, customer and team members are not satisfied

Teams who do not ask questions tend to make incorrect assumptions about the requirements

Teams who do not use project management tools in early phases of the project typically end up doing more work at the end (poor project plan)

Lack of use of project management tools and outsourcing techniques increases the lack of trust among team members as well as between their counterparts in India

# MIS 347 Projects (Research & Integration)

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**MIS 347 (Winter 2013)**

Grant Thornton

PA- Governor's Office of IT

**MIS 347 (Summer 2013)**

YOACAP

**MIS 347 (Winter 2014) – ongoing**

Rishabh Software (reverse outsourcing)

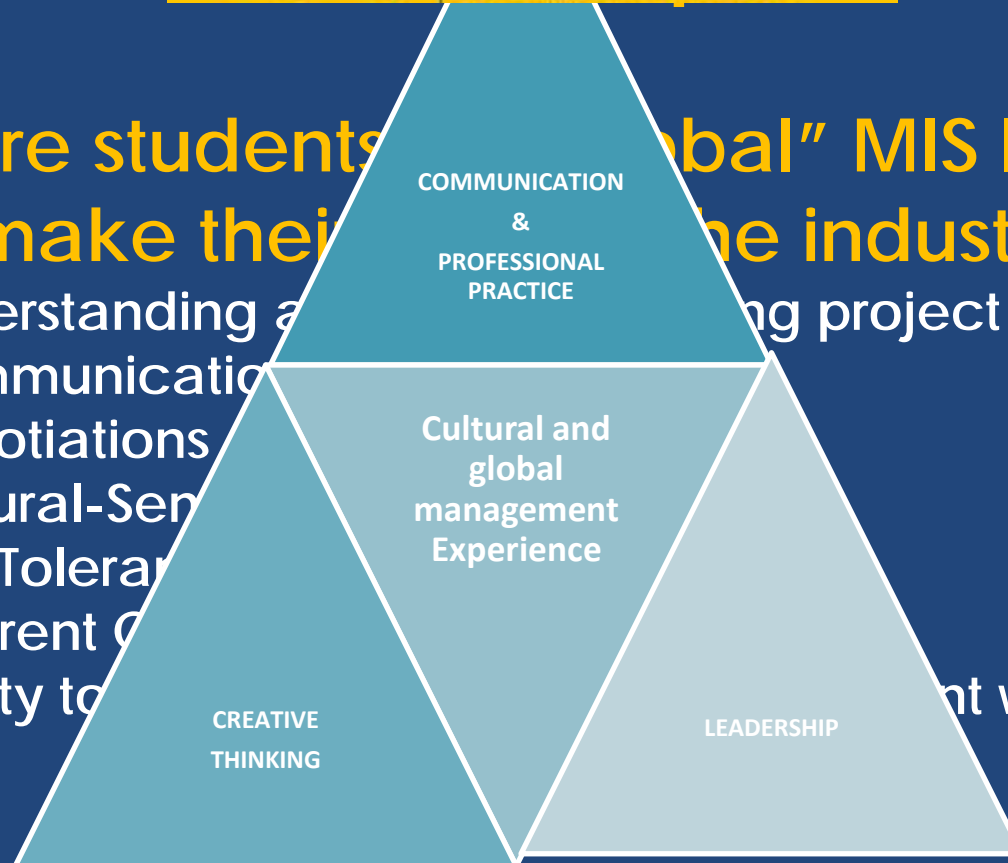
# Integrating research in teaching in MIS 347



✓ **“Technical Skills**

✓ **Prepare students to be “Global” MIS leaders as they make their mark in the industry**

- ✓ Understanding and managing project requirements
- ✓ Communication
- ✓ Negotiations
- ✓ Cultural-Sensitivity
- ✓ Risk Tolerance
- ✓ Different Communication Styles
- ✓ Ability to work in different work patterns



# Win-Win for Everyone

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## ✓ Research & Experiential Learning

Market Street Magazine <http://www.pagegangster.com/p/kExg3/#/page/19>

## ✓ Job/Co-op Offerings

**MIS 347 Student:** *“I actually got job offers by mentioning this experience.”*.  
**YOACAP and Pennsylvania State offered paid internships/jobs**

## ✓ Developing “Global” Leadership Skills

## ✓ Research integration into my teaching

Paper titled, ***IT IS ALL PERSONAL: DEALING WITH THE REVOLVING DOOR IN THE INDIAN HIGH TECH INDUSTRY*** (Gefen, Shah & Ragowsky)  
**(22<sup>nd</sup> European Conference on Information Systems)**

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# THANK YOU!

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