# INTERNATIONAL PROJECT MANAGEMENT (IPM)

## Session 1
## Introduction, Objectives, Basic Concepts and Course Outline

**EFREI Winter - 2017 - Michael Otten, Professor**

**(with appreciation to Paul Gosselin as originator of this course)**

# IPM Overview – 4 Sessions @ 4-5 hrs

| Session 1 International Project Management (IPM) – Concepts and Definitions<br><br>30 January 2017<br>Room E23<br>14:00-19:00 | Session 2<br>IPM Planning: Processes and Techniques<br><br>6 February 2017<br>Room E36<br>14:00-19:00 | | Session 3<br>IPM Implementation, Control, Communications, Risk Management and Management of Change<br><br>6 (or 13) March 2017<br>Room E36 (+Skype)<br>Room 14:00-19:00 | Session 4<br><br>Team Presentations<br><br>20 March 2017<br>by Skype | |
|---|---|---|---|---|---|
| Introductions<br><br>Objectives, Key Concepts, Definitions and models<br><br>Project Team Formation & Organization<br><br>Case Study: Latin America Supply Chain Fulfillment | Project Planning & Management<br><br>Prioritization of Projects within a Program<br><br>Financial & Resource Management, Planning and Control<br><br>Project Initiation: Requirements, Design, Systems Development, Migration and Implementation | | Skills & Techniques<br><br>Issue, Risk and Change Management<br><br>Team Project Exercises | Outside Speaker<br><br>Team Presentations<br><br>Course Summary and Exam Guidance | |

# Course Management Process

- Course Rules
  - **Respect for others – quiet when others talking**
  - **Phones and computers off and away, except when presenting**
  - **Be at class promptly at start and after breaks**

- Exercises:
  - **Individual**
  - **Group Brainstorming**
  - **Team Activities**
  - **Team Project and Class Participation (40% of grade)**
  - **Course Examination (60% of grade)**

- Taking Roll
  - **Please explain any absences, preferably in advance**

- Team Assignment – Your Groups! (After Break)

# Project and Homework Protocols

- Deadlines need to be respected for effective project management
  - Late submissions will be penalized
    - -0.5 for more than 1 day late without good excuse (TBD by Professor)
    - -1.0 for missed submission
    - -2.0 for unexcused lack of team participation; 0 grade if no participation
- Files should be labeled as follows:
  - IPM [Team] 2017-NN-NN [Content Identifier]
  - Example: IPM D 2017-01-25 Homework
- Non-Participation in Final Presentation and Report will result in 0 Project Grade unless excused by Team and justified to teacher at m.otten@ieee.org

# Course Outline


- Introductions – Professor, Students and Course Goals
- Projects, Programs and Portfolios – Definitions and Objectives
- Key Concepts & Techniques for Project Management
- Project Examples and Case Studies
- Team Project (40% of Grade, **including class participation**)
  - Establish Team
  - Define Project
  - Perform Project Planning and Control
- Course Exam
  - 60% of Course Grade (Note)

# Michael Otten - PhD, MBA, MSEE, BSE

- Electrical, Electronics and Information Technology Engineer – USA educated
  - BSE from Princeton University and MS from Columbia University
  - Masters project built laboratory computer from components to model logic 'critical races'
- MBA, PhD in Management and Technology from Harvard and American Universities
  - MBA Thesis on Development Project Termination
  - Dissertation on Computer Driven Speech
- IBM (International Business Machines) for over 30 years
  - R&D – Flat Film Memory Development (Hardware engineering)
  - Corporate Strategy Development – Business Area Strategies and Operating Unit objectives
    - Computers, Storage and Office Products, Software, Services - 44 countries
    - Business Systems, Inventory Management, Marketing Strategy, Offshore Sales – Global IBM
    - Planning and Operational: Europe, Middle East and Africa (EMEA), Asia Pacific, Latin America
    - Business Partner relationships and Business-to-Business Standards and Systems
    - Case Study on B2B XML for Harvard Business School MBA Technology course
- National Institutes of Health, US Public Health Service – Medical Computer Systems Research
- North American Aviation – Project Apollo Moon shot development
- Social Entrepreneur and Education Consultant
  - Board President Green Chimneys School & Children Services – Animal and Nature based Therapy
  - Board President Scarsdale Schools, one of top 'public' schools in the USA
  - Co-Founder of Green Chimneys Institute
  - Mentor at INSEAD, Fontainebleau
  - Adjunct at Ecole Francaise d'Electronique et Informatique (EFREI)

# Students – Who are you?

Countries and Cultures represented?

Major Interests

- Academic
- Technical
- Business
- Social
- Personal

Your Experience in Project Management?

- Methodology and theory
- Practical experience

*(In class exercise)*

# Profiles

- **Student Profile**

**Name:** **e-mail address:**

**Country of Birth**:

**Principal Country(ie s) of Residence/ Culture**:

**Major Interests and Prior Experience**

- **Technical**:
- **Business**:
- **Social**

**Specific Project Management Experiences, if any:**

- 1.
- 2

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- **Comments:**

# Individual Exercise – Who are You

10 Minutes to Prepare

@2 Minutes/person to Present

Re-Starting at: 15:30

# Course Objectives

- Establish a framework for thinking about & managing projects as part of future careers
- Give understanding of project management in a globalized, or sometimes fragmented world
- Explore through case studies practical aspects of project management
- Team Exercises for Project Management Planning, Implementation and Control

# Course Scope - Goals

- Planning & Learning Expectations
  - Establish a framework for thinking about & managing projects in future careers
  - Give understanding of project management in a global world
- **Explore through case studies practical aspects of project management**
  - *Simple, International and Multi-country Business*
  - *Information Technology related*
  - Both Pragmatic and Theoretical

# Projects & Programs - Definitions

**A project is:**

*"A unique set of coordinated activities with definite starting and ending points, undertaken by an individual or organization to meet specific objectives within defined schedule, cost, performance parameters"*

*"A **temporary** endeavor undertaken to create a unique product, service or result…. [or] A final product or service deliverable."(PMBOK 1.2)*

*PMBOK = Project Management Body of Knowledge*

"…a set of project management standards, suggestions and best practices based on the vast experience of many professionals n the field."– Project Management Institute

http://shop.bisigroup.com/ProductDetail/?pid=0000000000030170007

http://www.pmi.org/PMBOK-Guide-and-Standards.aspx/

# Projects & Programs Definitions

**A program is:**

*"A group of related projects, managed in a coordinated way to obtain benefits and control not available from managing them individually."*

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*"A **portfolio** [collection of Projects and/or Programs] has a business scope that changes with the strategic goals of the organization."*

*(PMBOK 1.4)*

http://pmiswmo.org/wp-content/uploads/2013/01/PMBOK-5TH-Edition.pdf

# Projects & Programs

- Project types:
  - Engineering, construction, systems, Information Technology (IT)
  - Internal vs. w/ External parties
  - Big vs. Small
  - Single-site, multi-site
  - One country, multi-country, international/global
  - Complex, Simple


*http://www.icivilengineer.com/Big_Project_Watch/*

# Projects & Programs

- Where do projects and programs come from?
  - Business needs or strategic expansion
    - Customer requests, Market demand
    - Competitive pressure
  - Technology change and Innovation
    - Product obsolescence, Technology maturation
    - Development time/cost versus Useful Life
  - Legal/regulatory/accounting environment changes
- Requirements Processes

# Projects & Programs Management

- Project Management is:

*"the application of knowledge, skills, tools and techniques to project activities to meet project requirements"..*

# Brainstorming

- Technique to obtain comprehensive lists
  - Risks and Opportunities
  - Creativity encouraged by lack of criticism
    - With Critical Debate found to be more stimulating*
- Good way to build team spirit
  - Everyone contributes
  - Nobody exposed to negativity (initially)

* "Groupthink," in "New Yorker" magazine, 30 Jan 2012, pp 22-27.

# International and Multi-Country Projects

- What characteristics make a project or program "global" or "international" versus non-international?"
- How is Multi-Country different from International?
- Generic Usage versus Professional Definitions
  - Multi-Country, International, Global
  - Portfolio, Program, Project, Task

*(Group Brainstorm)*

# 10 Minutes Brainstorming
# 15 Minutes Break

Return to Class by _____

# Multi-Country, International, Global Project Concepts

- Multi-Country Projects have same functions implemented individually in each of multiple countries.
- International Projects are implemented in a common framework across multiple countries.
- Global Projects are implemented centrally for common use in multiple countries

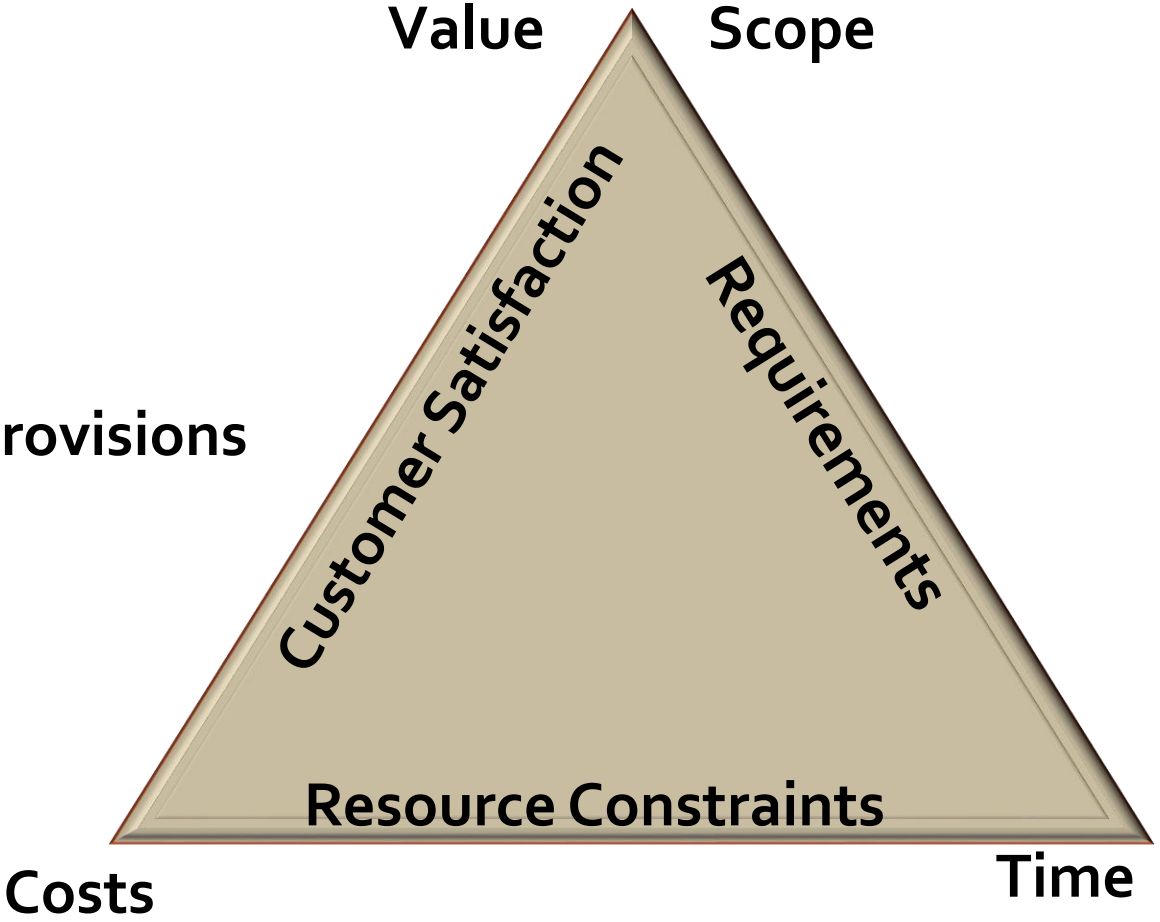
# Internatonal, Multi-Country and Global Projects & Programs

- What factors need to be considered?
- Hard stuff: Laws & Logistics
  - Economic and Political Environment
- Soft stuff: People
  - Culture – teams and expectations
  - Attitudes – risk, authority, quality, etc, etc
  - Work habits: schedules
  - Communication across borders:
  - - *http://www.bigprojects.org/*

# Key Concepts

**Constraints**

- Budget
- Skills
- Schedule
- Contractual provisions

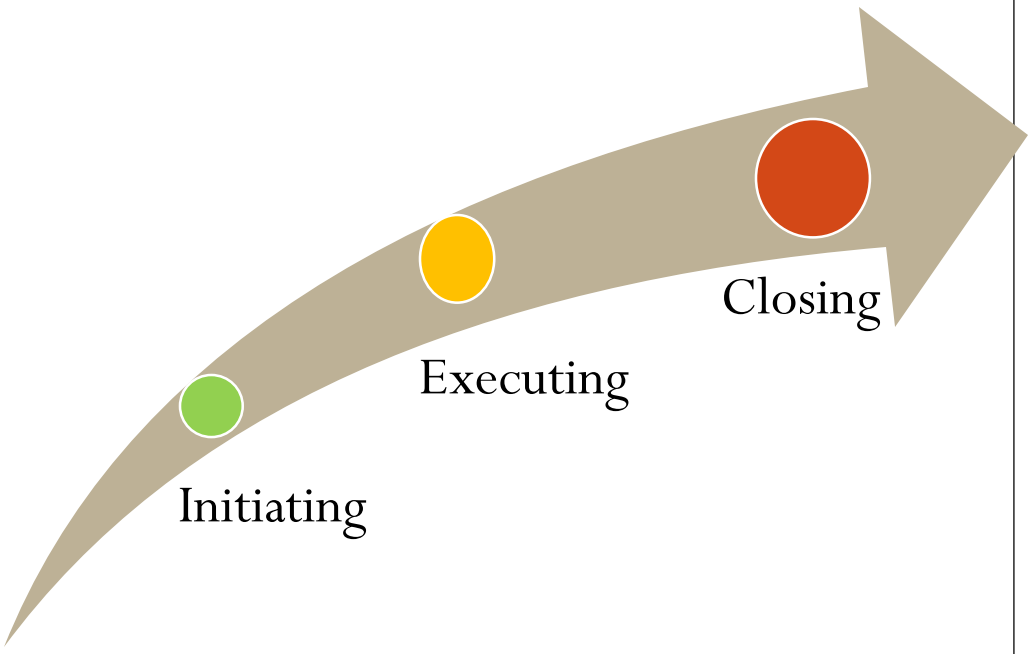



**BALANCE FACTORS**

# Key Concepts

## Project Process Groups

- Initiating
  - Planning
- Executing
  - Monitoring and Controlling
- Closing



# Key Concepts

Project Life Cycle

**Starting a project:**

- Prioritization
- Planning Scope
- Setting Team
- Discovery

**Managing & Executing project**

- Iterative Planning:
  - Requirements
  - Solutions
  - Tasks
  - Risk Management

**Closing a project:**

- Ending
  - Success
  - Failure
  - Follow-on
- Archive

# PROJECT CONTRACTING TERMINOLOGY

- Request for Proposal (RFP)
  - Request for Bids to accomplish something
- Fixed Cost Contract
  - Deliverable is committed at a specific price and any cost over-runs are absorbed by the contractor
- Time and Materials Contract
  - Work is charged for based on actual cost of materials and person-hours needed to complete the project, with a fixed profitability mark-up over the cost.

# Team Roles

- Leader
  - main speaking role
- Clarifier
  - secondary speaking role
- Support Team
  - Less visible speaking roles
  - Provides content to positions
  - Technology coordination
  - Human Resources

# Leader

- Establishes negotiation climate
- Makes opening statement
- Raises and explores questions
- Tests other party’s positions
- Presents bids
- Makes arguments
- Suggests concessions
- Closes ‘deal’

# Clarifier

- SHOULD NOT NEGOTIATE
- Summarizes
- Reformulates positions
- Asks reality testing questions
- Smoothes relations
- Promotes agreement
- Helps leader when under tension
- Develops Leader’s themes further

# Support Roles

- **Administrator/Accountant**
  - **Calculates figures**
  - **Checks time**

- **Strategizer/Planner**
  - **Controls process with strategic approach**
  - **Translates decisions into action plan**

# Corporate Roles

- **CEO: Chief Executive Officer - Lead**
  - **#1 leader of entire corporation**
- **COO: Chief Operations Officer - Clarifier**
  - **Responsible for smooth & timely operations**
- **CFO: Chief Financial Officer - Accountant**
- **CIO: Chief Information Officer - Strategist**
  - **Responsible for all I/T activities**
- **Admin Lead – Administrative Process responsibility**
- **HR - Human Resources**
- **Other?**

# Team Project

- Team Formation
  - Initial Assignment of class to teams by professor
    - Roles to be determined by Team collaboratively

- Roles
  - Team Lead – coordinates and kicks off presentations
  - Technology Coordinator – all final presentations to be MS
    - PowerPoint with back-up reports in MicroSoft (MS) Word. Project plans can be in Excel Spreadsheets or using Project Planning software optional; PDF Options
  - Quality Control Manager – Ensures process discipline
  - Meeting Facilitator – Ensures meeting discipline
  - Planning Director – Manages schedule and attendance
  - Other – TBD (To Be Determined)

*(Team Formation exercise)*

# Team Organization Exercise

- Select Leader
- Consider Calendar
  - Consider Workload Conflicts
  - Times available for team members to work together
  - Regular checkpoints (e.g., 9:00 pm Tuesdays)
- Determine Team Member Skills and Discuss Roles that each member might be best suited for

# Team Organization Exercise

10 Minutes to Select Leader and Determine Meeting Scheduling Constraints

# Latin America (LA) Case Study

- **Challenge 1990's to modernize Order and Fulfillment systems for 20 LA countries/regions**

- **Applications Systems Modules: "Best-of-Breed"**
  - **Product Data Base**
  - **Customer Data Base**
  - **Hardware Order & Distribution**
  - **Software Order & Distribution**
  - **Billing Systems**
  - **Invoicing Systems**

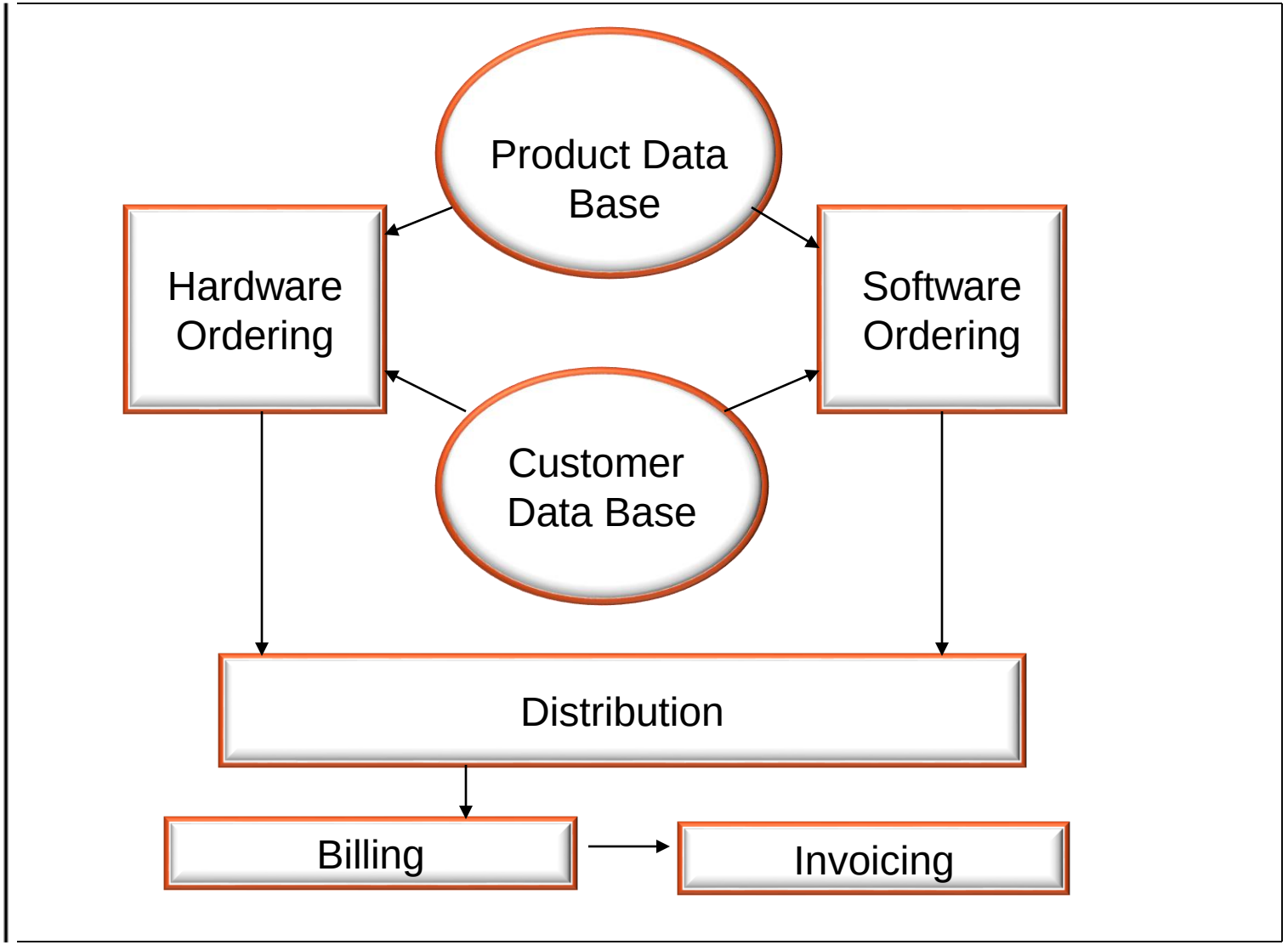
- **$35 Million/year Budget – 5 Year Program**
  - **Access to Global systems from 44 countries**

# Enterprise Resource Planning

- **"Enterprise resource planning** (ERP) is business process management software that allows an organization to use a system of integrated applications to manage the business and automate many back office functions related to technology, services and human resources."

http://www.webopedia.com/TERM/E/ERP.html

# LA ERP SYSTEMS SCHEMATIC

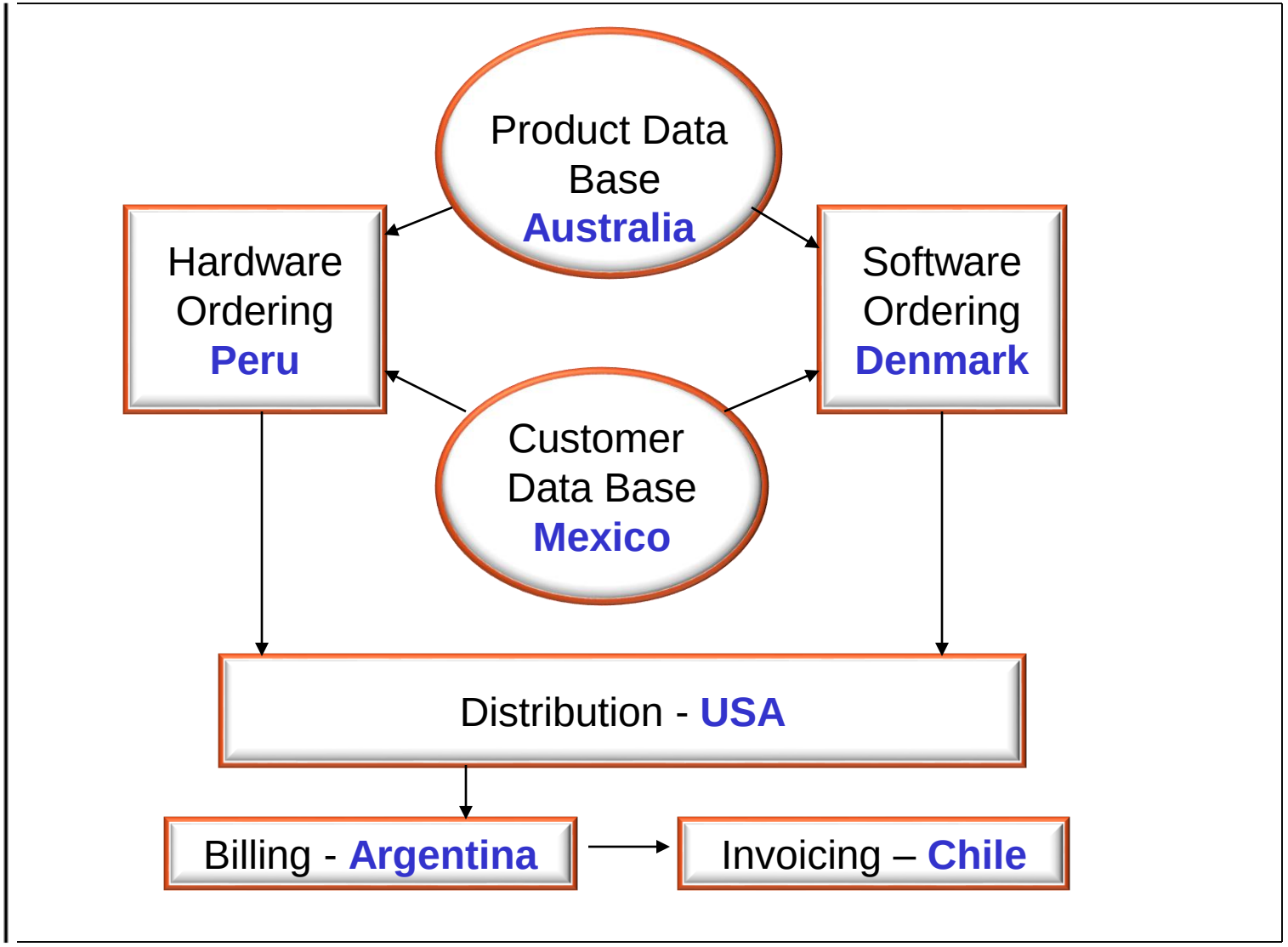


# LATIN AMERICA (LA) PROGRAM PLAN
## Case Study

- **First International Selection Project**
  - **To Identify 'Best-of-Breed' systems World-wide**
- **Followed by Seven Major Development Projects**
  - **Product Data Base and Data Management System**
  - **Customer Data Base and Data Management System**
  - **Hardware Product Ordering System**
  - **Software Ordering and Distribution System**
  - **Hardware Distribution System**
  - **Billing**
  - **Invoicing System**
- **Driven by Systems Integration, Operations, Maintenance and Management Control System (LA HQ)**

# LA ERP SYSTEMS SCHEMATIC



# LATIN AMERICA (LA) PROGRAM PLAN
## Case Study – Stakeholders \

- **First International Selection Project**
  - **To Identify 'Best-of-Breed' systems World-wide**
- **Followed by Seven Major Development Projects**
  - **Product Data Base and Data Management System (Australia)**
  - **Customer Data Base and Data Management System (Mexico)**
  - **Hardware Product Ordering System (Peru)**
  - **Software Ordering and Distribution System (Denmark)**
  - **Hardware Distribution System (USA)**
  - **Billing (Argentina)**
  - **Invoicing System (Chile)**
- **Driven by Systems Integration, Operations, Maintenance and Management Control System (LA HQ)**

# Business Need => Project Charter

- **Scope**
  - **Statement of Problem or Challenge**
  - **Boundaries of Solution, Deliverables**
  - **Time and Resource Feasibility**
  - **Critical versus Discretionary Project Elements**

- **Document Expectations**
  - **Project Objectives, Limitations and Time-Line**
  - **Stakeholders**
  - **Success Criteria**
  - **Business Case: Value versus Resources/Cost**

# Homework for Next Week
## Initial Project Planning

- Charter - LATIN AMERICA (LA) PROGRAM
  - 1-2 Sentences Statement of Program/Project Mission
- Major Work Elements or Tasks to be Performed
- Stakeholders Identified
  - Project Owner, usually same as Project Funder
  - Beneficiaries or Customers
  - Performers – roles by activity
- Constraints
  - Timeframe
  - Cost
  - Resources/Skills

# Project and Homework Protocols

- Deadlines need to be respected for effective project management
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  - Example: IPM D 2017-01-25 Homework
- Non-Participation in Final Presentation and Report will result in 0 Project Grade unless excused by Team and justified to teacher at m.otten@ieee.org

# Team Exercise to Start Homework

**Deliver to m.otten@ieee.org by noon, next Monday**

- **Microsoft PowerPoint, Word or PDF Document format**

**Charter Statement including**

- **Statement of Problem or Challenge**
- **Boundaries of Solution, Deliverables**
  - **Including Migration from Legacy and Testing**
- **Time and Resource Feasibility**
- **Critical versus Discretionary Project Elements**

**Stakeholders**

**Team Roles & Assignments of tasks to team members**

*Raise Questions about Homework or Project Planning Expectations*

# Homework due by Noon, Next Monday

- Deliver to m.otten@ieee.org before next Monday
  - Microsoft PowerPoint, Word or PDF Document format
- Charter Statement including
  - **Statement of Problem or Challenge**
  - **Boundaries of Solution, Deliverables**
    - **Including Migration from Legacy and Testing**
  - **Time and Resource Feasibility**
  - **Critical versus Discretionary Project Elements**
- **Stakeholders**
- **Team Roles**