Service Engineering: Multi-Disciplinary View
Call Center Design

- **Information Design**: Marketing, Psychology, Operations Research
  - Queue (Invisible)
- **Organization Design**: Parallel (Flat), Sequential (Hierarchical)
  - Societies, Psychology, Operations Research
- **Agents**: Business Frontier of the 21st Century
  - Experts
- **Computer-Telephony Integration - CTI**: MIS/CS
  - MIS
- **Arrivals**: Business Frontier of the 21st Century
  - Good or Bad
- **Busy**: Rare
- **Redial (Retrial)**
- **Lost Calls**
- **Service Completion**: 75% in Banks

- **Skill Based Routing (SBR) Design**: Marketing, HRM, Operations Research, MIS
  - Skill Based Routing (SBR) Design
- **VIP Queue**: If Required 15 min, then Waited 6 min
  - If Required 6 min, then Waited 6 min
- **Service Process Design**: Operations Research, Economics, HRM
- **Logistics**
- **Psychological Process Archive**
  - Expect 3 min
  - Willing 8 min
  - Perceive 15 min

- **Customers Interface Design**: Computer-Telephony Integration - CTI
  - Marketing, Psychology, Operations Research
- **Human Factors Engineering**
  - VRU/IVR
- **Customers Segmentation - CRM**: Marketing
  - Queue (Invisible)
- **Efficiency**
- **Quality**
  - Perceived
  - Expected
  - Willing

- **Tele-Stress Psychology**: (Turnover up to 200% per Year)
  - (Sweat Shops of the 21st Century)
- **Incentives**: Game Theory, Economics
- **Job Enrichment Training**: HRM
  - Agents (CSRs)
- **Agents (CSRs)**
  - Training
- **Service Completion**
  - Psychology, Operations Research
  - Multi-Disciplinary View

- **Forecasting Statistics, Human Resource Management (HRM)**
  - Operations, Marketing, MIS

- **New Services Design (R&D)**
  - Operations, Marketing, MIS

- **Lost Calls**
  - Redial

- **Internet Chat Email Fax**

- **Human Factors Engineering**
  - VRU/IVR
  - Internet Chat Email Fax

- **VRU/IVR**
  - Lost Calls

- **Index**
  - Function
  - Scientific Discipline
  - Multi-Disciplinary