



Welcome!!!

- **Welcome to 15.980 *and* ESD Organizing for Innovative Product Development**
- Hosted by Tom Allen (**Chief Entertainer**)
- and:
- Alice Xu, (**Chief Organizer**)
- and
- Bill Foley (**Chief Engineer**)



Readings & Lectures

- Do not be surprised if what I talk about in class has no relation to the readings.
 - ◆ Why be bored with the same stuff twice?



Work for Today

■ Stellar

- ◆ Any problems?
- ◆ OK with those out in Videoland?

■ Grade Determination

- ◆ Paper/Project?
 - ↳ Group or Individual?
- ◆ Quiz?
- ◆ Any other ideas?



Two Points to Begin With

- Good internal *technical* communication is critical to the product development process.
 - ◆ Research shows that the best ideas consistently come from communication with colleagues within the organization.
- Two factors heavily determine the structure of internal communication networks.
 - ◆ Organizational structure.
 - ◆ Physical layout of the facility.



Two Tool Sets

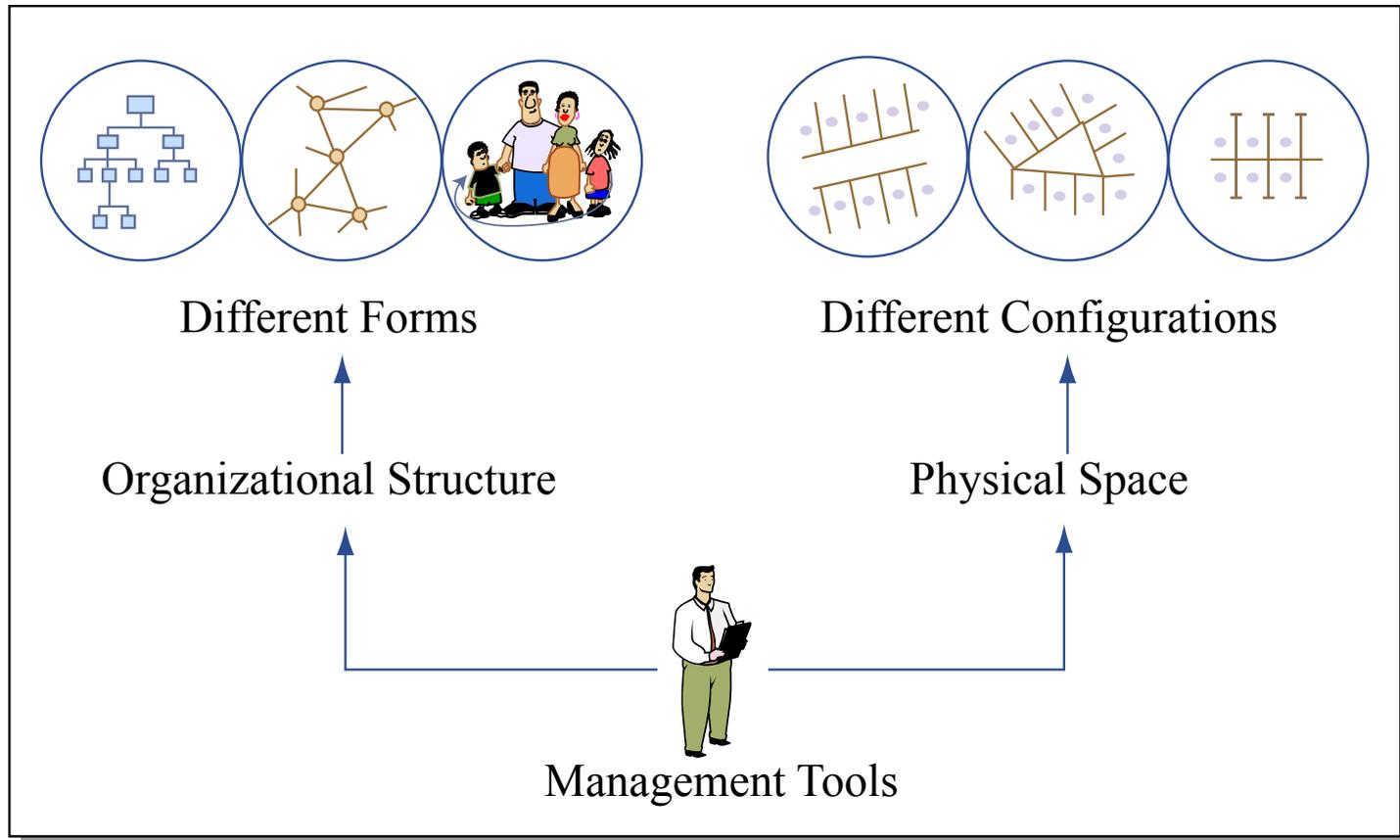


Figure by MIT OCW.



Maintaining Currency with New Technology

- Competitive threat can come from both inside and outside the industry that it will affect.
- To reduce this threat the organization must constantly import new knowledge from a broad array of potential sources.
 - ◆ As we will see, this is not as easy as it sounds.



Knowledge Management

- **Gaining Knowledge**
 - ◆ Technology Transfer
 - ☞ Between Organizations
 - ☞ Within Organizations
 - ◆ Gatekeepers
- **Disseminating Knowledge**
 - ◆ Technical Communication
 - ☞ Organization Structure
 - ☞ Physical Structure of Facilities



What do we know about transferring knowledge?

- It is a 'people process'.
- Transferring documentation is, at best, an auxiliary process.
- People must be in direct contact and understand each other to transfer knowledge.
- The best 'package' for knowledge is the human mind.
- Moving people is the most effective way to move knowledge
- This can imply either organizational or geographical movement.
- Organizational boundaries impose a serious barrier to the transfer of technology
- This is due to the development of different organizational cultures.