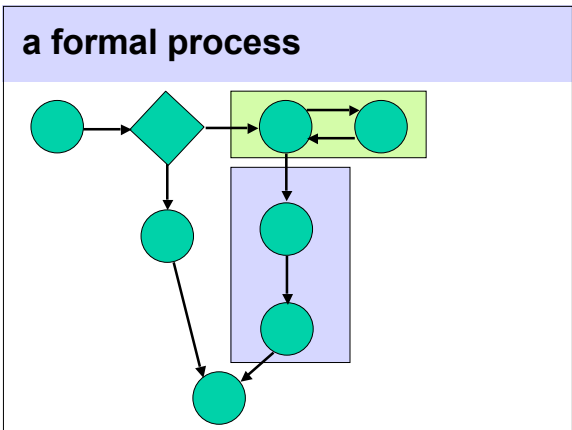
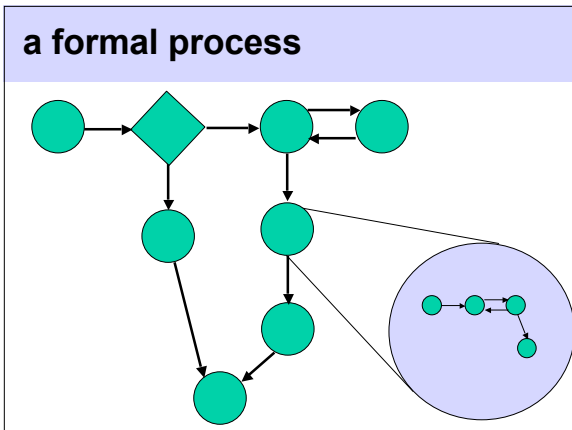
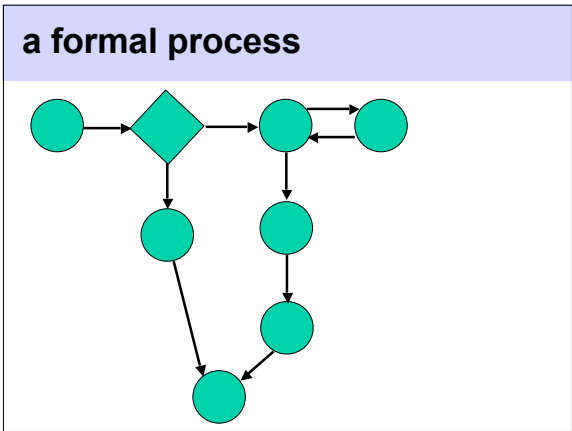


**what happens...**

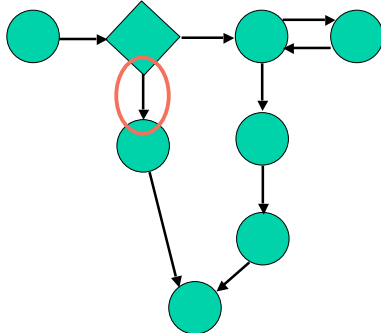
- ... when you walk into Starbuck's?
- and why?

**business processes**

- not simply "what organisations do"
  - they can be formalised and written down
    - people can be required to act according to them
    - performance and deviation can be measured
  - breaking it down
    - individual steps and activities
    - organised into sequences and alternatives
  - remember the machine metaphor
    - processes are a means to *standardise action*
    - processes are a means to *measure progress*



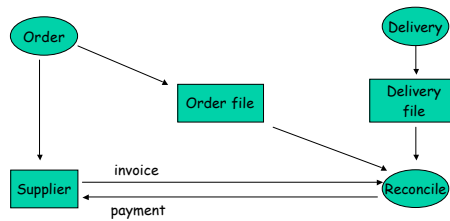
## a formal process



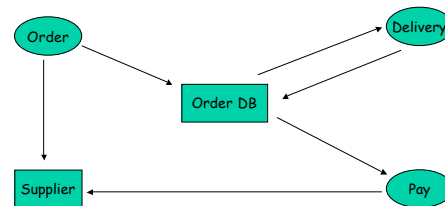
## BPR

- Business Process Reengineering
  - late 1980s to mid 1990s
  - focus on information flow
  - identify redundant or unnecessary steps
    - ... and eliminate them
  - critical role for technology
    - once your process has been redesigned, you need to make sure it's followed
    - you want to retain centralised control of the processes that are put into effect
    - workflow technology can accomplish this

## Ford : before



## Ford: after



what does it take to achieve this?

## workflow technology

- technology for managing processes
  - embody an explicit representation of a process
  - database of process *instances*
    - record details of each process
      - history, state, documents, etc
    - ensure the orderly execution of processes
      - turn process and tasks to to-do lists and action items
  - some design questions
    - to what extent do people see the whole?
    - how can exceptions be managed?

## speech acts

- language doesn't just describe the world
  - language is also a means for action
    - "I promise to pay you ten dollars"
  - context matters
    - "there's a bull in the field"
      - a description of the state of the world?
      - a warning not to walk through the field to the car?
      - a suggestion about the photograph you want to take?
- describing the consequences of utterances
  - locutionary act (what I say)
  - illocutionary force (what that does)

## speech acts

- five basic types
  - assertive
    - commit the speaker to the truth of something
  - directive
    - attempt to get the hearer to do something
  - commissive
    - commit the speaker to some course of action
  - expressive
    - expressing a psychological state
  - declarations
    - bring the world into alignment with the utterance

## example #1

A: What's the time?  
B: It's six o'clock  
A: Aha! So it's time for a drink!

## example #2

A: Where is your homework?  
B: The dog ate it. Can I give it to you tomorrow?  
A: Okay. You have 'til 4pm.

## example #3

A: Let's go see a movie  
B: I have homework  
A: That's not due for days!  
B: I'm going to need more time to work on it, though.  
A: We could go tomorrow...?  
B: Yeah, let's do that...

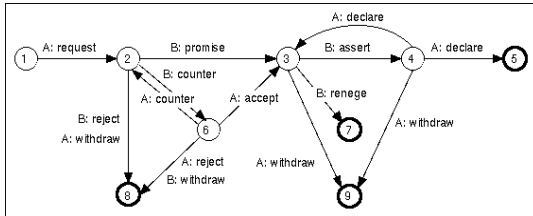
## example #4

Shall I compare thee to a Summers day?  
Thou art more lovely and more temperate:  
Rough windes do shake the darling buds of Maie,  
And Sommers lease hath all too short a date:  
Sometime too hot the eye of heaven shines,  
And often is his gold complexion dimm'd,  
And evey faire from faire some-time declines,  
By chance,or natures changing course untrim'd:  
But thy eternall Sommer shall not fade,  
Nor loose possession of that faire thou ow'st,  
Nor shall death brag thou wandr'st in his shade,  
When in eternall lines to time thou grow'st,  
So long as men can breath or eyes can see,  
So long lives this,and this gives life to thee,

## it's not always obvious...

- "Does this dress make me look fat?"
- "How 'bout dem Lakers?"
- "I wish you wouldn't do that"
- "Yeah, right"
- similarly:
  - it's not always clear what the effect of an act is
    - its role in the process
    - the consequence of removing it
    - the consequence of enforcing it

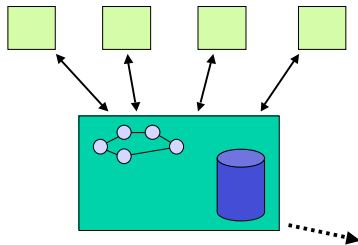
## conversation for action



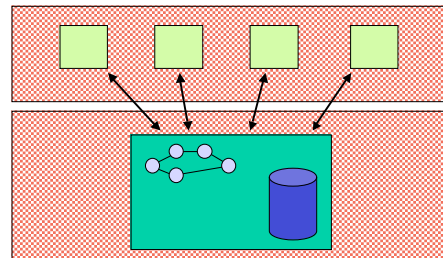
## experiences with workflow

- The Coordinator
  - speech-act based email
    - encoded an model of commitment negotiation
    - too rigid to use effectively
  - aimed in the wrong place
    - communication rather than specific activities
- modern workflow technologies
  - focused on specific processes
  - coupled to other information systems
  - coupled to other process systems
  - coupled to other organizations

## workflow architectures



## workflow architectures



dominant issues: *control & change*

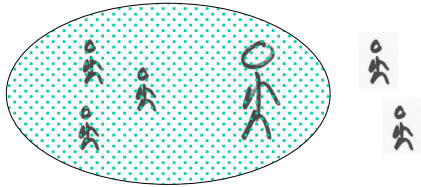
## workflow and advantage

- internal efficiency
  - optimising internal processes
    - requires measurement
    - requires control to maintain
  - substitutability of (human) resources
    - need to be able to respond to changes in demand
      - don't make outcomes dependent on individuals
- interorganizational efficiency
  - integrating suppliers into your IS structure

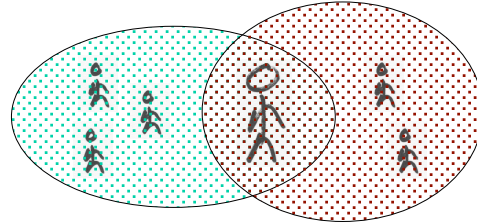
## workflow and integration



## workflow and integration



## workflow and integration



## however...

- degree of specification
  - balancing control with autonomy
  - different process languages vary
    - put the smarts in the language
    - put the smarts in the environment that executes it
- integration with existing practice
  - analysis of practice often focuses on what rather than why
  - we'll see this on Tuesday...

## next week

- a workflow system in practice
  - “Workflow from Within and Without”
  - research paper in CSCW
- issues in process modelling
- current assignment due at Tuesday's lecture