

# ETM5221 Engineering Teaming: Application and Execution

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## Week 1 April 2, 2002 Challenges of Teaming

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# Agenda

Class Overview  
Introductions  
Review the Questionnaire  
Meeting Analysis  
Teaming Challenges

# Class overview

1. Instructor Introductions
2. Class Introductions
3. Teaching and Learning Objectives
4. Course Syllabus and Policies

## Professors

Nicholas C. Romano, Jr. Ph.D.

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## Class introductions

- Your Name
- Where you work
- What is your job
- Why interested in taking this class
- Kids? Pets? Describe them
- Favorite Food
- Favorite Color

## Teaching philosophy

If we only tell you, you might forget

If we also show you, you might remember

If you get yourself involved, you will understand

## Three steps to active student learning

1. Teach: We will explain and demonstrate concepts
2. Practice: Students must take advantage of opportunities to practice using these concepts
3. Evaluate: Assignments, participation & Exams allow Instructor evaluation

Students must also learn to evaluate themselves and prepare accordingly

## We are educators, professors, NOT trainers. We will...

1. Encourage
2. Provide opportunities
3. Offer useful real world perspectives
4. Prepare students for future
5. Take a small step preparing students to better lead and manage teams

## Course syllabus detail review

## Pre-class questionnaire results

## Meeting analysis: Findings from research and practice

- Why consider meetings in teaming?
- Defining meetings
- Meeting productivity metrics

## Why consider meetings in teaming?

Research and practice illustrate that meetings:

- Are essential for accomplishing work
- Dominate workers' and managers' time
- Are considered costly, unproductive, dissatisfying
- Are steadily increasing in number and length

## Why consider meetings in teaming? (cont'd.)

"Almost every time there is a genuinely important decision to be made in an organization, a group is assigned to make it -- or at least to counsel and advise the individual who must make it."

-Hackman

## Why people meet

~~\_\_\_\_\_~~  
*Surface Perspectives*      **Monitor Project Progress**  
~~\_\_\_\_\_~~  
**Allocate Resources**      *Share the Vision*  
**Synergy**      ~~\_\_\_\_\_~~  
**Avoid Decisions**      *Prioritize Tasks*  
**Share Work**      **Solve Problems**  
~~\_\_\_\_\_~~      **Socialize**      **Build Trust**  
*Develop Project Plans*

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## Why people meet (cont'd.)

"We meet because people holding different jobs have to cooperate to get a specific task done.

We meet because the knowledge and experience needed in a specific situation are not available in one head, but have to be pieced together out of the knowledge and experience of several people."

- Peter Drucker (1967)

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## Today we collaborate through meetings

We need to understand today's meetings as thoroughly as possible in order to move to toward collaborating in a virtual world

One way to do this is through Meeting Productivity Metrics

## A big change is occurring. Why is this happening?

- Downsizing/Rightsizing
- Flattening
- Telecommuting
- Increased Competition
- Globalization
- Etc....


## A shift is taking place with respect to the critical resource

Revolutionary Age	Critical Resource
Agricultural	Physical capital (manpower, horsepower)
Industrial	Financial capital (purchasing power)
Information	What do you think it is?

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## The Information Age



Manage routine transactions (50s-60s)  
Integrated business operations (70s)  
Enterprise-wide communication (80s)  
Collaborative technology (90s)  
Ubiquitous computing 2000-???  
Manage and leverage intellectual capital

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## Intellectual capital

- **Companies typically value tangible assets, such as buildings, machinery, cash but such measures do not include the value of the work force, their knowledge, and the way they use information technology to increase productivity.**
- **In the information society intangible assets may represent significant competitive advantage.**

## Intellectual capital: Categories of intangible assets

- Human Centered Assets
- Intellectual Property Assets
- Infrastructure Assets
- Market Assets

## Meeting intellectual capital

The Gottlieb Duttweiler Foundation has estimated that organizations use only 20% of available intellectual capacity on a day to day basis.

This is most likely a high estimate.

## Existing meeting productivity metrics

- Types
- Purposes
- Time
- Number
- Cost
- Efficiency
- Problems

## Types of meetings in Corporate America

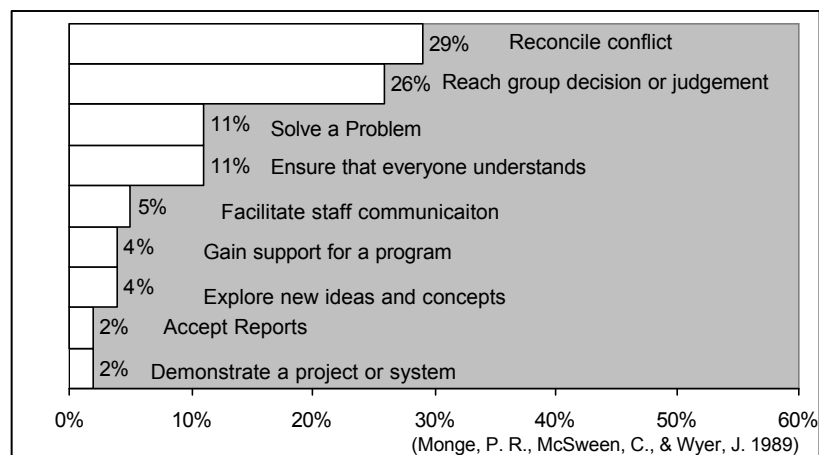
- 45% Staff
- 22% Task
- 21% Information Sharing
- 5% Brainstorming
- 2% Ceremonial
- 5% Other

Based on 903 meetings (Monge, P. R., McSween, C., & Wyer, J. 1989)

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## Meeting purposes: 66% involve complex group processes



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## Time spent in meetings shows an upward trend

1960's: Average Exec. 3 1/2 hrs/wk (~3-4 Meetings) Additional time in informal meetings (Tillman, 1960)

1970's: Average Exec. 6-7/wk (~2x 1960's Study - Rice, 1973) Managers up to 60% of their time. (Mintzberg, 1973)  
Program managers up to 80% of their time.  
Middle managers 3 or 4 full days a week.  
Some 8 straight hours in one meeting. (Van de Ven, 1973)

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## Time spent in meetings shows an upward trend (cont'd.)

1980's: Typical middle managers ~35% of their work week. Top managers 50% of their time. (Doyle, 1982)

Typical managers up to 80 % of their time. (Monge, 1989)

Average technical professional/manager 1/4 work week.

Top and middle managers 2 days/week.

Executive managers 4 days/week. (Mosvick, 1987)

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## Time spent in meetings shows an upward trend (cont'd.)

Mosvick (1982, 1986) in 2 studies over a 5 year period of 950 junior-senior managers and technical professionals in large-scale technology-intensive industries U.S. and abroad

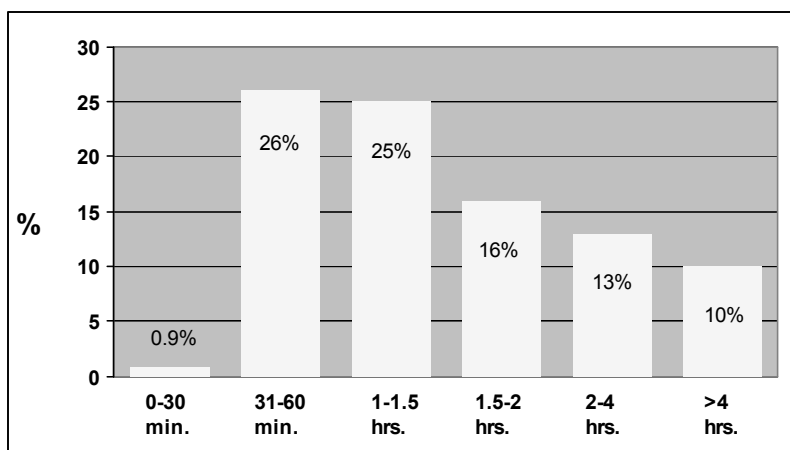
Major finding:

"a notable shift toward an increase in the number and length of meetings with an increasingly high level of dissatisfaction with meetings."

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## Reported length of meetings: 51% between 30 and 90 minutes



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(Monge, P. R., McSween, C., & Wyer, J. 1989) 30

## Time spent in meetings shows an upward trend (cont'd.)

Up to 20% of a manager's work day is spent in conference room meetings. (Panko, 1992)

Managers spend ~ 20% of their work day in 5 person or larger formal meetings and as much as 85% of their time communicating. (Panko, 1994)

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## Meeting frequency is increasing

Fortune 500 companies hold between 11 to 15 million formal meetings/day and 3 to 4 billion meetings/year (Doyle, 1982; Monge, 1989)

A 1997 survey found that in 1998...  
24% of respondents expect to hold more meetings  
85% predict the same length or longer meetings

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## Meeting costs

The 3M Meeting Productivity Study and Harrison Hofstra Study found that...

- 11-15 Million formal meetings / day
- ? Million informal meetings / day
- 3-4 Billion meetings / year
- 30-80% Manager's time in Teamwork
- 7-15% of personnel budgets on teamwork
- \$ billions of spent each year

## Meeting efficiency

On average, by managerial function,  
33% of meeting time is unproductive  
(Sheridan, 1989)

(N=1305)		
Rank	Type of Problem	Number of References
1	Getting off the subject	204
2	No goals or agenda	190
3	Too lengthy	187
4	Poor or inadequate preparation	94
5	Inconclusive	88
6	Disorganized	86
7	Ineffective leadership/lack of control	38
8	Irrelevance of information discussed	37
9	Time wasted during meetings	37
10	Starting late	36
11	Not effective for making decisions	31
12	Interruptions from within and without	30
13	Individuals dominate/aggrandize discussion	29
14	Rambling, redundant, or digressive discussion	27
15	No published results or follow up actions	25
16	No pre-meeting orientation/cancelled or postponed meetings	20
17	Meetings too large/too many people	13
18	Ineffective speakers/communication problems	13
19	Too much information presented	12
20	Poor attitudes or effort by participants	10
21	Lack of participation	8
22	Participants have no decision authority	8

Source: Data combined from [Mosvick, 1982 #876; Mosvick, 1986 #877]

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## Meeting problems: Agenda (or lack thereof)

No goals or agenda – 2nd most commonly reported problem (Mosvick, 1987)

~ 50% had no written agenda;  
 However 73% of respondents felt an agenda is "essential" for a productive meeting.  
 (Burluson, 1990; Sheridan, 1989 - Harrison-Hofstra Survey)

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## Meeting problems: Agenda (or lack thereof) (cont'd.)

32% No stated agenda

17% Prior Verbal agendas

9% Written agendas distributed at start

29% Prior written agendas

(Monge, 1989)

## Workers express the desire to work in groups

3 year survey of 10,277 U.S. workers from all levels of employment that 97% reported they needed conditions that encourage collaboration to do their best work. (Hall, 1994)

## A recent survey of executives found that...

43% of them admitted dozing off at least  
once during a meeting

The majority concluded that 20-30% of  
meetings were unnecessary

(Erickson, 1998)

## Findings

Decades of study show that meetings dominate  
workers' and managers' time and yet are  
considered to be costly, unproductive and  
dissatisfying.

Yet meetings are essential, because no one  
person has the knowledge, insight, skills and  
experience to do the job alone. (Erickson, 1998)

## Steps to move toward understanding

- Develop better Collaboration Productivity Metrics
- Develop a Collaboration Productivity Maturity Model
- Develop and Test Guidelines and Interventions to improve Collaboration Productivity via Procedures, Facilitation, and Technology (Erickson, 1998)

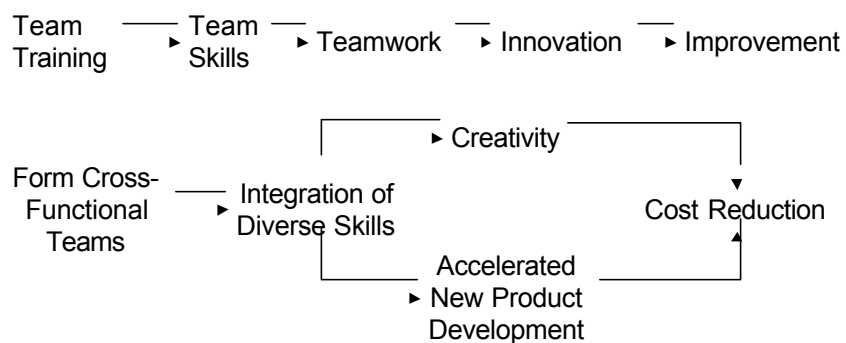
## Why do some demonstrate teamwork, others don't?

- Why did the same teamwork approach lead to such widely varying results?
- If the pilot effort was such a success, why are other applications of teamwork failing?
- Why is the probability of effective teamwork over there higher than it is here?

## The underlying theory or logic is probably not to blame

- An idea is deemed good, in part, because it makes logical sense
  - Install Teams  $\rightarrow$  A  $\rightarrow$  B  $\rightarrow$  C  $\rightarrow$  Improvement
- This logic is easily transferred to – and makes sense in – a lot of different settings
- And, more often than not, a success story exists that provides support for this logic

## For example...



## Unfortunately, the real world has its own logic (at times)

- Potential sources of slippage are found at each step of a train-of-logic
- These sources vary from setting-to-setting with respect to direction, magnitude, and pliability
- They influence the degree to which the logic train plays itself out or derails
  - In other words, they influence probability of effective implementation

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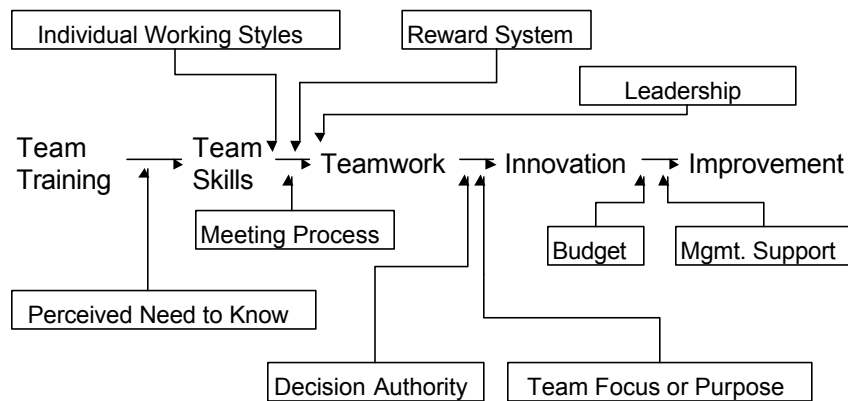
## Implementation often takes on a field of dreams approach

- Install the good idea, make it operational, and the desired results will come
- Installation – or solving the Stage 1 Problem - is one thing, what happens next is another
- Where installation (more or less) ends, the Stage 2 Problem begins
  - Effective use to the point of functionality (optimality)
  - Given a good idea's installation, what must be done to increase the probability of success?

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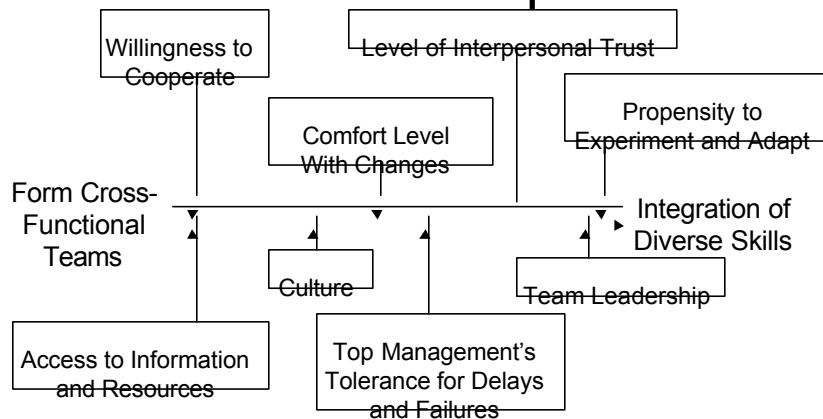
For example, assume training has been done. What next?



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## Another example

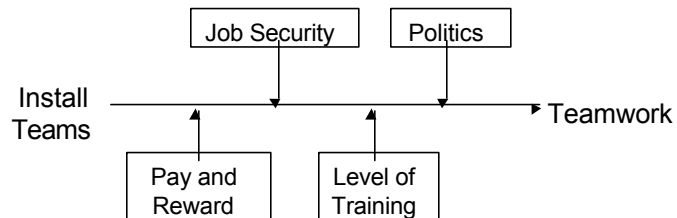


Based on Jassawalla, A.R. and H.C. Sashittal, *Building collaborative cross-functional product teams*. *Academy of Management Executive*, 1999. 13(3): p. 50-63.

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## And one more (simplistic) example

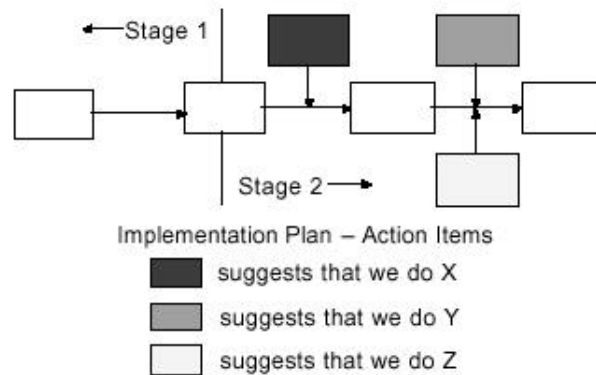


Based on Tudor, T.R. and R.R. Trumble, *Work-teams: Why do they often fail?* S.A.M. Advanced Management Journal, 1996. 61(4): p. 31-41.

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## Sources of slippage suggest ways to increase probability of change



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## Good ideas are good only to the degree they achieve good results

- The trains-of-logic that underlying teamwork are hard to argue against
- However, it's sources of slippage that influence whether that logic train plays out or derails
- The probability of success can be increased by paying attention to these sources of slippage
- The Stage 2 Problem, therefore, should be the centerpiece of implementation planning