PMINJ Chapter
May 4th Symposium 2015

Time Management & Knowledge creation IN Projects

Dr. Katia Passerini (presenter)
New Jersey Institute of Technology
In collaboration with
Dr. Dezhi Wu
Southern Utah University

# TIME MANAGEMENT & KNOWLEDGE CREATION IN PROJECTS

Dr. Katia Passerini (presenter)
New Jersey Institute of Technology

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Southern Utah University

OUTLINE

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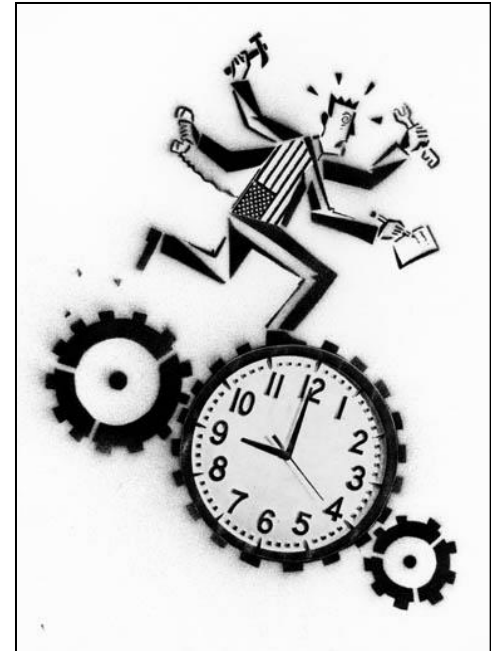
INTRODUCTION

- **Organizations always strive to manage time efficiently.**

- **People are *overwhelmed* with multiple pressures to get their work completed on time.**

- **Increasingly complex *time demands* and constraints have been placed on people and organizations**

  - **i.e. the anytime-anywhere employee**

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"...And what's more Pearson, it hasn't gone unnoticed that you're not meeting your deadlines."

THE OBJECTIVES OF THIS RESEARCH

- To explore how *professionals manage their time demands* and respond to the temporal boundaries designed by their organization.

- To explore how *temporal knowledge (k-on time management)* is created, retrieved, stored and applied in work and life contexts.

- To categorize *what types of knowledge* are being utilized in personal time management practices.

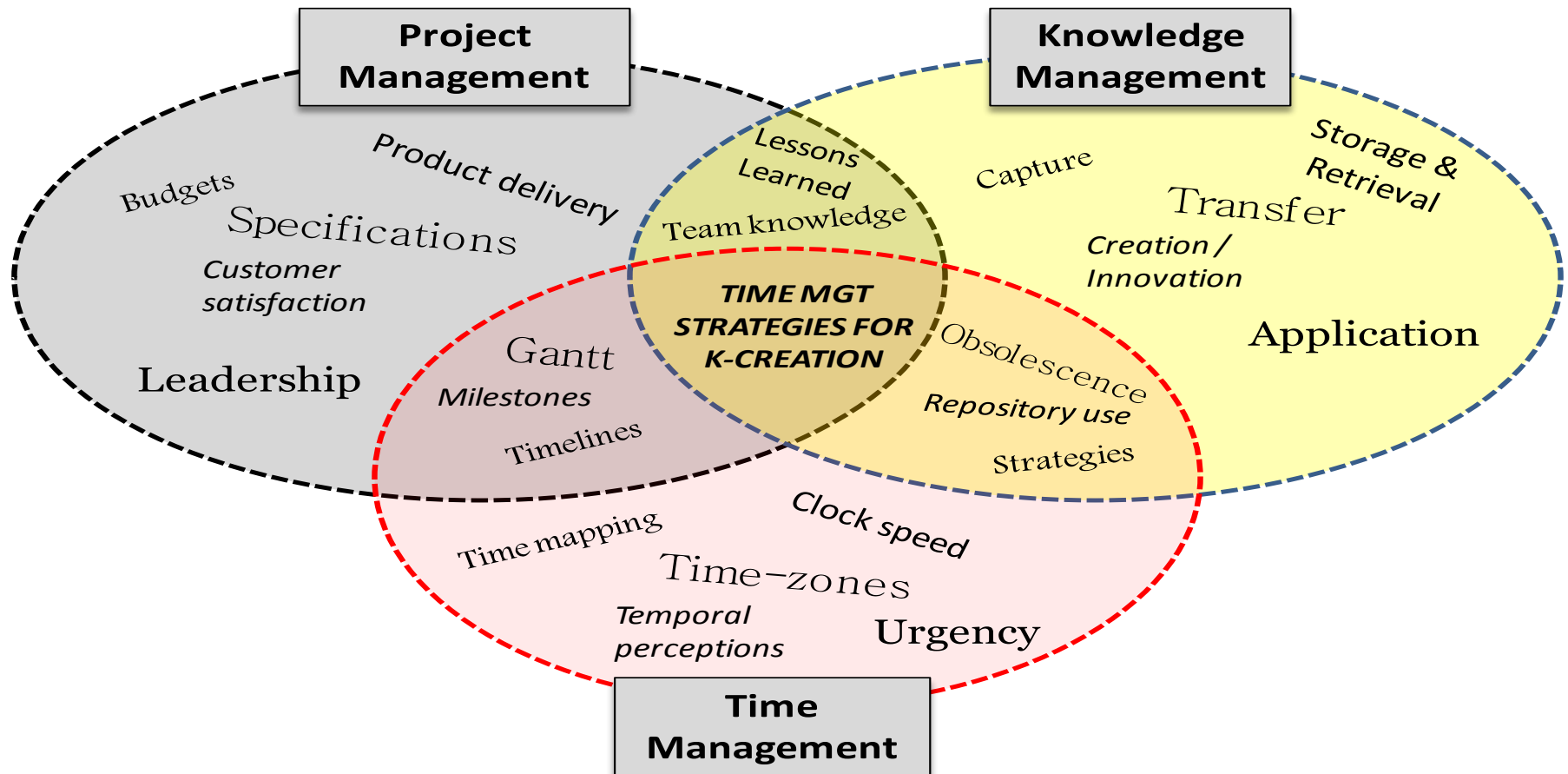05/04/2015

THEORETICAL BACKGROUND (OVERVIEW)

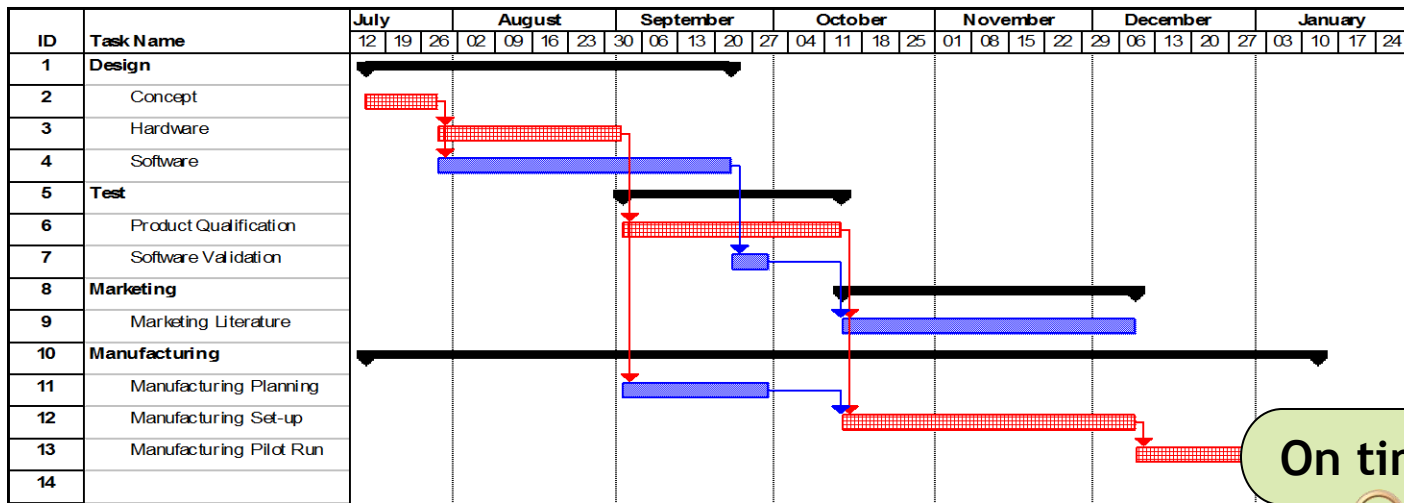Figure 1: Relationships among Time Mgt., Knowledge Mgt. and Project Mgt.

THEORETICAL BACKGROUND (1)

- ***Time Management in Organizations***
  - Orlikowski and Yates (2002) state that "management in organization has long had an *obsession with time*."
  - For the vast majority of organizations, time is "*not just an immutable constant…but a cluster of concepts, events, and rhythms covering an extremely wide range of phenomena*" that need to be managed (Hall, 1983, p. 13).
  - Time management is viewed as a *necessary endeavor* for companies that wish to remain *competitive* (Richard, 1987).

THEORETICAL BACKGROUND (2)

■ *Time Management & Project Management*

ID	Task Name	July 12	19	26	August 02	09	16	23	30	September 06	13	20	27	October 04	11	18	25	November 01	08	15	22	29	December 06	13	20	27	January 03	10	17	24
1	**Design**																													
2	Concept																													
3	Hardware																													
4	Software																													
5	**Test**																													
6	Product Qualification																													
7	Software Validation																													
8	**Marketing**																													
9	Marketing Literature																													
10	**Manufacturing**																													
11	Manufacturing Planning																													
12	Manufacturing Set-up																													
13	Manufacturing Pilot Run																													
14																														

On time

On budget

Specifications/ SCOPE

THEORETICAL BACKGROUND (3)

- ***Time Mgt & Knowledge Management***
  - The value of knowledge is dependent on the *context* of its use, and time is a critical component of context
    - Therefore, knowledge and time mgt are **intrinsically** related, with time being an attribute of the value of knowledge (k-timeliness).

  - Knowledge management is focused on "organizing and making available important knowledge, **wherever and whenever** it is needed" (Sabherwal and Becerra-Fernandez, 2003, p. 228).

THEORETICAL BACKGROUND (4)

- ***Time Mgt & Knowledge Mgt Systems (KMS)***
  - KMS are a class of information systems designed to manage organizational knowledge.

  - KMSs can be organized through taxonomies (Alavi & Leidner, 2001), many of which are time-dependent.

    - "**Repository model**" – the essence is its *update*, *relevance* and *timeliness* of information resources
    - "**Network model**" – is used to indicate the exchange of knowledge in the online forums and communities at *different times*.

RESEARCH APPROACH

- **(Phase 1) A set of in-depth semi-structured interviews was conducted with twenty knowledge workers in a US public research university.**
  - **Each interview lasted from 20 minutes to 1 hour.**
  - **The interviews focused on *personal time management strategies* with a review of individuals' daily, weekly and monthly schedules.**
- *(Phase 2) Research replicated @ similar site in the US West Coast with fifteen knowledge workers*

SAMPLE INTERVIEW QUESTIONS

- *When you have **too many things to do**, what kind of time management **strategy** do you use to get your work done on time?*

- *When you have **important deadlines**, how do you usually handle your professional and personal demands?*

- *When you have too many **meetings**, how do you deal with more important work?*

- *Do you feel you lose **control of your time**? If yes, why? If not, why not?*

- *Do you usually **participate in any social events**? If yes, why? If not, why not?*

DATA ANALYSIS METHOD

- **All interviews were audio-taped and transcribed.**
  - **The entire transcript has over 350 pages, and later were transferred into a spreadsheet broken by lines with separate and self-contained statements.**

- **Alavi and Leidner (2001)'s review of *knowledge definitions* served as a basis of our *coding analysis scheme*.**

DATA ANALYSIS METHOD (2)

■ **Two independent researchers coded all the transcript units.**

■ **Cohen's Kappa coefficient (Kraemer, 1982) was performed, and intercoder coding reliability reached a satisfying level.**

Individual Profiles	
Subject	**Role**
1	Assistant Professor
2	Assistant Professor
3	Assistant Professor
4	Assistant Professor
5	Associate Professor
6	Associate Professor
7	Distinguished Professor
8	Distinguished Professor
9	Instructor+PhDStudent
10	Instructor+PhDStudent
11	Instructor+PhDStudent
12	PhD Student
13	Dept. Chair
14	Associate Dean
15	Dean
16	Dean
17	President
18	Coordinator
19	Coordinator
20	Secretary

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SUMMARY OF RESULTS (CODING GROUPS)

Main Coding Categories	Coding Subcategories	Frequency					
		Coder 1		Coder 2		Mean	
		Count	Percentage	Count	Percentage	Count	Percentage
1) Nature of Time	Explicit	329	94.5	317	91.1	323	*92.8*
	Tacit	19	5.5	31	8.9	25	7.2
2) Actors / Users	Individual	123	35.3	150	43.1	137	*39.4*
	Group	16	4.6	26	7.5	21	6.0
	Organization	188	54.0	153	44.0	170	*48.9*
	Inter-organization	21	6.0	19	5.5	20	5.7
3) Related Processes / Activities	Creation	31	8.9	35	10.1	33	9.5
	Storage/Retrieval	69	19.8	57	16.4	63	18.1
	Transfer	98	28.2	111	31.9	105	*30.2*
	Application	150	43.1	145	41.7	147	*42.2*
4) Related to the Purpose / Use of Time	Procedural	33	9.5	63	18.1	48	13.8
	Conditional	132	37.9	91	26.2	111	*31.9*
	Relational	38	10.9	69	19.8	54	15.5
	Pragmatic	145	41.7	125	35.9	135	*38.8*

Coding Categories Frequency Analysis

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STUDY RESULTS (1)

	1) Nature (epistemology) of time
Explicit	**Articulated, generalized and codified understanding of time structures and deadlines.** Example: *"I need to grade assignments today." "I always said that I have to return students work in one week."*
Tacit	**Rooted in actions, experience, and dependent on a specific context; not necessarily articulated even in the mind of the user.** Example: *"Because - you know - research is not something that you can do from 10 o'clock to 12 o'clock. It's idea generation… Sometimes, I got ideas from casual chats with other people. So I think that's also important." "Or something like that…it is need based, so I don't think we can call it a strategy."*

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STUDY RESULTS (1)

- **Easy to articulate (explicit)**

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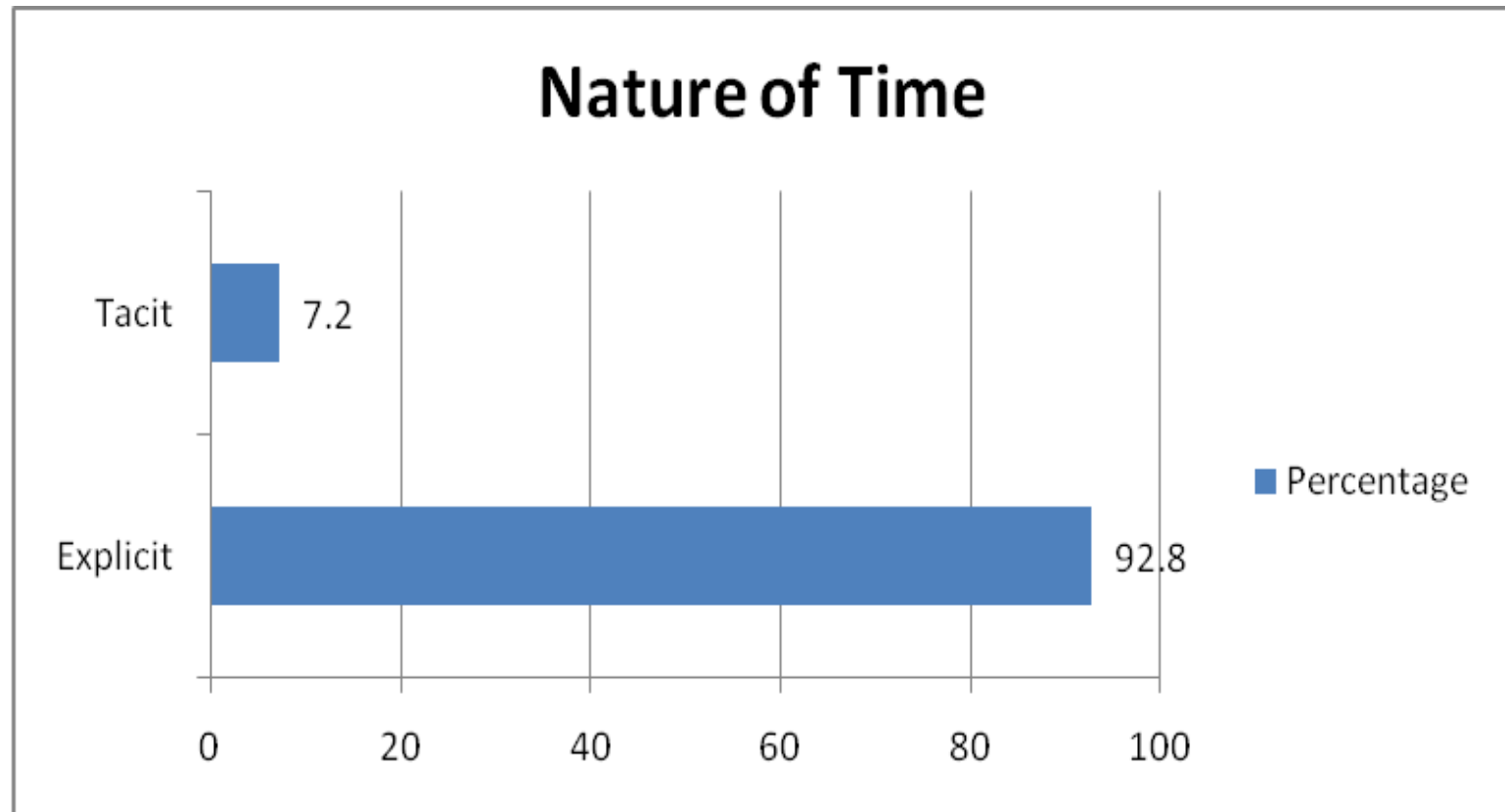
STUDY RESULTS (2)

2) Actors / Users (ontological dimension)	
Individual	**Definition of time & deadlines is created by & inherent to individuals.** Example: *"I schedule time in the morning to get things done."*
Group	**Temporal norms and boundaries are created by and inherent to the collective actions of a group.** Example**:** *"Because you upset other people by not getting things done on time because they have to wait, you upset a whole mechanism."*
Organization	**Definition of time & deadlines are created by & inherent to the organization.** Example: *"Well certain priorities are set up by deadlines. There are things that have to be turned in, and done at the university."*
Inter-organization	**Definition of time & deadlines are created & reside outside the organization.** Example: *"Some deadlines you just don't meet. For example, there is a deadline for a paper for a specific journal, Sept. 30th and two days before the deadline…"*

STUDY RESULTS (2)

- Organization & Individual Control
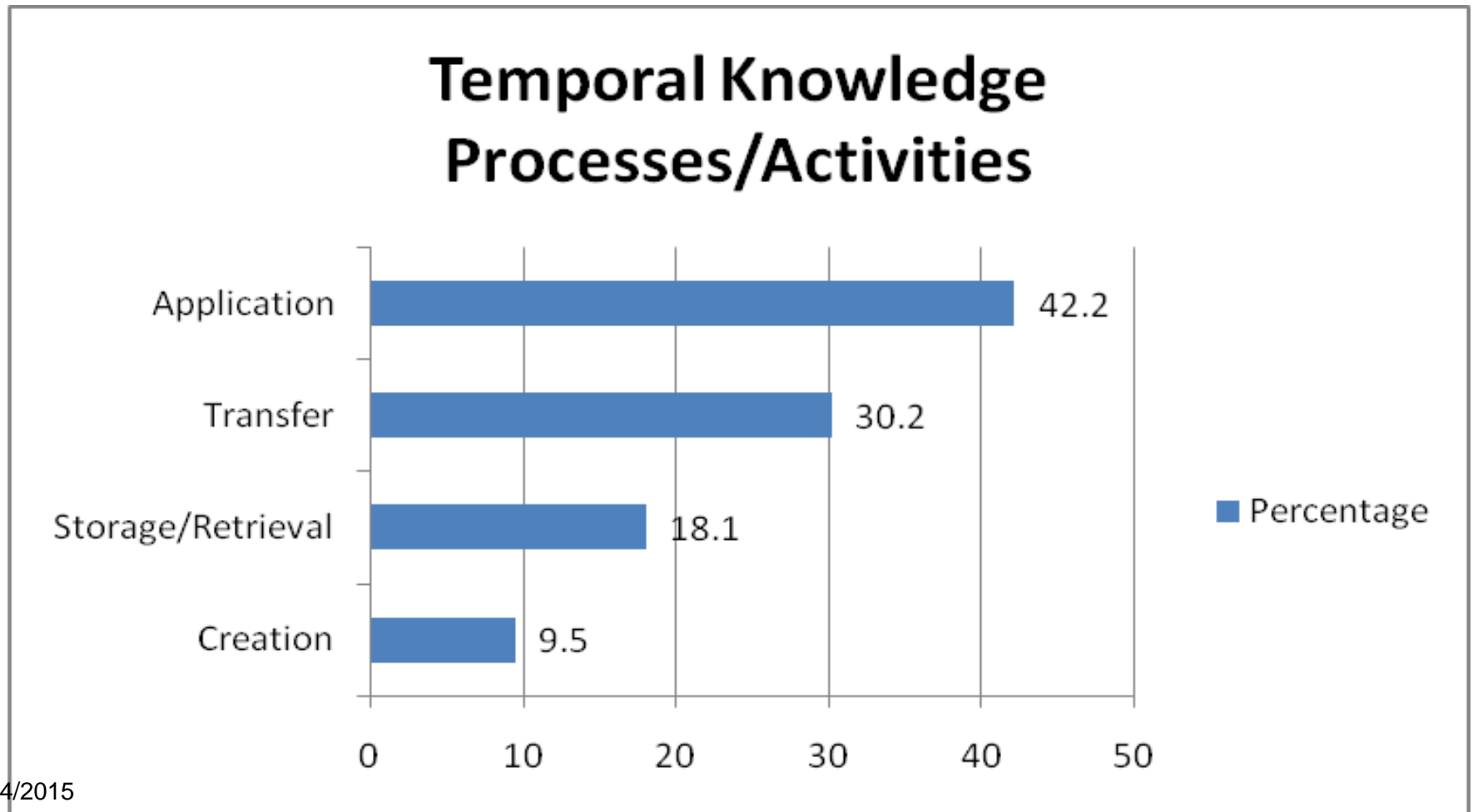

Temporal Knowledge Actors/Users

Actor/User	Percentage
Inter-organization	5.7
Organization	48.9
Group	6
Individual	39.4
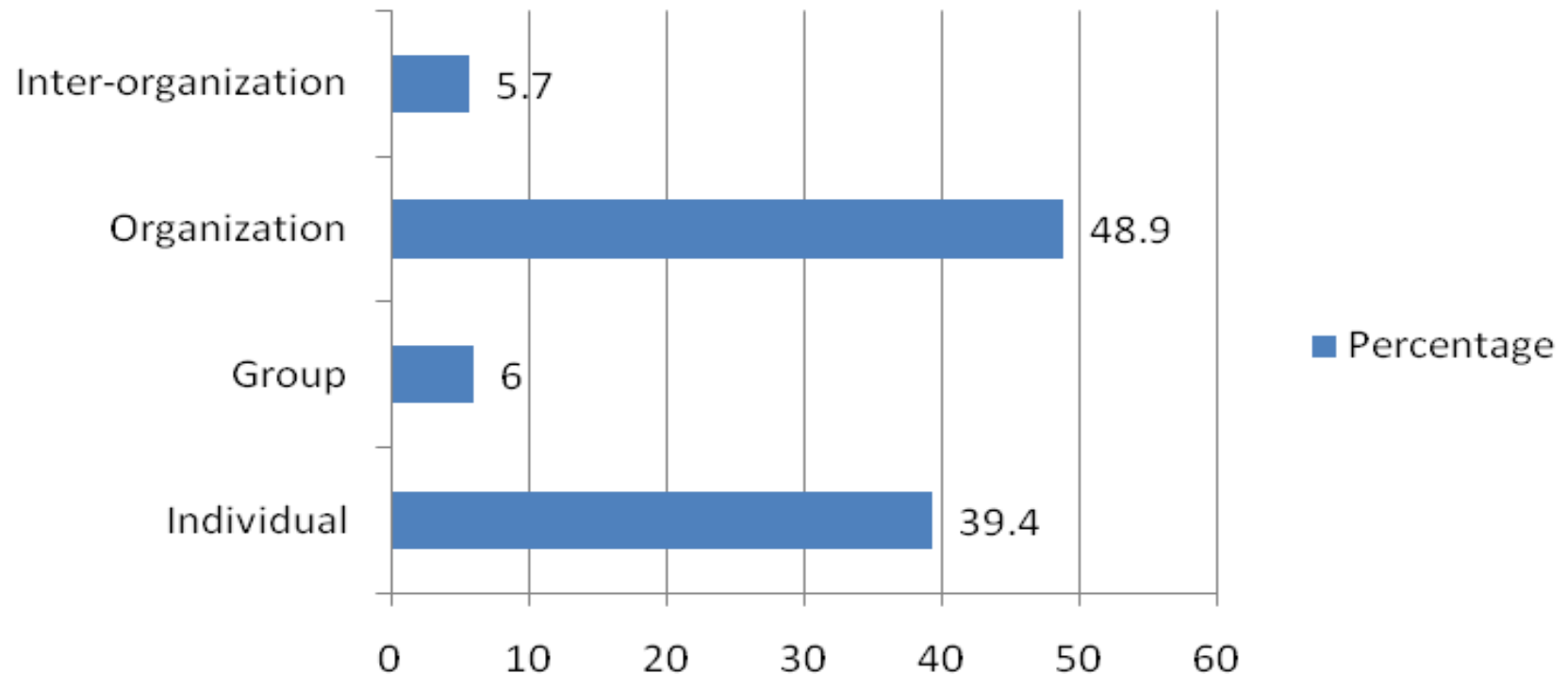
STUDY RESULTS (3)

3) Related processes / activities	
Creation	**Involves scheduling to develop new content or enhance existing content.** Example: *"Well, for the year of my sabbatical, my short term goal is to write some papers and get the first draft done of the book."*
Storage/ Retrieval	**Involves using scheduling tools to codify and retrieve deadlines and is articulated through written documentation, structured information in databases etc.** Example: *"I use my PDA to write down meetings…and I put down tasks that I have and make sure that I don't forget them."*
Transfer	**Refers to using time to transfer (info and knowledge) between individuals, from individuals to groups, between & across groups, & from groups to the organization** Example: *"But I really enjoyed time I spend time with my students, one on one. That is one of my favorite times during the week. So I enjoy it and I enjoy what comes out of it because students really respond to that individual attention and it's very rewarding for me to do that."*
Application	**Involves focusing on actions and application.** Example: *"To manage email traffic we create folders such as A, B, C, and D, like your priorities. But the folder D is where you put your friends' emails. They don't need to be responded immediately, and can be responded later."*

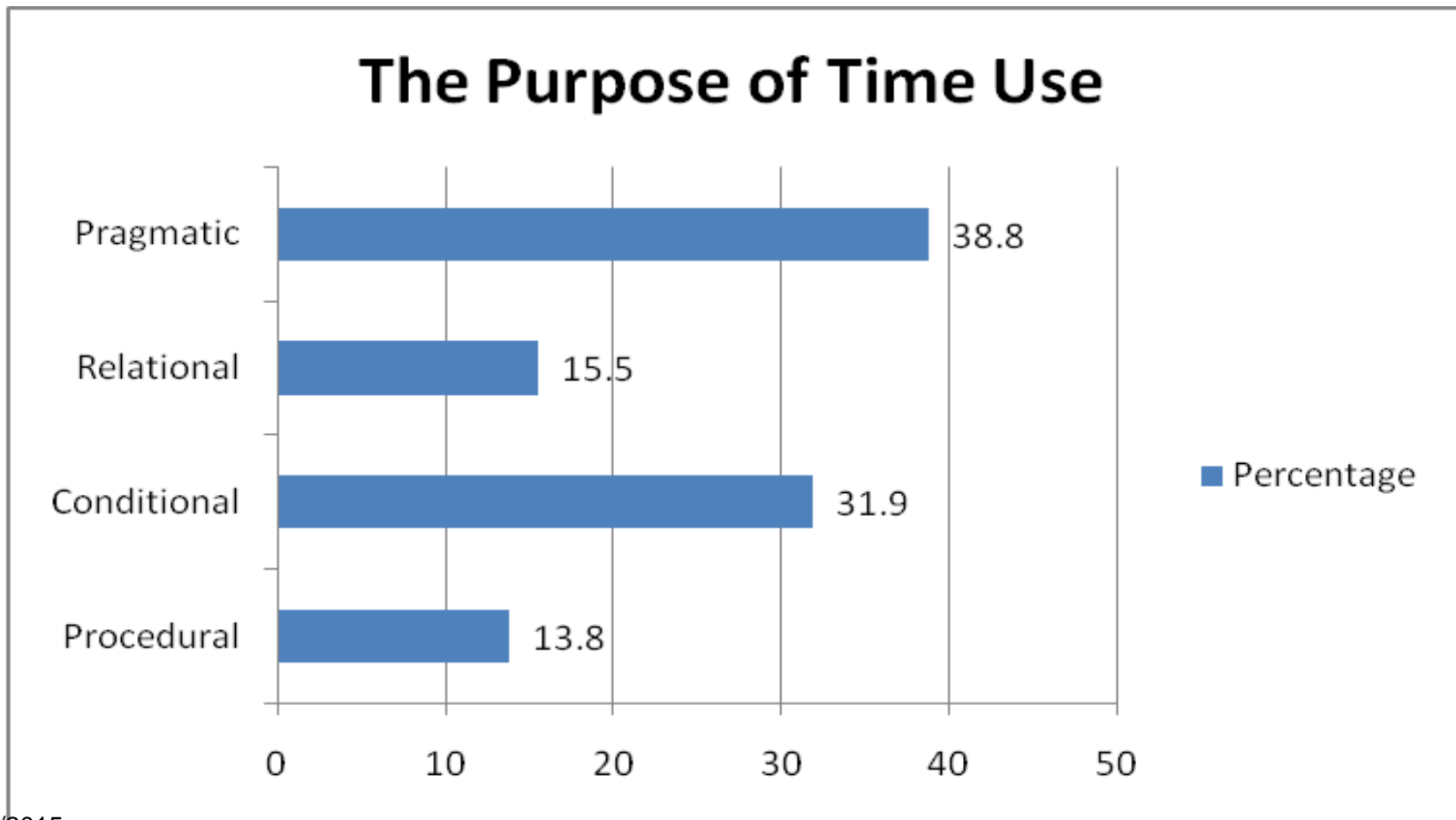# STUDY RESULTS (3)

- Application highest / **Creation lowest???**

STUDY RESULTS (4)

4) Related to the purpose / use of time	
Procedural	**Know-how** Example: *"Inside of my calendar, there are clips. I have like file folder labels; then I have little post-it notes. And I use colors to show the different classes."*
Conditional	**Know-when** Example: *"I don't have to come to school on Thursday, Friday, Saturday or Sunday."*
Relational	**Know-with** Example: *"If there are parties held for the department, I usually hold the parties, or I attend the parties, and I do that simple because really nice if I go…other people notice, and people appreciate that."*
Pragmatic	**Useful and practical time management** Example: *"I try to put due dates that are earlier than the real due dates."* *"Well not newspapers, usually during the meeting, I am doing grading and skimming articles, reading articles."*

STUDY RESULTS (4)

- Pragmatic

The Purpose of Time Use

| Category	Percentage
Pragmatic	38.8
Relational	15.5
Conditional	31.9
Procedural	13.8

CONCLUSIONS (SUMMARY)

- Even in a context where scheduling self-determination is rather high, organizations are still highly driven by *explicit* deadlines which are codified and clear to the actors.

- At least 50% of the time was determined by **institutional players** (bosses or organizational structures).

- Somewhat incoherently with the nature of an academic institution, the majority of the scheduling refers to *application processes*, little to k-creation.

- The study results show that knowledge workers focus on *conditional knowledge of time* (i.e., understanding when the deadlines are), and *pragmatic knowledge* (i.e., finding out appropriate strategies for achieving time management goals).

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STUDY LIMITATIONS

- **This study was conducted in an *academic institution*, and thus the results might not be generalized to other types of business organizations.**

- **Coding scheme**
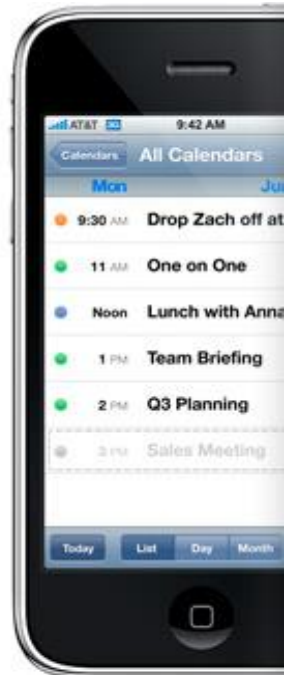 - **Temporal knowledge categories may be beyond the four main knowledge categorizations.**

FUTURE RESEARCH (1)

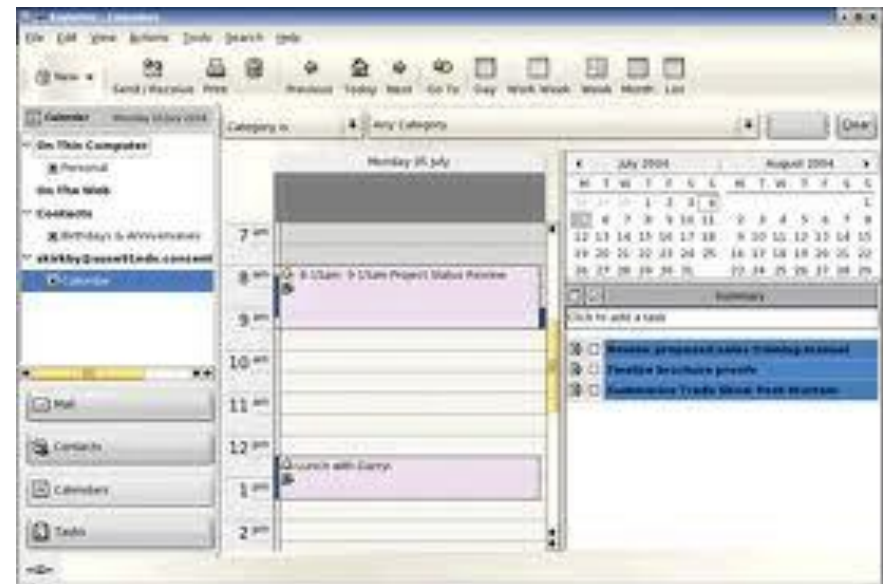- Further analyze the interview data according to **individual profiles/groups**.
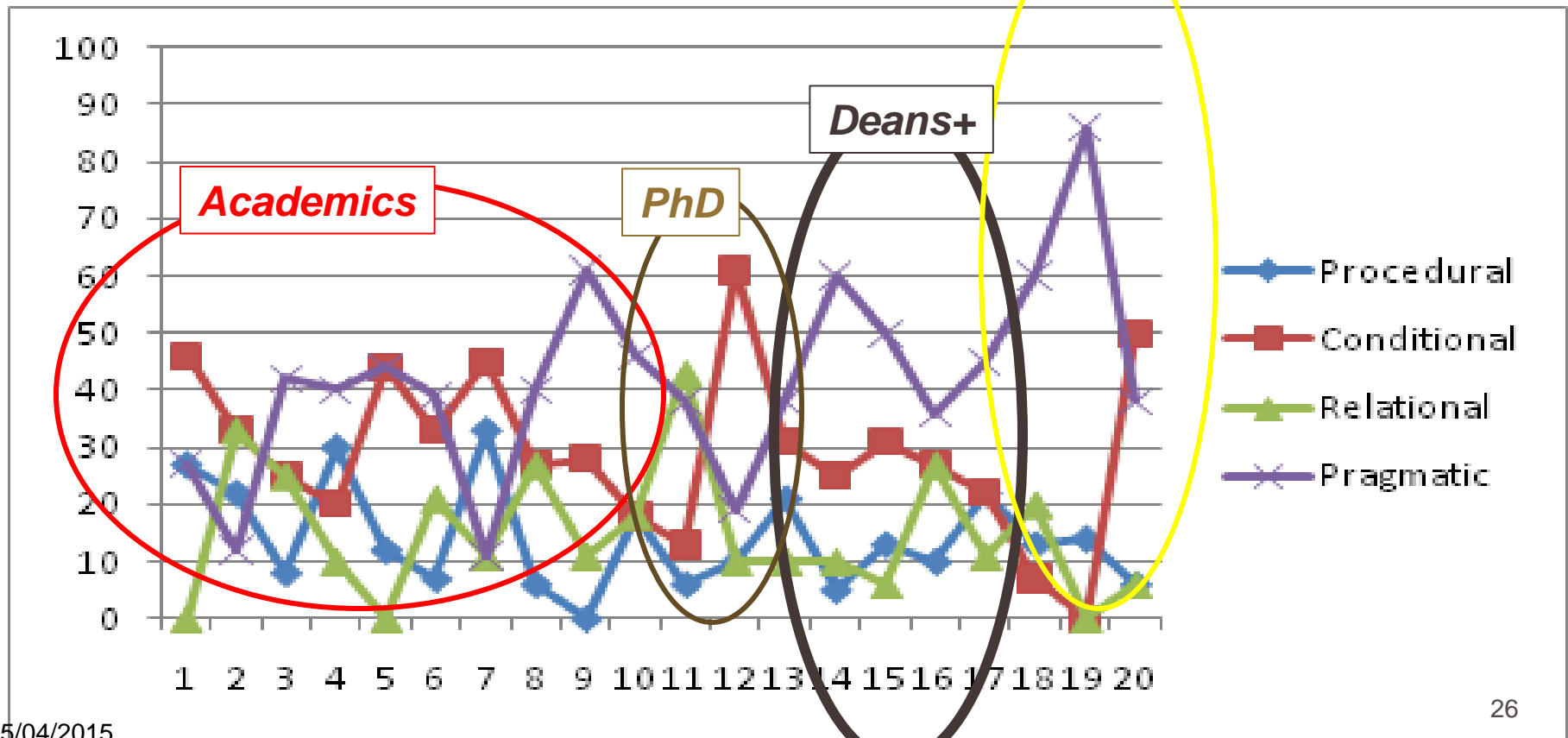
FUTURE RESEARCH (2)

- To expand this study to **other types of organizations**.
- To get insights for **improving the current time management systems**.

FUTURE RESEARCH EXAMPLE: IT PROFESSIONALS IN ACADEMIC SETTINGS

- **16 IT employees interviewed at SUU**

  - No individual time control (organization-driven)
  - Good time mgt strategies
  - Use of calendar tools integrated across systems
    - i.e. **Novell Groupwise** integrated into **Blackberry**
      - Personal **Google calendar** also integrated

THANK YOU