



**Universität  
Zürich** <sup>UZH</sup>

**Center for Research in Sports Administration**

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# Managing your Ph.D. process

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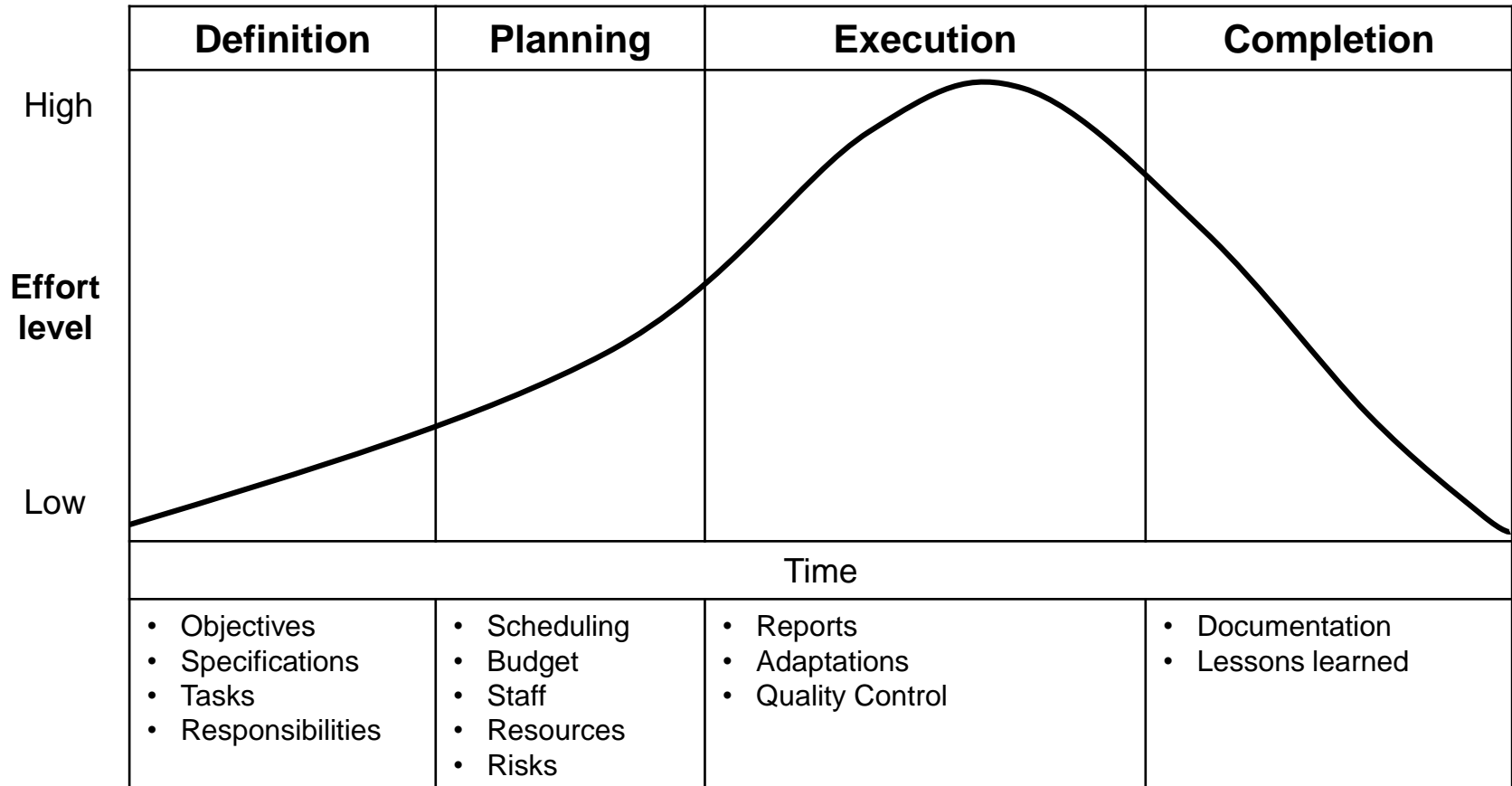


## **Who I am**

- Professor of Services & Operations Management, University of Zurich
- Chairman of the Board of Directors of the Center for Research in Sports Administration, University of Zurich
- Associate Editor of the Journal of Sports Economics
- Dipl.-Kaufmann, Ludwig-Maximilians-University Munich (1988)
- Dr. oec. publ., Ludwig-Maximilians-University Munich (1991)
- Dr. rer. pol. habil., Ludwig-Maximilians-University Munich (1996)

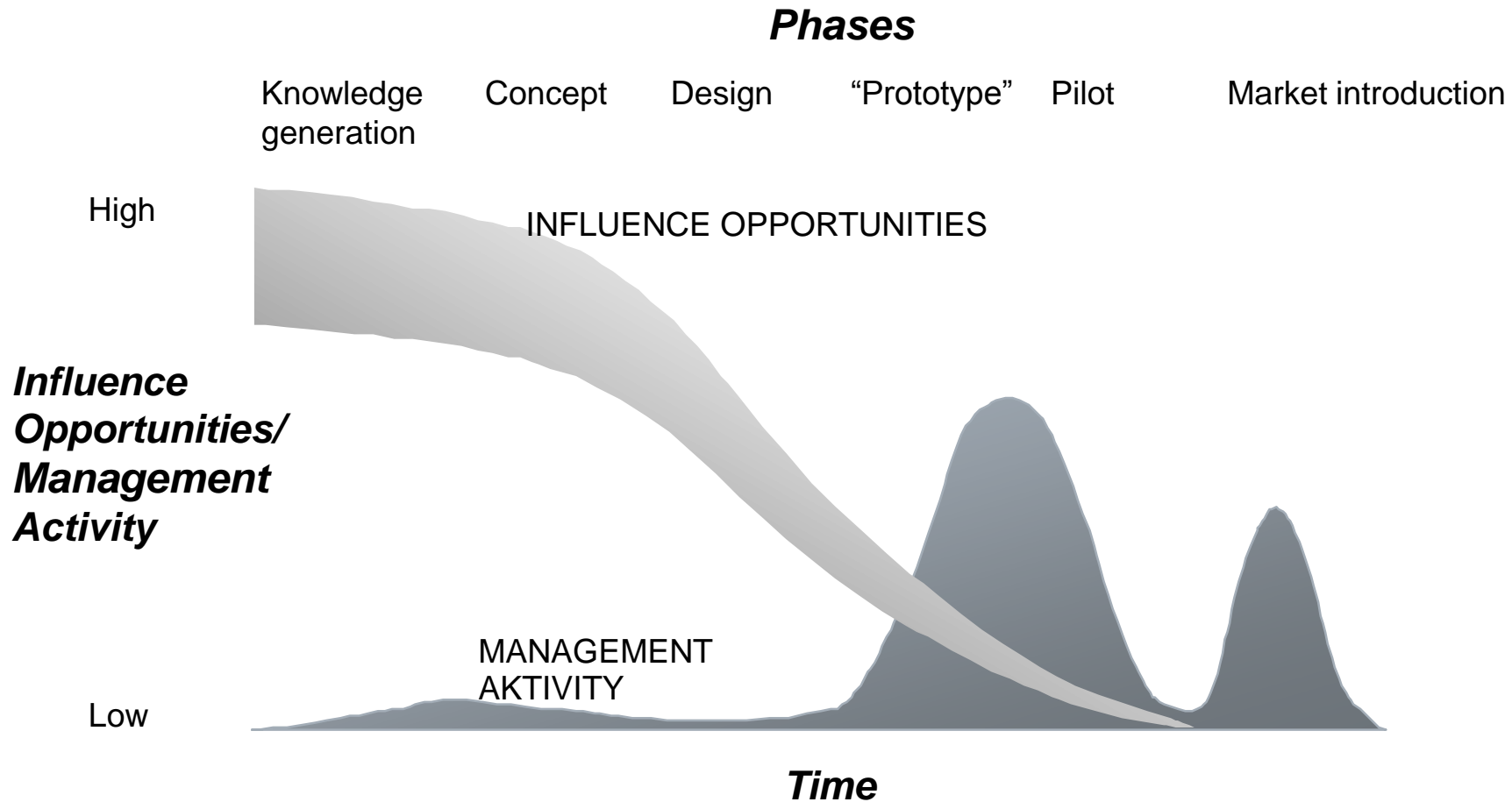


# Lessons from Project Management: Project Lifecycle





# Project Dilemma





## Important Milestones

- Graduation (Bachelor/Master's Degree)
- Application as Doctoral Student
- Acceptance as Doctoral Student
- Coursework requirements
- **Dissertation (Thesis, papers)**
- **Defense (oral exam)**
- After Ph.D.



## Backward Induction

- Game theory: The process of deducing backwards from the end of a problem or scenario to infer a sequence of optimal actions.
- Dynamic Programming (finite horizon): The process where the first stage to be analyzed is the final stage of the problem and problems are solved moving back one stage at a time until all stages are included.
- Final stage: After Ph.D.
  - Academic career vs. career outside of academia
  - In both cases: Ph.D. as a signal



## Outside Academia

- Important signals
  - Duration
    - The faster the better (c.p.)
  - Grade
    - Often less important
  - Topic(s)
    - Relevance for the job
  - Publication of thesis/papers
    - Less important
  - Supervisor
    - Reputation in the industry
  - University
    - Reputation in the industry



## Academia

- Important signals
  - Duration
    - Less important
  - Grade
    - Usually minimum requirements
  - Topic(s)
    - => field of specialization (method and application)
  - Publication of thesis/papers
    - Most important
    - Often pipeline for tenure track decision
  - Supervisor
    - Reputation in academia
  - University
    - Reputation in academia





## Defense (Oral Exam) (1/4)

- Knowing the format of your defense
  - Format differs across countries, universities and faculties
- Prepare and practice your presentation
  - First at home in front of a mirror and a clock to measure the duration
  - Then in front of your colleagues and friends
    - Practice as often as possible
    - Listen to feedback
  - If possible, practice in the room where your defense takes place
    - Check beamer, micro, etc.



## Defense (Oral Exam) (2/4)

- How to present
  - Start with a summary slide which contains
    - Research question in one or two sentences
    - Research method in one or two sentences
    - Major results in one or two sentences
    - Significance of results in one or two sentences
  - Continue with motivation, related literature, data and/or model, etc.
  - Always include a slide which deals with the generalization and relevance of your results
  - Finish with summary slide which contains
    - Results of your research
    - Relevance of your results (e.g. policy/management implications)
    - Limitations of your research
    - Open questions for future research
  - Always prepare backup slides for clarification and potential questions



## Defense (Oral Exam) (3/4)

- Format of your slides
  - Font size: make sure that everybody in the room can read your slides
  - You may use photos or videos, but do not try to be fancy!
- Content of your slides
  - Do not try to put too much content into one slide
    - Often less is more
- Style of presentation
  - Stand up and face the audience!
  - Be authentic
    - Do not try to imitate!
    - Do not try to hide your nervousness (everybody expects you to be nervous!)
  - Slow down!
    - Do not speak too fast!
    - Take a deep breath after each sentence and make a short pause after each slide



## Defense (Oral Exam) (4/4)

- How to prepare for the questions part?
  - Read the reports of your examiners (if possible)
  - Put yourself in the role of an examiner and think what you would ask
  - Collect all questions from your friends/peers when you practice your presentation with them
  - Prepare backup slides for expected questions
- How to deal with unexpected questions?
  - Do not panic if you are surprised by the question
  - First analyze the question
    - Think loud so that the audience can follow how you analyze the question
  - Then work your way step by step towards a possible answer
    - Again, speak out the sequence of your thoughts
  - Do not guess!
    - If you cannot find an answer say so and explain why!



## Dissertation (Thesis): The First Step

- Rearrange your entire life!
  - Until now, most (if not all!) of what you did was repetitive
  - Your dissertation is about something new
    - Something that changes our thinking!
    - New theory, new evidence, new insights, etc.
  - This requires dedication and time!
    - Learn to say no! (to family, friends, partner)
    - It takes 10 000 hours to become an expert!
    - $10\,000 / (365 \times 3) = 9.1$  h/day
    - $10\,000 / (365 \times 5) = 5.5$  h/day



## Dissertation (Thesis): Defining Your Research Topic

- Where do you want to be in 5, 10, 20 years?
  - What do you want to be known for as a researcher?
- Topics in the field of sports
  - Peculiarities of the sports industry
    - Focus is narrower
    - Post-doc position in sports management
  - Sports as a “lab”
    - Focus is broader
    - Post-doc position in other fields



## Peculiarities of the Sports Industry

- Why is the sports industry different?
  - Competitive Balance
- Focus on **Sports** Management
  - Results are limited to sports industry
  - Publication in sports journal
- Career Paths
  - Assistant Professor of Sports Management
  - Job in the sports industry



## Sports as a “Laboratory”

- Sports is one industry of many, but an ideal “lab”
  - Large amount of data
    - Time series, cross-section, panel
  - Data objectively measurable
  - Data publically available
  - Constant “environment”
    - Fixed rules and regulations
- Focus on Sports **Management**
  - Idea: Results are generalizable
  - Publication in general journal
- Career Paths
  - Assistant Professor of Management
  - Job in any field





## Examples

- Peculiarities of the sports industry
  - Araia, A.; Y. Ko and S. Ross (2014): Branding athletes: Exploration and conceptualization of athlete brand image, in: Sport Management Review
- Sports as a “lab”
  - Kilduff, M.; C. Crossland, W. Tsai and M. Bowers (2017): Magnification and Correction of the Acolyte Effect: Initial Benefits and Ex Post Settling up in NFL Coaching Careers, in: Academy of Management Journal
- Exceptions to the “Rule”
  - Speed, R. and P. Thompson (2000): Determinants of Sports Sponsorship Response, in: Journal of the Academy of Marketing Science



## How to Define a Research Problem: Develop an Idea

- Option 1: Start from an unsolved problem, puzzle, anecdote, etc.
  - Why are many athletes bankrupt soon after the end of their career?
  - Why does Maria Sharapova earn such a high income from endorsements?
  - “We have no state and city taxes, and it’s always 80 degrees.” (Glenn “Doc” Rivers, Orlando Magic)
- Option 2: Start from a theoretical prediction or common assumption
  - Min Max in game theory
  - Is there discrimination?
- Option 3: Be creative!!!
  - Corruption in sumo



## From Idea to Research Project

- Narrow down your topic
  - First: Define what you do **not** want to investigate
  - Second: Write a note which answers the following questions
    - What topic do I want to study?
    - Why do I want to study this topic?
    - Which scientific method(s) do I want to apply?
    - What results do I expect?
    - Why are these (potential) results important?
  - Third: Give that note to your friends, peers and your supervisor
    - Analyze their feedback
    - Redefine your research if necessary
    - Revise your note accordingly
    - Repeat the third step if necessary



## **Research Project: Essentials**

- **Research Question**
  - Which research question(s) do you want to answer
- **Methodology**
  - Which scientific method do you plan to apply
- **Results**
  - What do you plan to find out
- **Significance**
  - Why are these results important



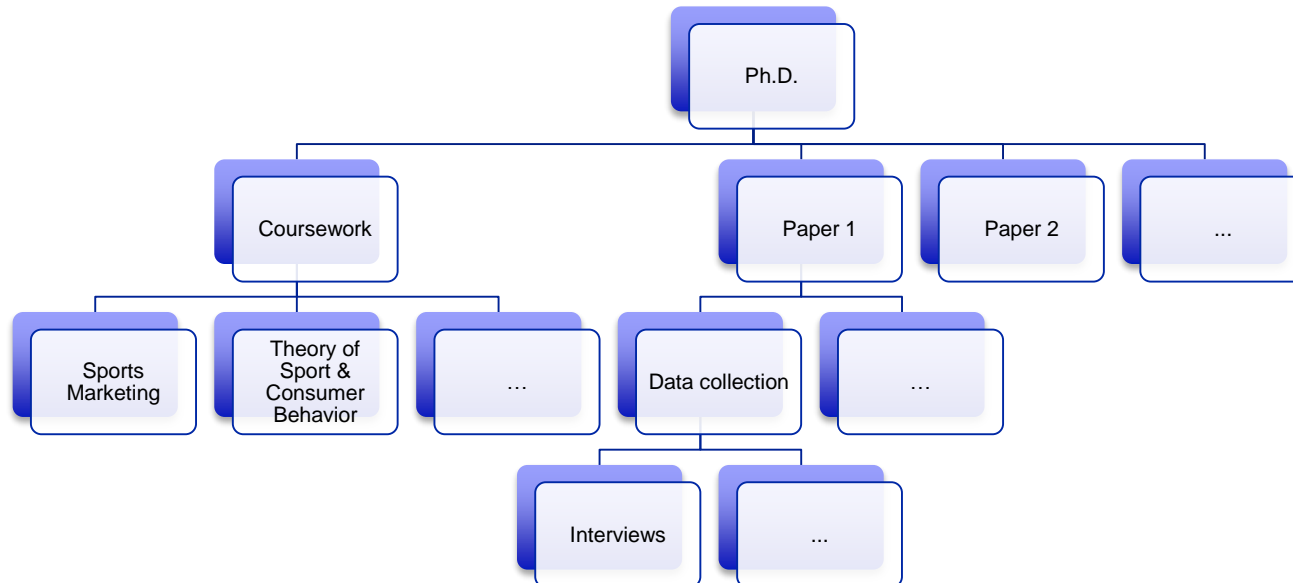
# Realizing Your Research Project: Management Tools

- What are these tools useful for?
  - Project planning and control
  - Project execution
  - Coordination and scheduling of project subtasks
- Important tools:
  - Work Breakdown Structure
  - Gantt-Diagram
  - Project Network: Critical Path Method (CPM)



## Work Breakdown Structure

- Analyze: divide your project into subtasks
- Hierarchy of tasks: define super- and subordinated tasks
- The smaller the subtasks the easier you can manage them
- Example:





## Gantt-Diagramm

- Start: Work Breakdown Structure
- Defines start and end of each subtask
- Takes restrictions into account
- Be realistic with your calculations!
  - Research always takes 20% longer than anticipated
- Anticipate problems
  - Related to your research (e.g. data problems, computer failure => backups!!!!)
  - Related to your private life (e.g. holiday, illness)
- Advantage: Visualizes project plan/schedule
- Disadvantage: Unable to handle complex projects



# Example: Gantt-Diagram for Research Paper 1

#	Task/Activity	Duration	Months											
			1	2	3	4	5	6	7	8	9	10	11	12
A	Develop Idea	1	█											
B	Define Topic	1		█										
C	Literature Review	1			█									
D	Theoretical Part	2			█	█								
E	Data Collection	3			█	█	█							
F	Data Analysis	2						█	█					
G	Interpreting Results	2								█	█			
H	Revision & Editing	1										█		
I	Feedback	1											█	
J	Final Revision	1												█





## Project Network

- Consists of nodes (circles) and arrows
  - 2 modes:
    - Activity on node (AON): project activities are represented by nodes
    - Activity on arrow (AOA): project activities are represented by arrows
  - AON is more common => PERT(Program evaluation and review technique)
  - Activity takes place over a time interval
  - Event takes place at an instant of time



## Example

Activity (node)	Immediate Predecessor	Estimated Duration
A	-	2
B	-	8
C	A	3
D	C	2
E	C	10
F	B, C	4
G	D	4
H	E, F	1
I	E, G	3
J	H, I	2

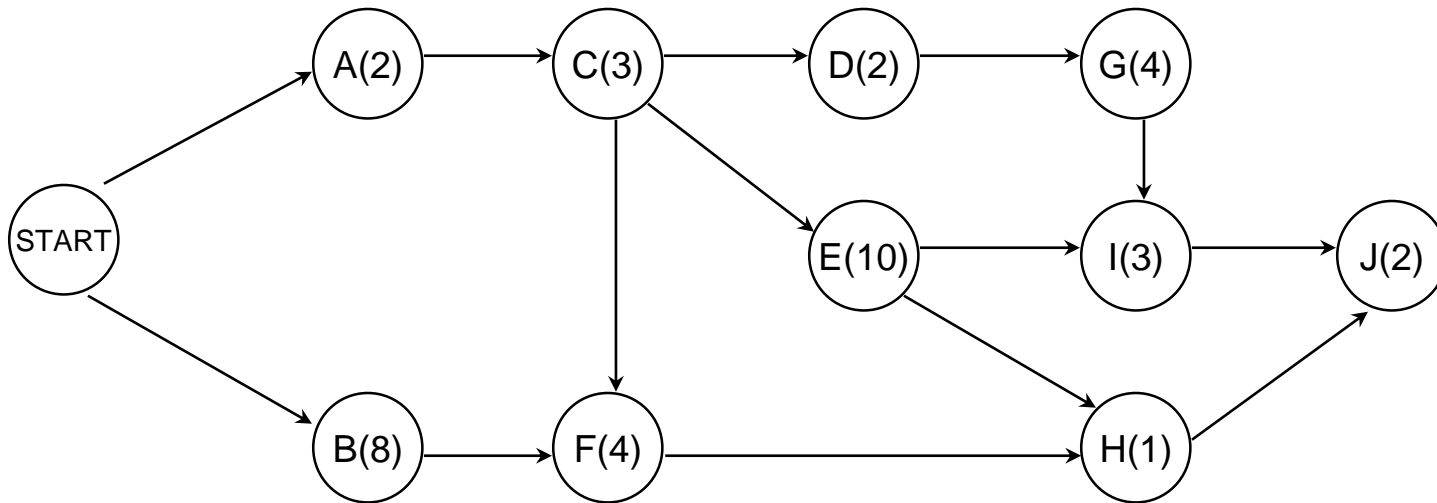


## Critical Path Method (CPM)

- Approach to determine the start and finish dates for individual activities in a project
- Critical path: unbroken chain of activities from start to end of project
- Delay of any activity on critical path results in delay of project completion
- => management priority on critical activities



## PERT Chart (AON Network)



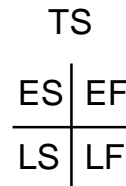


# Critical Path Method (CPM): Notation and Calculation

Notation:

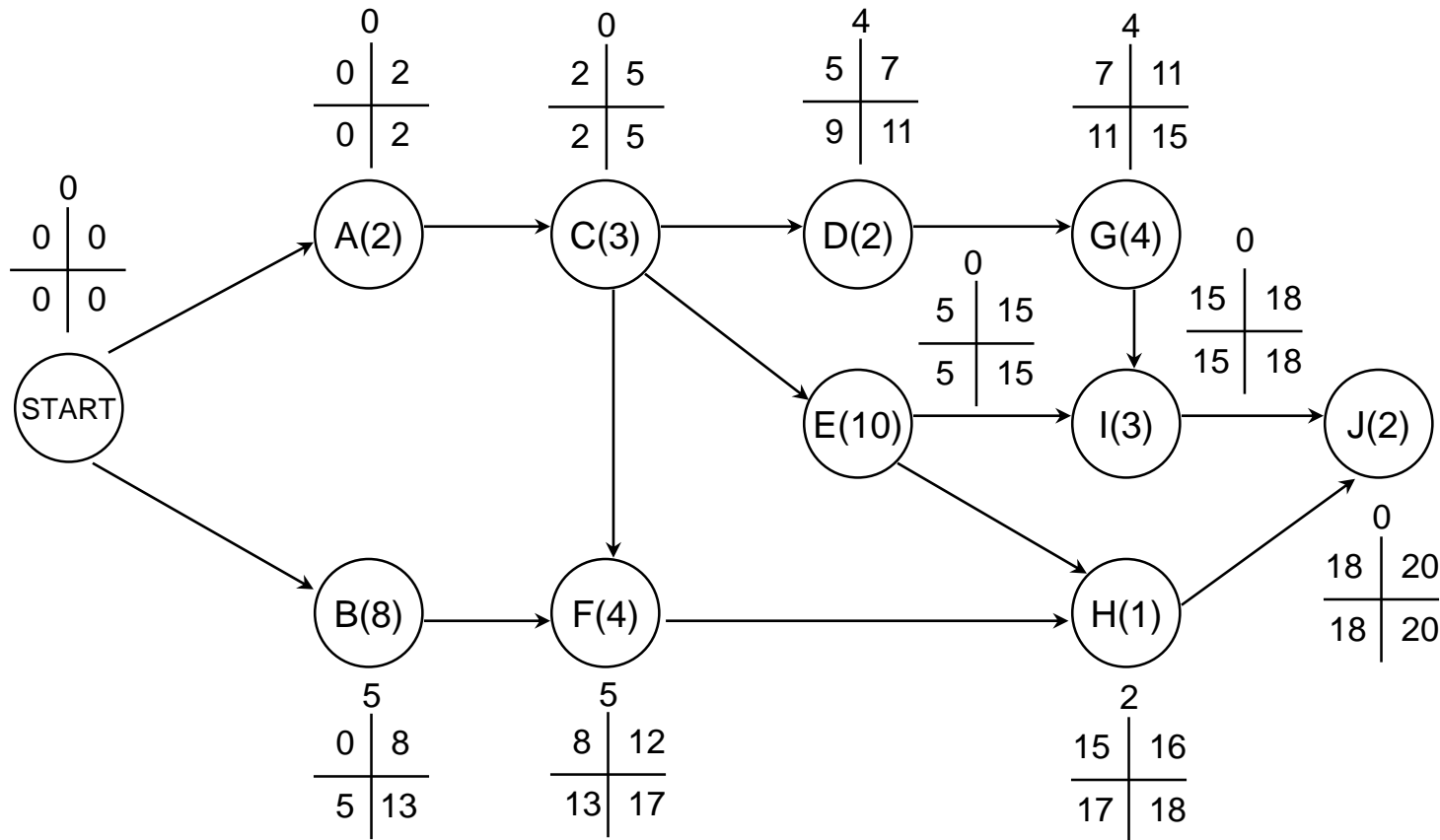
Definition	Symbol	Calculation
Expected Duration	t	
Early Start	ES	= $EF_{\text{Predecessor}}$
Early Finish	EF	= $ES + t$
Late Start	LS	= $LF - t$
Late Finish	LF	= $LS_{\text{Successor}}$
Total Slack	TS	= $LF - EF = LS - ES$

Depiction:





# Critical Path Analysis





## Micromanagement: General Advice

- Start writing and researching as soon as possible
- Write at least one paragraph per day
- Do not write what others have already written
- Advance **your** argument
- Do not try to be perfect
- Do not get discouraged
- You may have to
  - restructure your argument
  - recollect your evidence
  - reanalyze your data
  - => this is why it is not called search but **research!**



## **Conclusion**

- Start now!
- Focus!
- Do not get discouraged!
- Keep your head up and move forward!
- You will succeed!