



**It Will Never Work  
in Theory: Live!**

# Padding and Negotiation of Software Estimates

---



Patrícia Matsubara  
UFMS & UFAM



**Igor Steinmacher**  
UTFPR



Bruno Gadelha  
UFAM



Tayana Conte  
UFAM

# Context



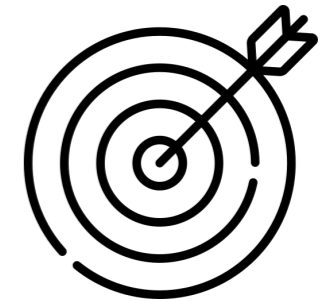
## Estimate

A **projection** from the past to the future



## Commitment

A **promise** to deliver a feature at a certain level of quality by a specific deadline



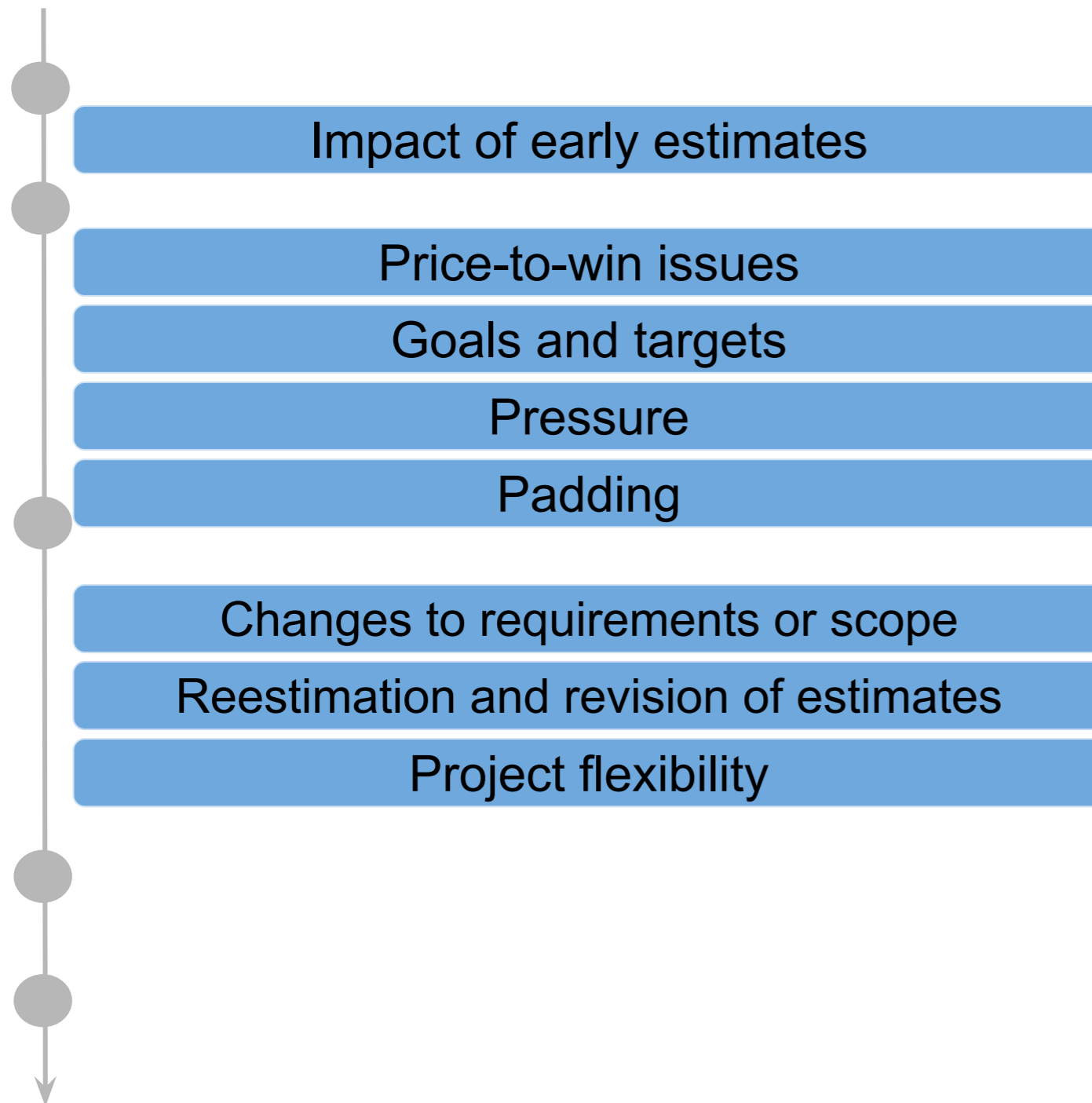
## Target

A desirable **business outcome**

We create software **estimates** in a **social** setting:  
an **organization** with goals and plans.

# What research has found so far...

## Factors affecting expert-judgment software estimates



Original Paper:

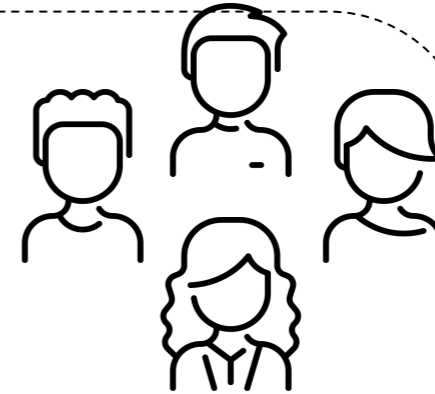


# What we have observed in practice

**Phase 1**  
**Company**  
**A**

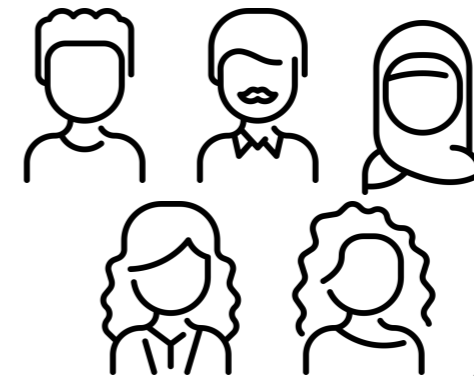
1

**Observation sessions**



2

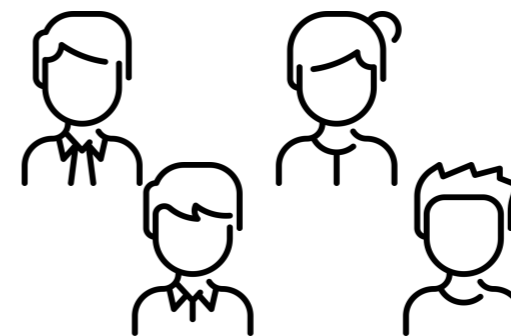
**Interviews**



**Phase 2**  
**Companies**  
**B, C & D**

3

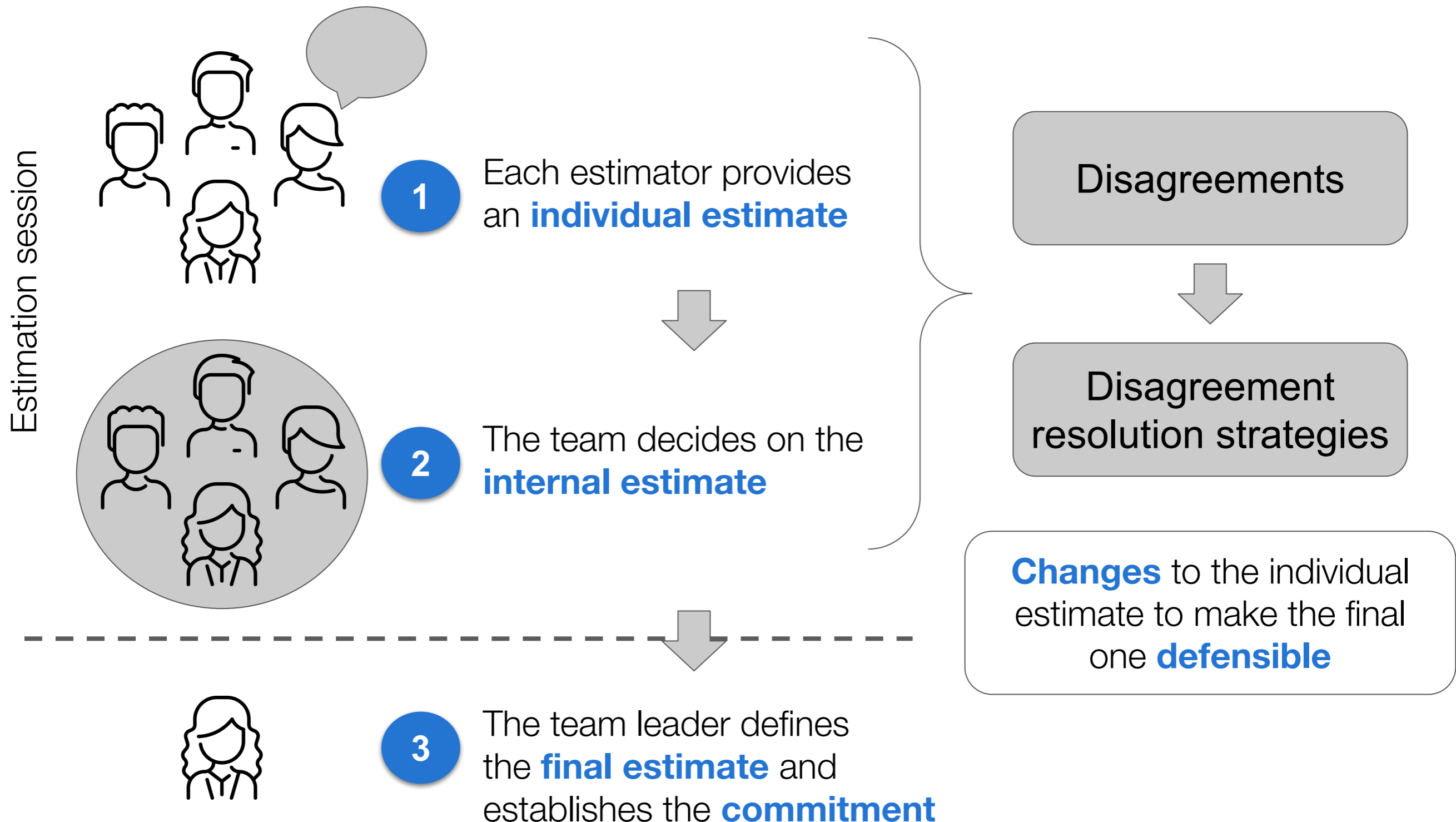
**Interviews**



Original Paper:





# Defensible estimates




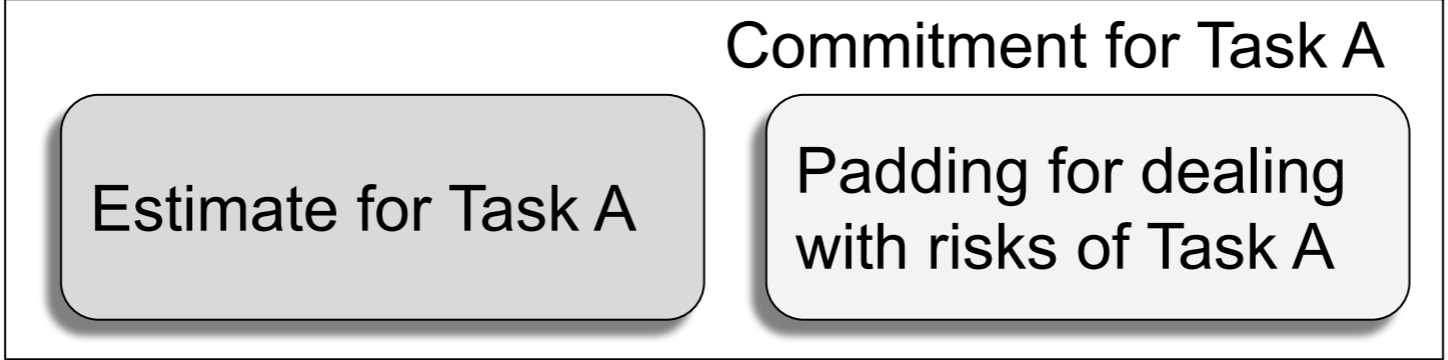
# Reasons to pad

- 1

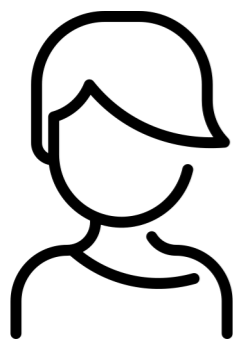
Contingency buffer (risk) 
- 2

Completing other tasks 
- 3

Improving overall quality 




## Interviews



P8 (Developer)




*“Usually, it is because we are afraid of the **problems we will have to face**. Like, in larger tasks (...)”*

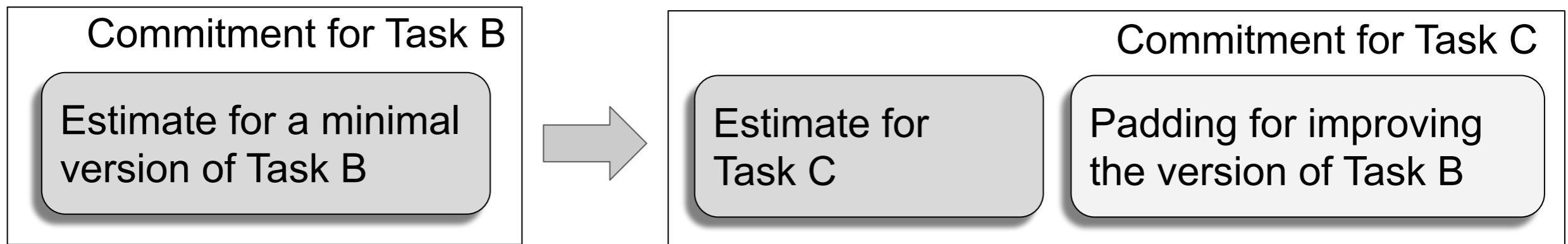


P9 (Team Leader)

*“When we **cannot define the feature very well**. We need to carry out feasibility studies, but there is no time to do it because it is time to make a proposal”.*

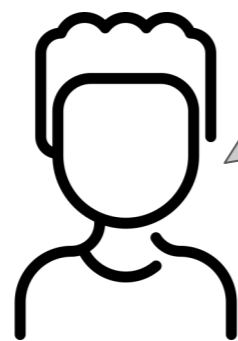
# Reasons to pad

- 1 Contingency buffer (risk) 
- 2 Completing other tasks 
- 3 Improving overall quality 



No padding!

## Interviews





P3 (Team Leader)


*“We may use padding to **gain time for a task that we could not add padding** (...) We gave an estimate of 30 working days for functionality Y, but we are counting on the **padding of other tasks to finish it.**”*

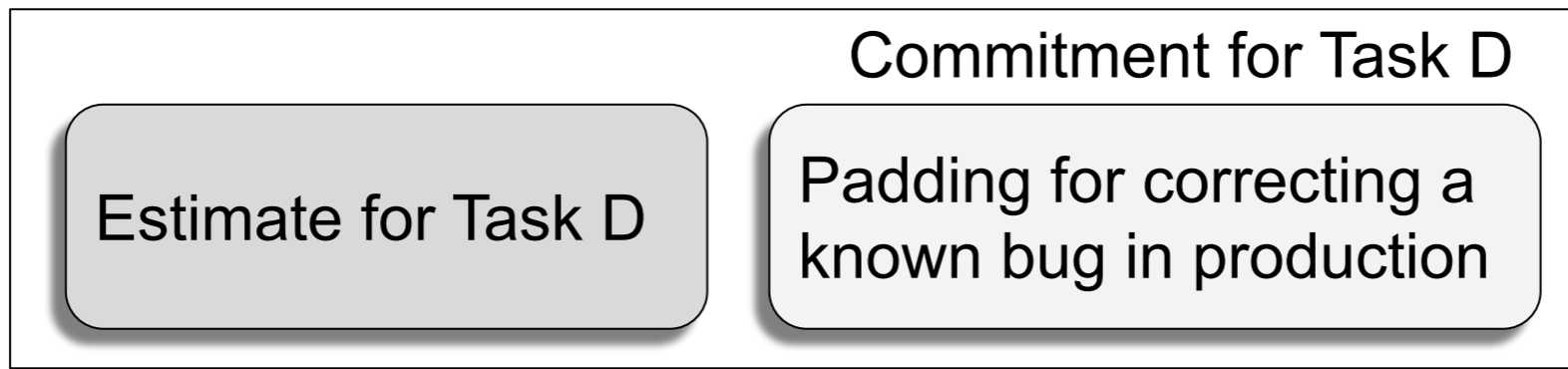
# Reasons to pad

- 1

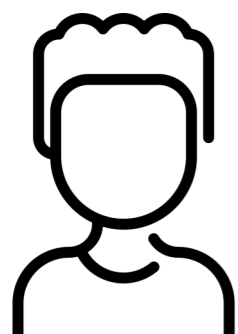
Contingency buffer (risk) 
- 2

Completing other tasks 
- 3

Improving overall quality 

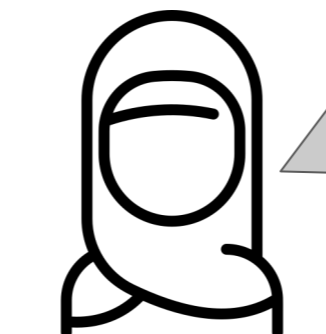


## Interviews



P3 (Team Leader)

*“It also happens that there **are errors we know**, and we add one day in one task to correct it.”*


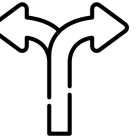



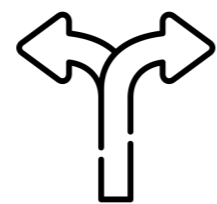
P3 (Technical Team Leader)

“When we are making the team estimates, **we think about the improvements we can make to the system.** Moreover, the padding is used for this also, for implementing these improvements.”



# So... what?

- Padding can be used as a **social way of hiding things**
- **Accuracy is in harm**: how we actually perform?
- Everything needs to be sold as **Business Value**
  - **Developers**: need to expose the reasons 
  - **POs/Leads**: triage the reasons → Describe as customer value 
  - **Management**: Educate the clients 



**Negotiation principle -  
invent options for  
mutual gains**



**Negotiation principle -  
educate: let reality be  
their teacher**



**Negotiation principle  
- focus on interests,  
not positions**



It will never work in theory  
**Thank you!**

patriciagfm@icomp.ufam.edu.br

**igorfs@utfpr.edu.br**

bruno@icomp.ufam.edu.br

tayana@icomp.ufam.edu.br

## Padding and Negotiation of Software Estimates



**Negotiation principle -  
focus on interests, not  
positions**



**Negotiation principle -  
educate: let reality be  
their teacher**



@patymatsubara



@igorsteinmacher



**Negotiation principle -  
invent options for  
mutual gains**