

# Project Guidelines

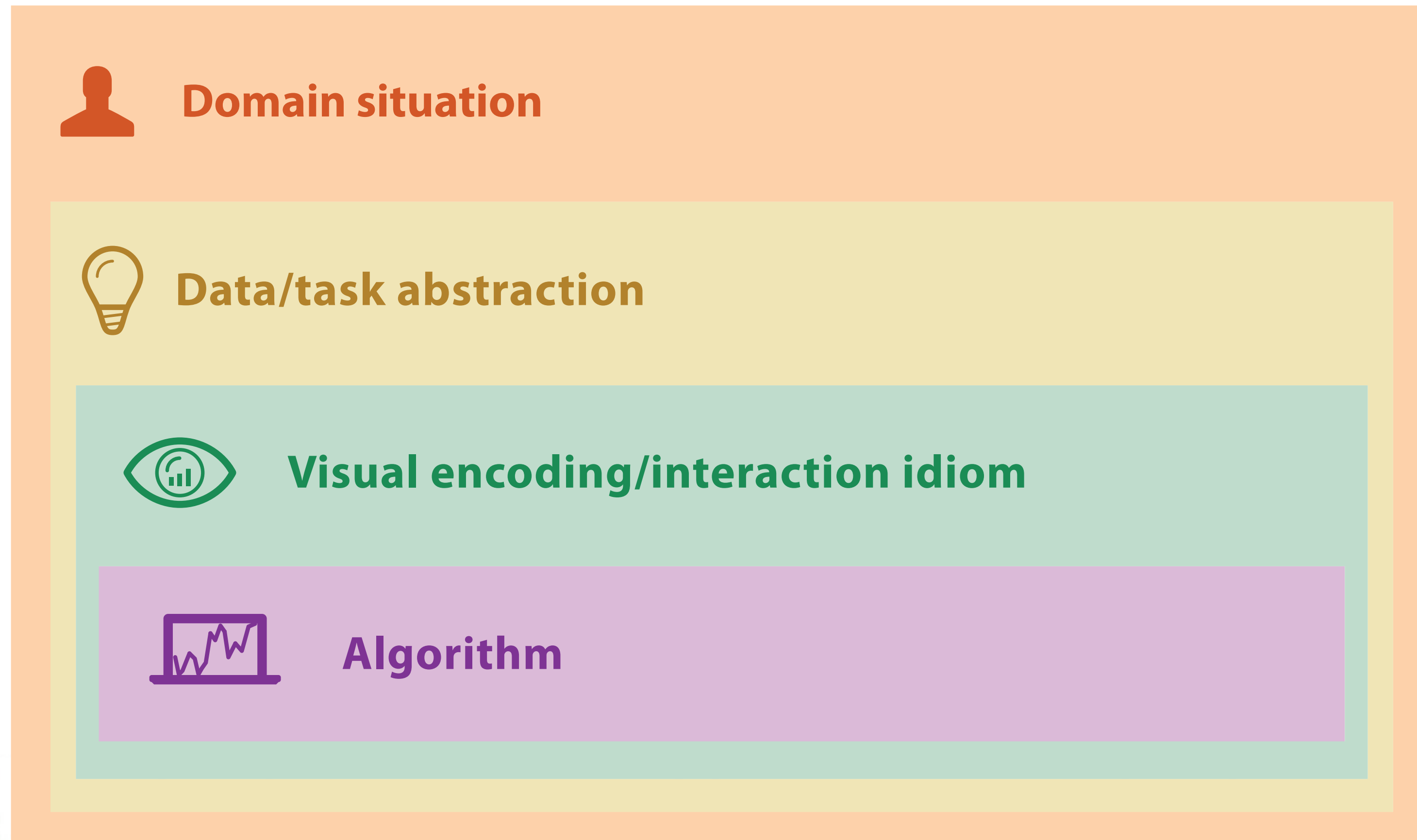


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# Four Levels for Validation






# Four Levels of Design and Validation

- different threats to validity at each level

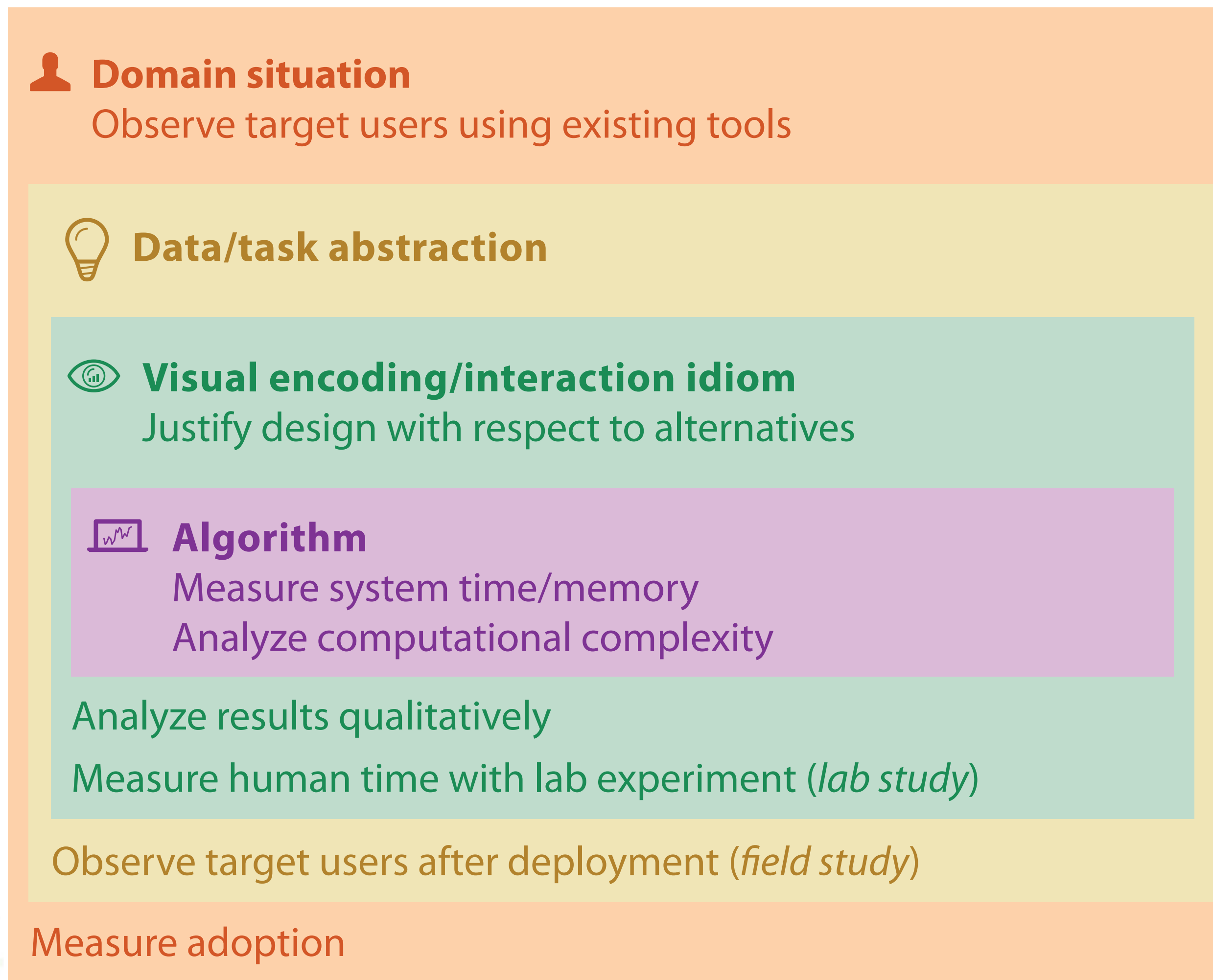
 **Domain situation**  
You misunderstood their needs

 **Data/task abstraction**  
You're showing them the wrong thing

 **Visual encoding/interaction idiom**  
The way you show it doesn't work

 **Algorithm**  
Your code is too slow

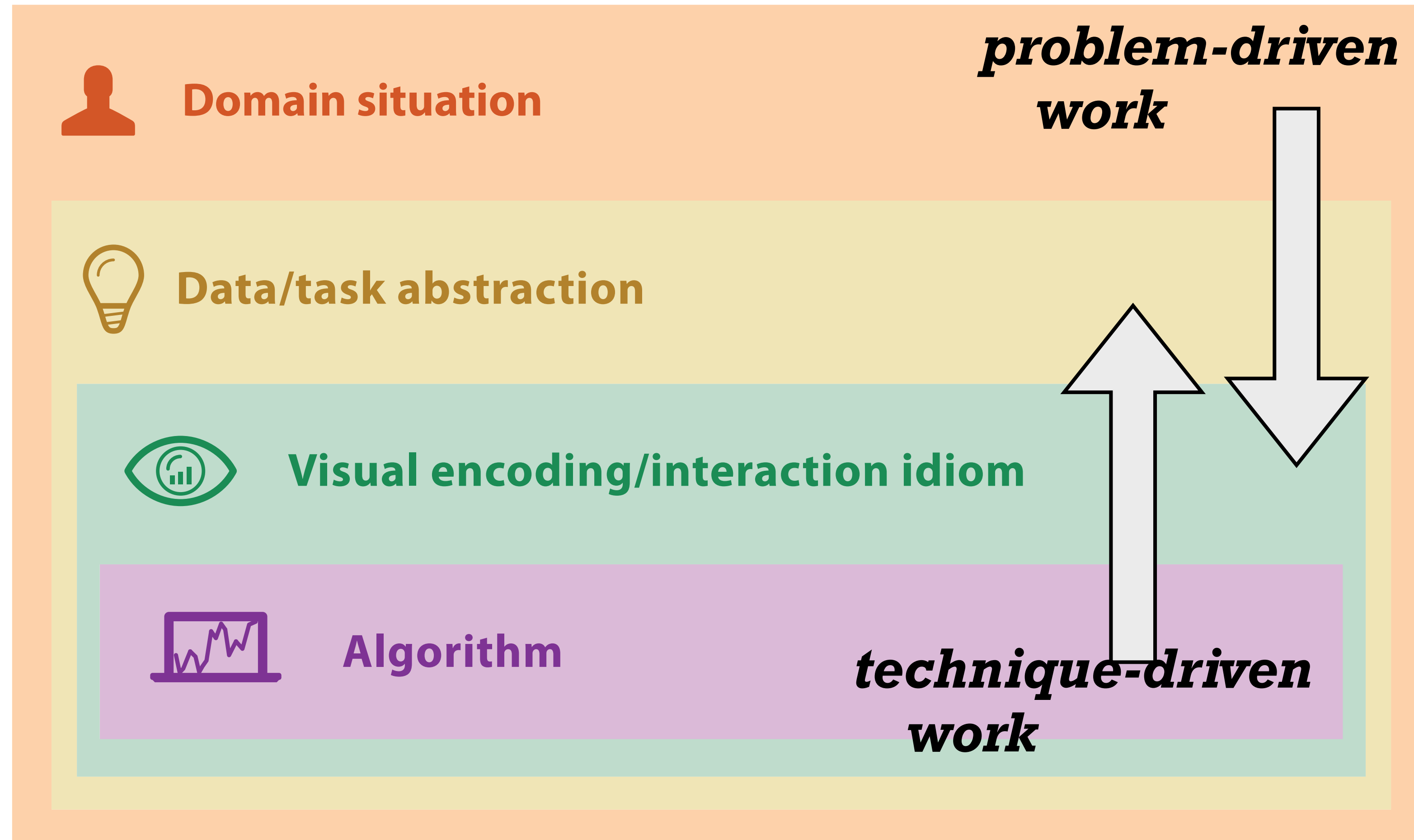
# Nested Levels of Design and Validation



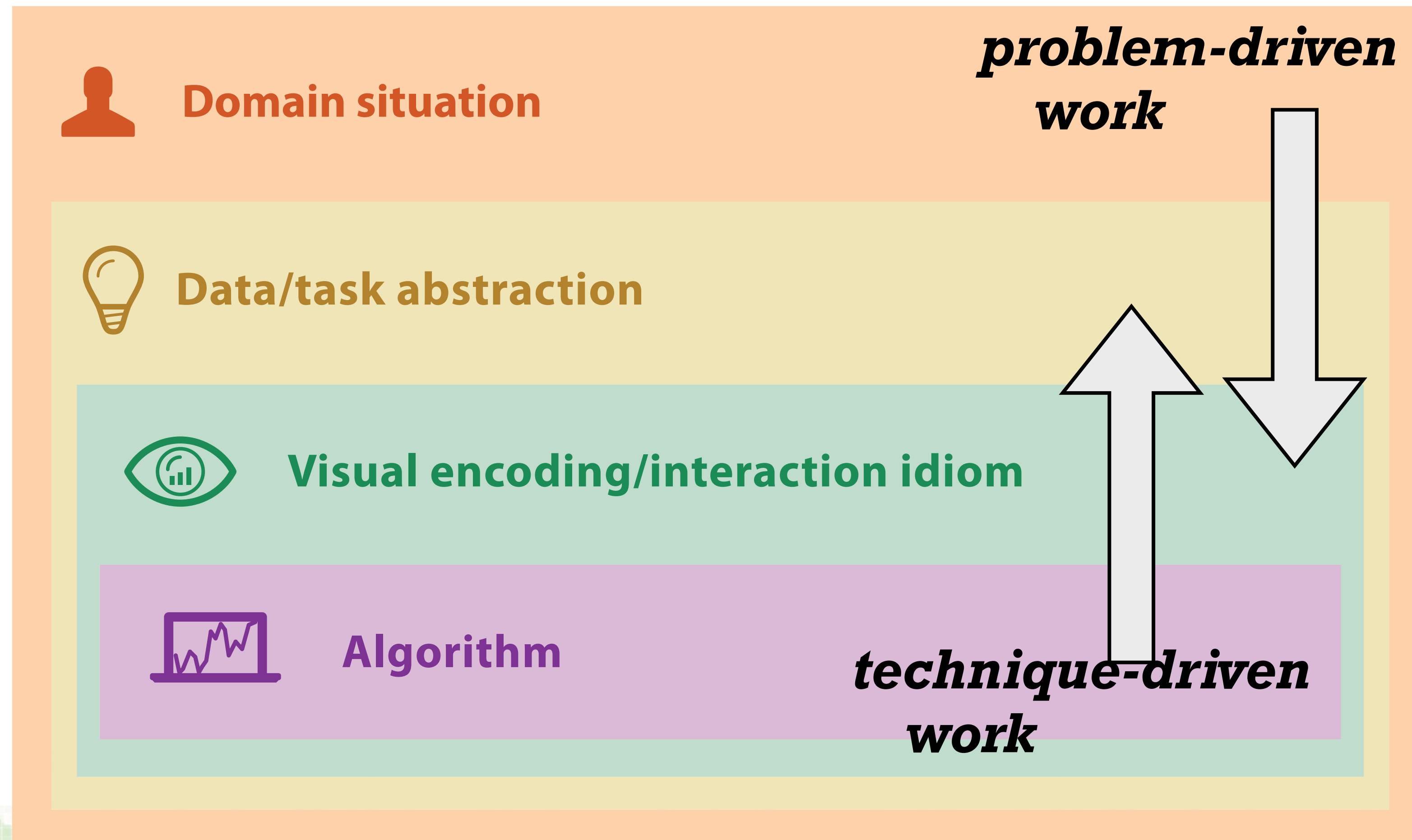
- mismatch: cannot show idiom good with system timings
- mismatch: cannot show abstraction good with lab study



# Directionality



# Project must be towards “problem-driven”





# Must be towards “problem-driven”

- Identify your “clients” — who will benefit from your visualization
- Clearly define your data and task abstraction
  - What are the datasets involved?
  - What are the actions and targets?
- Justifications for marks, channels and encodings based on your data must be provided for each idiom in the project
- Validations are needed at least for the top two layers



# General Requirements

- Must have spatial component(s) in both data and the idiom design
- Interaction is required, and should not take seconds to update for every click/interaction on the interface
- Data must not be loaded entirely to the client's web browser
  - This also helps improve the interaction rate
- At least Select and/or Navigate manipulations must be included
  - This means some form of data filter/reduction must be performed (with some being on the server side)



# Logistics

- Individual work:
  - Projects with similar codes will not receive credits
- Can share projects with other classes (as long as your project meets the requirements in the previous slide)



# Deliverables

- **Live demos** on Dec 11
- Final submissions include:
  - A teaser image (a static preview of your product)
  - Links to your GitHub repo and your live webpage
  - One paragraph summarize the context of your work
  - Detailed information on your data sources and justification for your idiom design



# Next Step

- Submit your project ideas by Nov 27 on Blackboard

