



EN

SHELTER
Promoting Energy Renovation

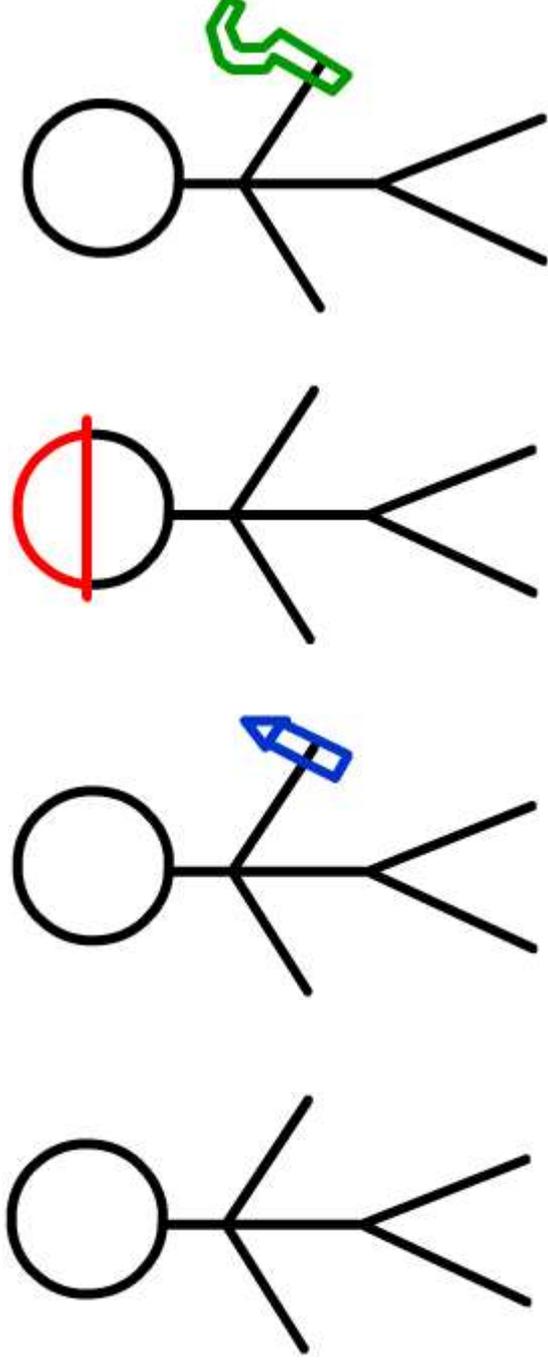
THE
GUIDE
INNOVATE
TO RENOVATE



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A methodology for choosing the best adapted delivery methods: SHELTER Guide and Recommendations for energy renovations



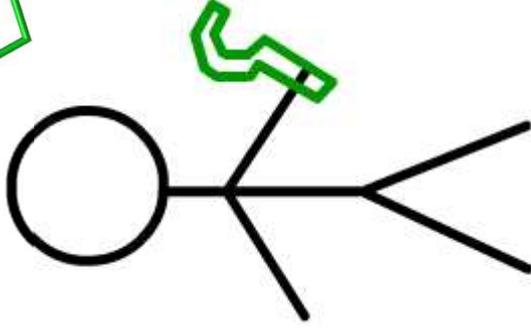
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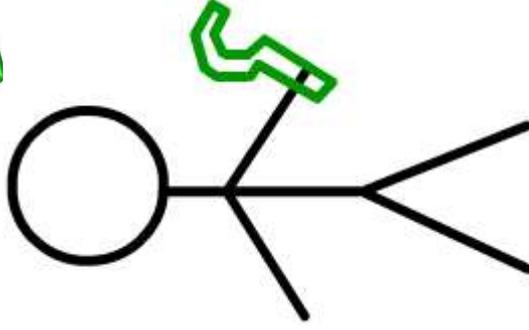
The Problem “examples”

I'm here to fix the solar panels,
but there is no access to the roof.



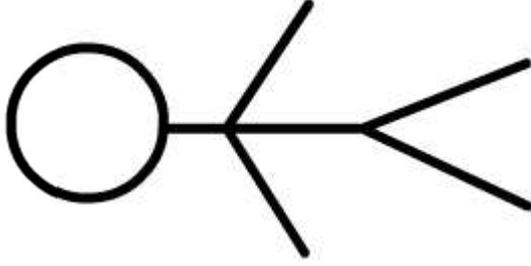
The Problem “examples”

I'm here to fix the boiler again. I don't know why
have you chosen for this brand. Everyone knows
that they brake after 3 years.

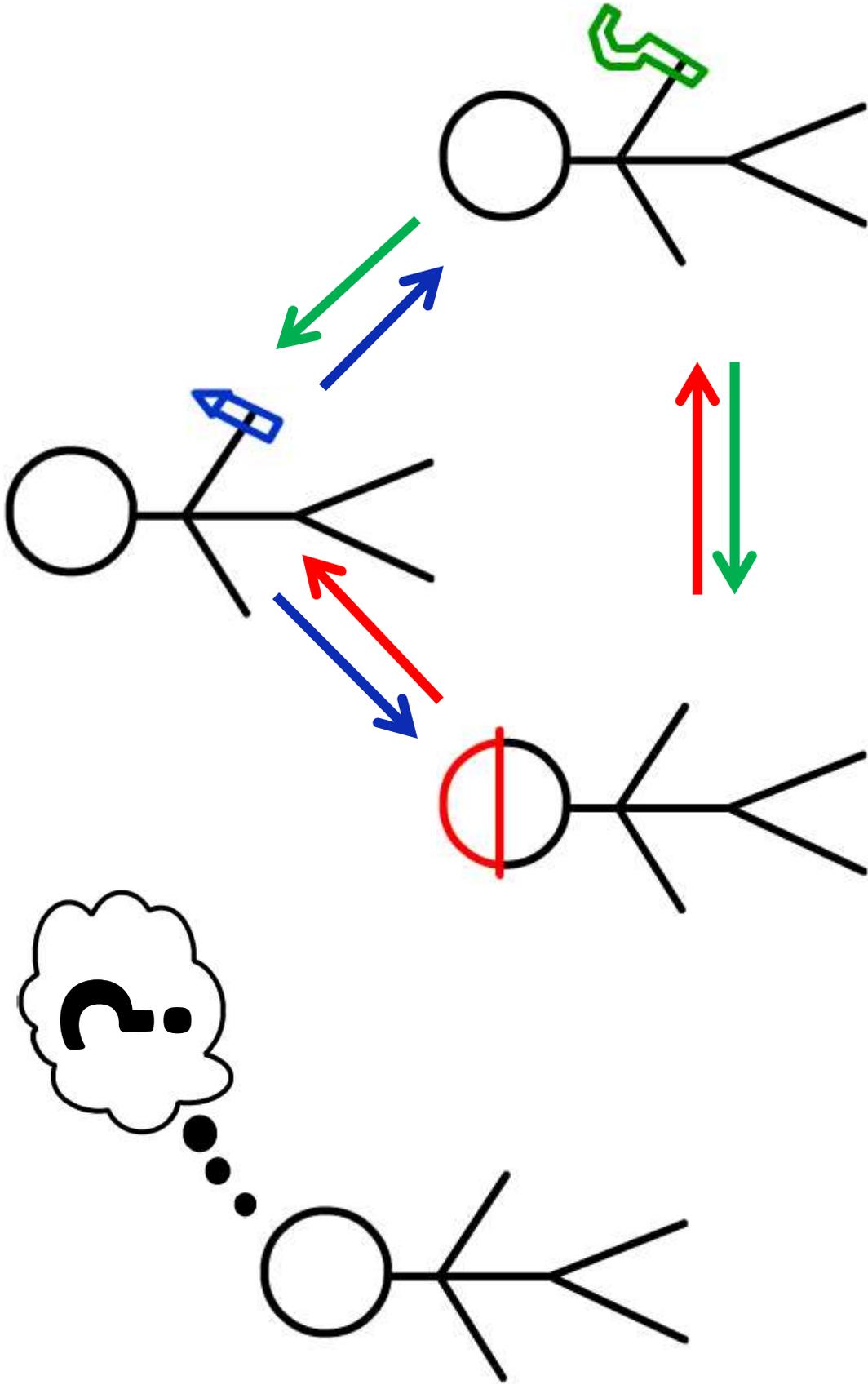


The Problem “examples”

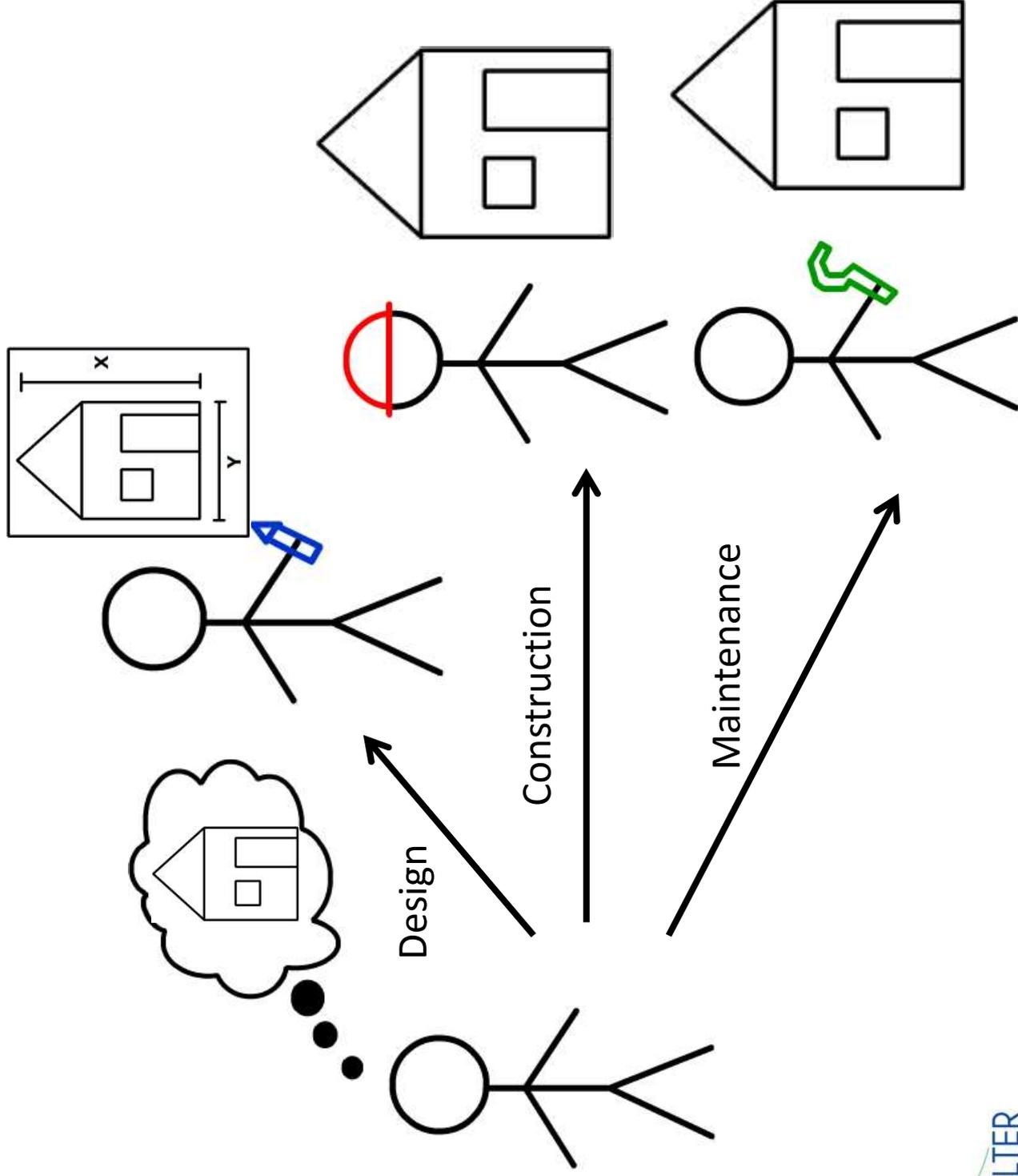
After renovation our tenants were supposed to pay 40% less in their energy bill, but they only save 20%.



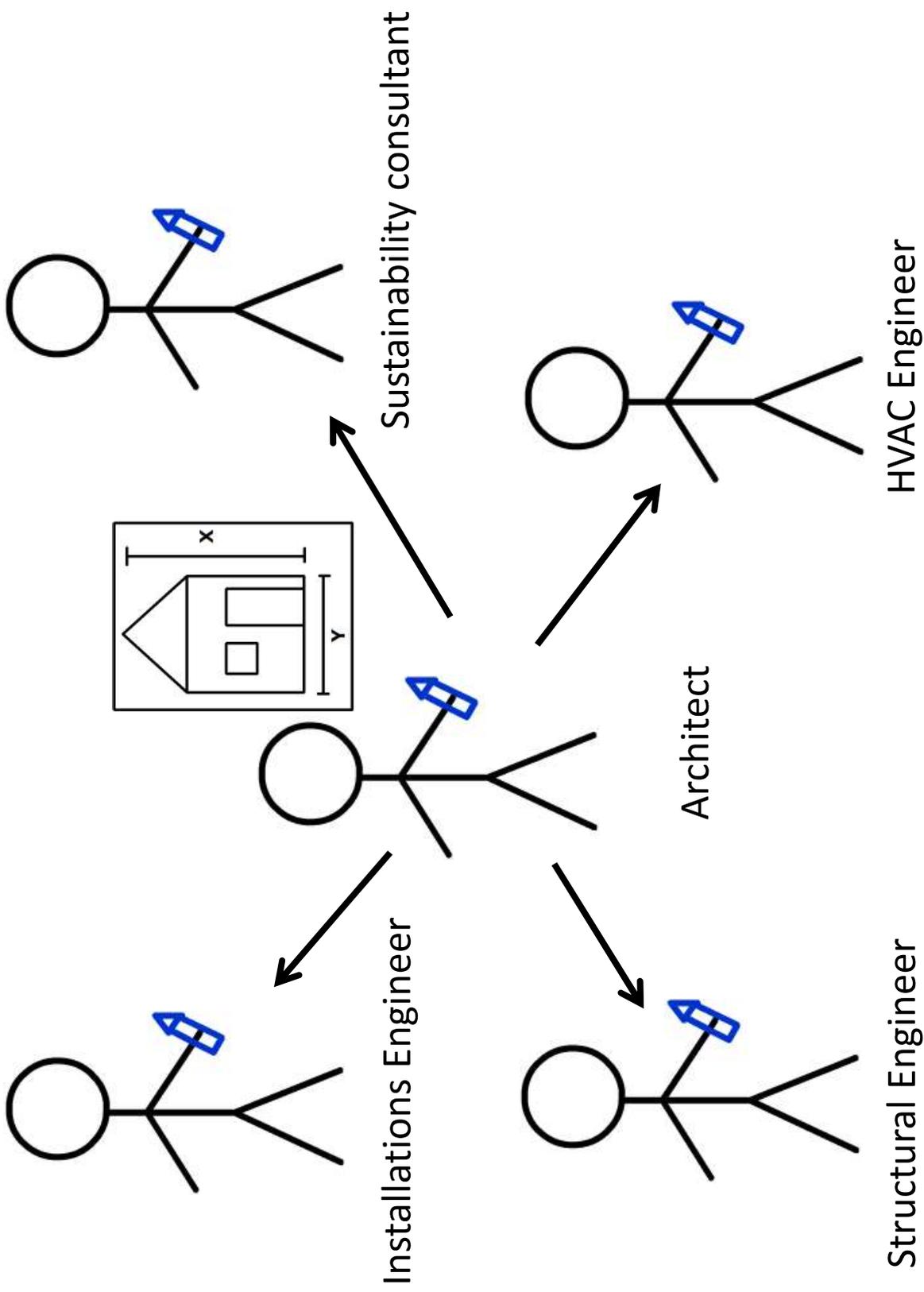
The Problem “examples”



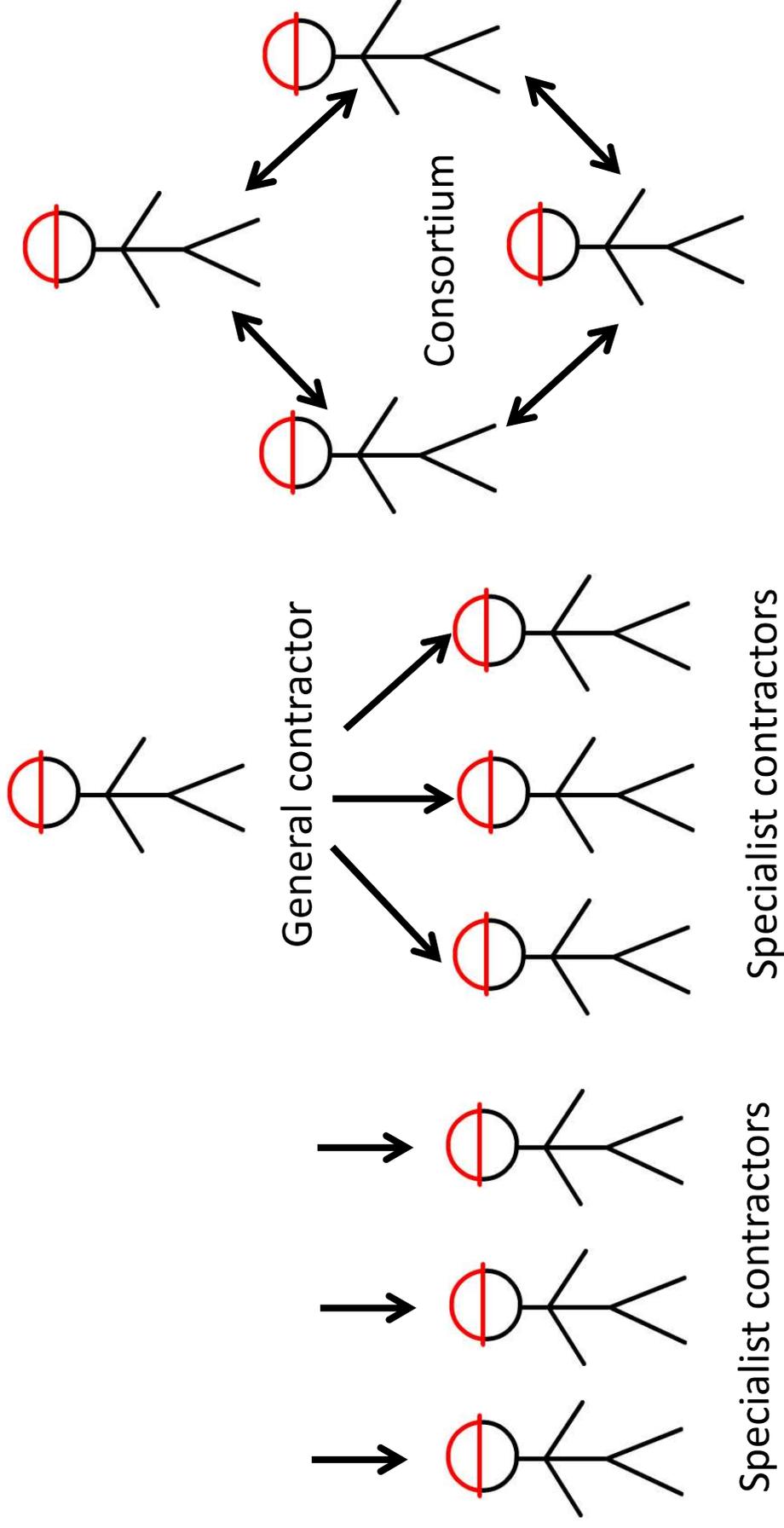
Renovation process



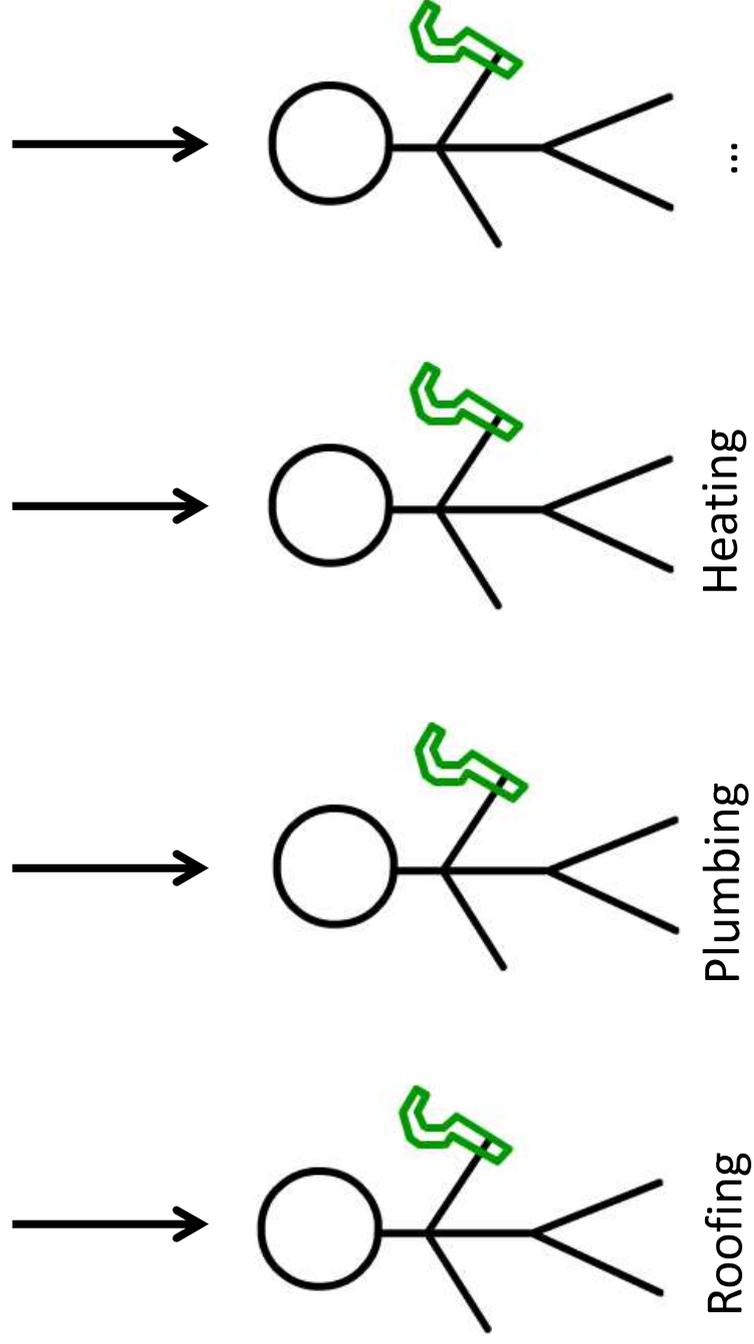
The Design Companies



The Construction Companies



The Maintenance Companies

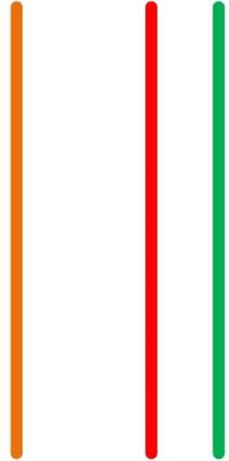
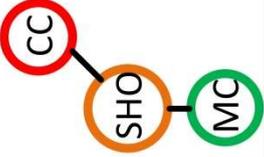


The SHO often a body governed by public law

“The **award of contracts** concluded in the **Member States** on behalf of the State, regional or local authorities and other **bodies governed by public law entities, is subject to respect of the principles of** the Treaty and in particular to the principle of freedom of movement of goods, the principle of freedom of establishment and the principle of freedom to provide services and to the principles deriving therefrom, such as the principle of **equal treatment, the principle of non-discrimination**, the principle of mutual recognition, the principle of proportionality and **the principle of transparency**”

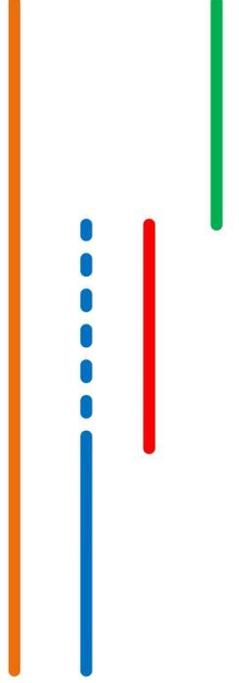
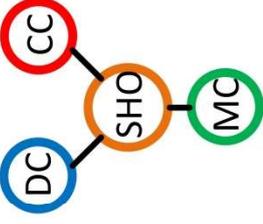
Directive 2004/18/EC for the award of public works contracts, public supply contracts and public service contracts

Project Delivery Methods	Actors	Phases	Build	Maintain	Contractual relations
Step-by-Step		Design			
Design-bid-Build					
Design-Build					
Design-Build-Maintain					

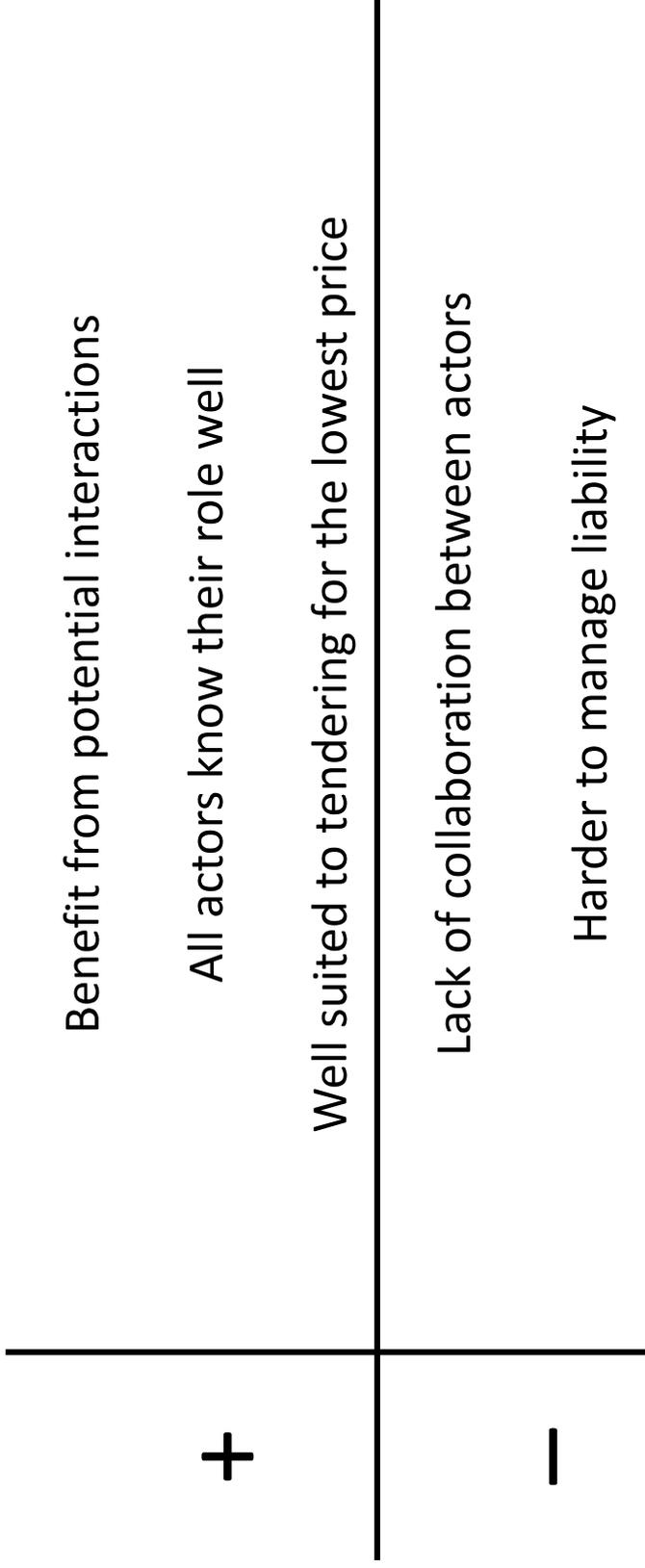
Project Delivery Methods	Actors	Phases	Contractual relations
		Design Build Maintain	
Step-by-Step	SHO DC CC MC		
Design-bid-Build			
Design-Build			
Design-Build-Maintain			

SbS Step by Step

+	<p>Split renovation into small interventions</p> <p>Components whole-life costing approach</p> <p>Easier to secure specific subsidies</p> <p>Facilitates intervention over pepper-potted stock</p>
-	<p>Prevents interactions between components</p> <p>Favours components with short pay-back time</p> <p>No cooperation between construction teams</p>

Project Delivery Methods	Actors	Phases	Contractual relations
		Design Build Maintain	
Step-by-Step			
Design-bid-Build	SHO DC CC MC	 <p>The diagram shows four horizontal bars representing the duration of different roles in a Design-bid-Build project. The x-axis is divided into three phases: Design, Build, and Maintain. SHO (orange solid bar) spans the entire duration from Design to Maintain. DC (blue dashed bar) spans the Design phase. CC (red solid bar) spans the end of the Design phase and the beginning of the Build phase. MC (green solid bar) spans the end of the Build phase and the entire Maintain phase.</p>	 <p>The diagram shows four nodes in circles: DC (blue), SHO (orange), CC (red), and MC (green). DC and CC are connected to SHO. SHO and MC are connected to each other.</p>
Design-Build			
Design-Build-Maintain			

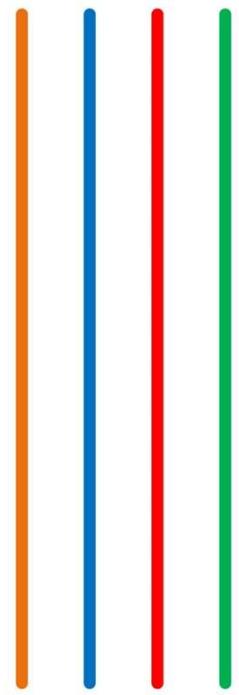
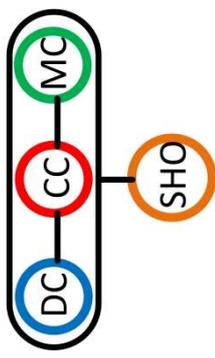
DBB Design-Bid-Build



Project Delivery Methods	Actors	Phases	Contractual relations
		Design Build Maintain	
Step-by-Step			
Design-bid-Build			
Design-Build	SHO DC CC MC		
Design-Build-Maintain			

DB Design-Build

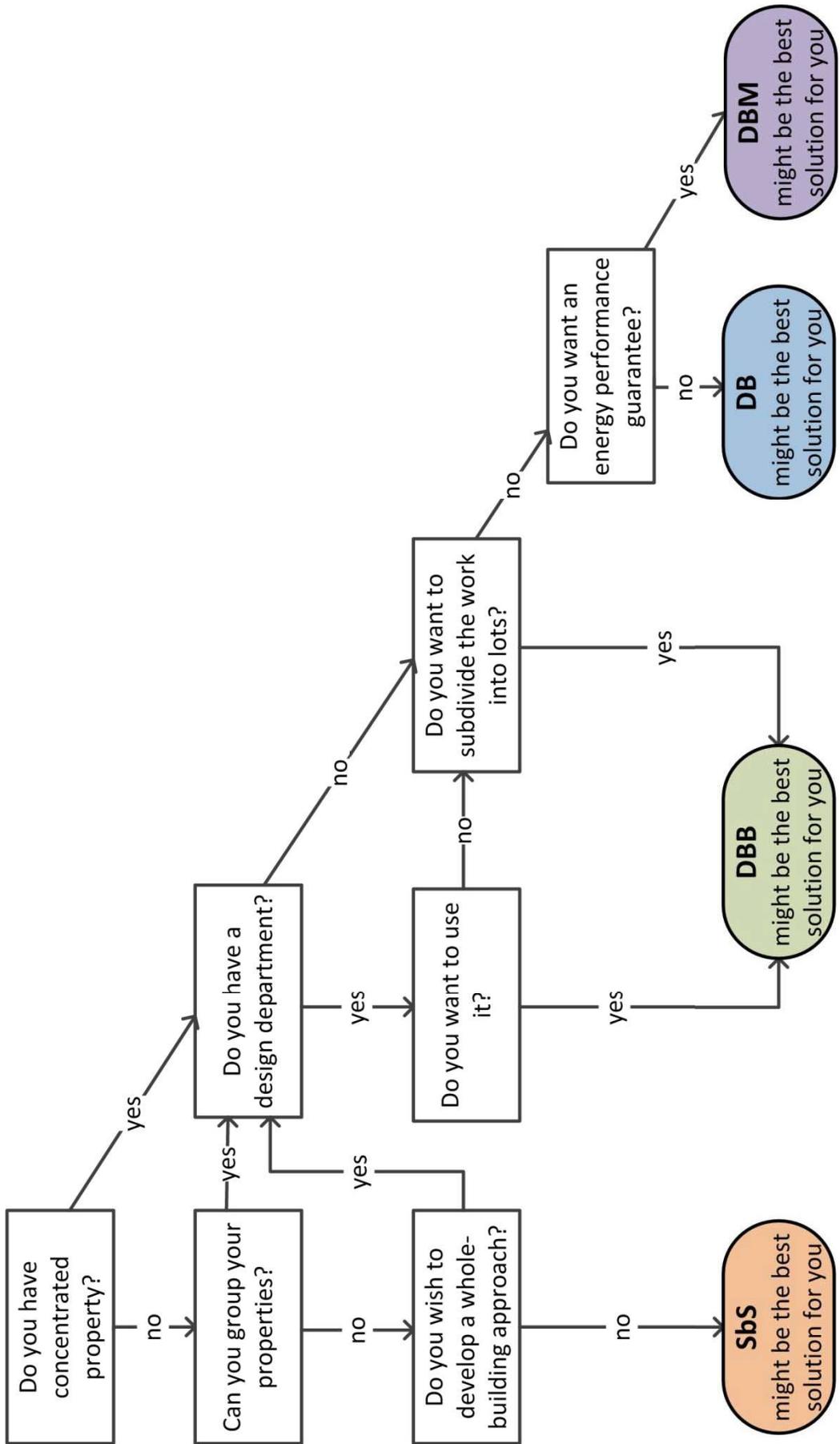
+	Improves certainty of price for renovation works Completed in shorter time than DBB Performance-based specifications can be implemented
-	Direct involvement of SMEs more complicated Precludes referee role of design companies Presupposes a change in the role of the actors

Project Delivery Methods	Actors	Phases	Contractual relations
		Design Build Maintain	
Step-by-Step			
Design-bid-Build			
Design-Build			
Design-Build-Maintain	SHO DC CC MC		

Design-Build-Maintain

+	<p>Substantially improves the certainty of price</p> <p>Transfer the majority of design risk failing</p> <p>Easier to use performance-based specifications</p>
-	<p>Direct involvement of SMEs more complicated</p> <p>Precludes referee role of design companies</p> <p>Presupposes a change in the role of the actors</p> <p>Presupposes change in management strategy</p>

Project Delivery Methods	Actors	Phases	Contractual relations
		Design Build Maintain	
Step-by-Step	SHO DC CC MC		
Design-bid-Build	SHO DC CC MC		
Design-Build	SHO DC CC MC		
Design-Build-Maintain	SHO DC CC MC		



-

Energy performance objective

-

Investment capacity

+

+

Recommendations

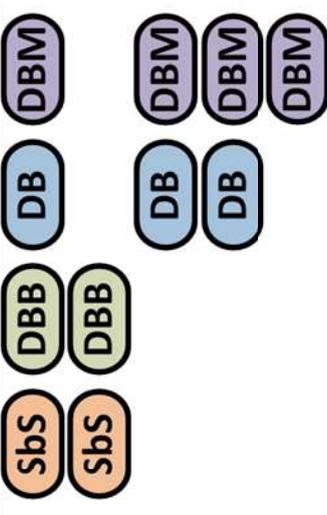
Strategy

- Introduce energy efficiency as one of the key parameters
- Group properties by typology and geography



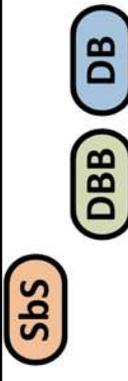
Tendering and contracting

- Use award criteria
- Use framework agreements
- Use performance-based specifications
- Use competitive dialogue
- Use Energy Performance Contracting



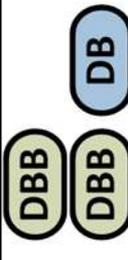
Design

- Design models by typology of dwellings
- Invite maintenance companies to participate in design phase



Construction

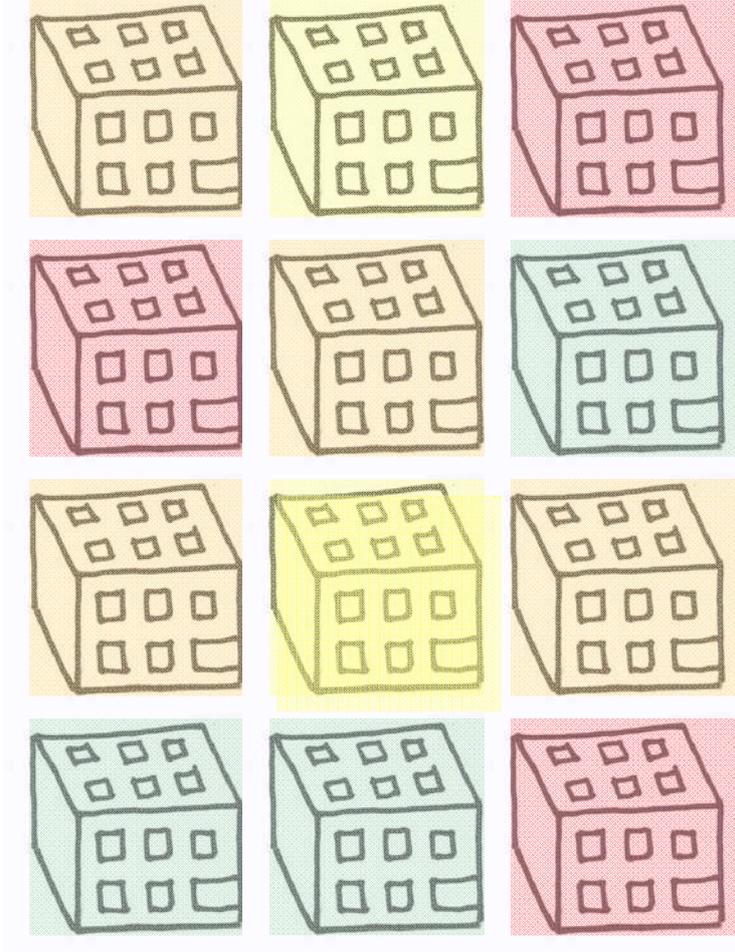
- Organize at start meeting with all the contractors
- Define transfer period between construction and maintenance



Strategy

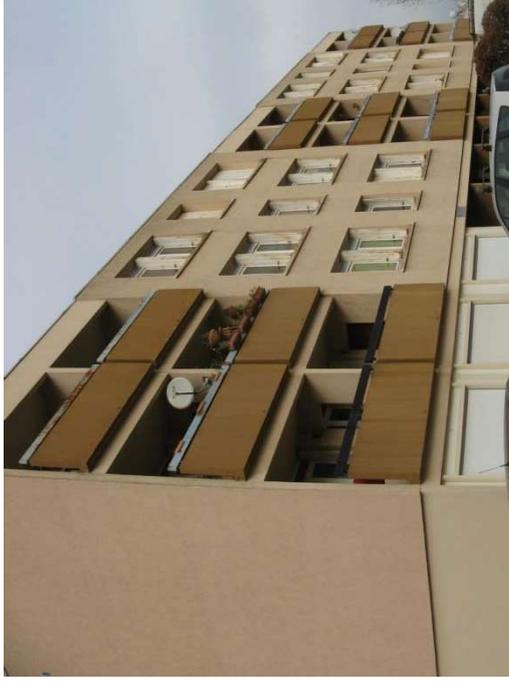
Introduce energy efficiency as one of the key parameters

- SbS
- DBB
- DB
- DBM



Tendering and contracting

Use award criteria



- Price 45%
 - Works methodology 14%
 - Energy performance objective 20%
 - Quality of the maintenance 14%
 - Tenant's guidance 7%
-
- Price 30%
 - Energy savings proposed 10%
 - Energy saving measures proposed 15%
 - Obtaining of the French BBC certificate 5%
 - Technical report 25%
 - Architectural quality of the project 15%



Tendering and contracting

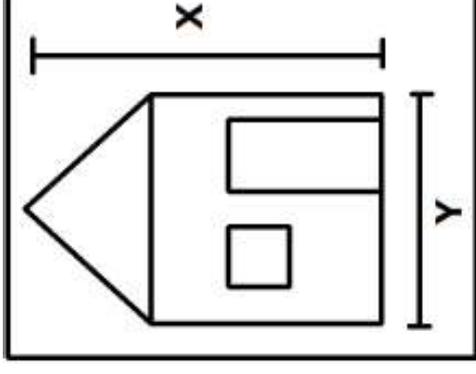
Use performance-based specifications



Specifications

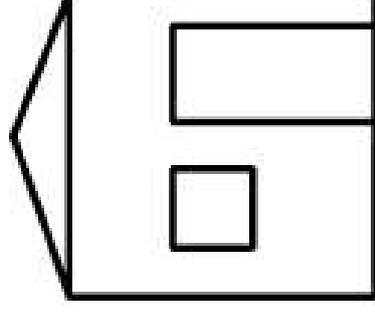
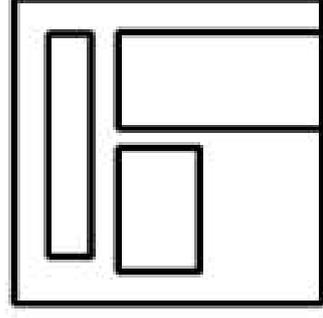
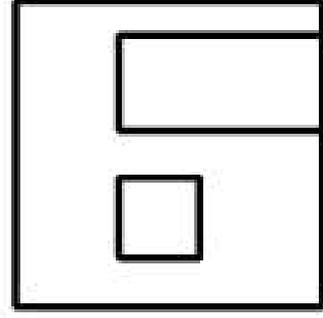
- Descriptive

House: 4m wide, 5 m tall, door on the right side, window on the left side, pitched roof.



- Performance-based specifications

House: for two persons, with natural light, low energy use.



Tendering and contracting

Use performance-based specifications

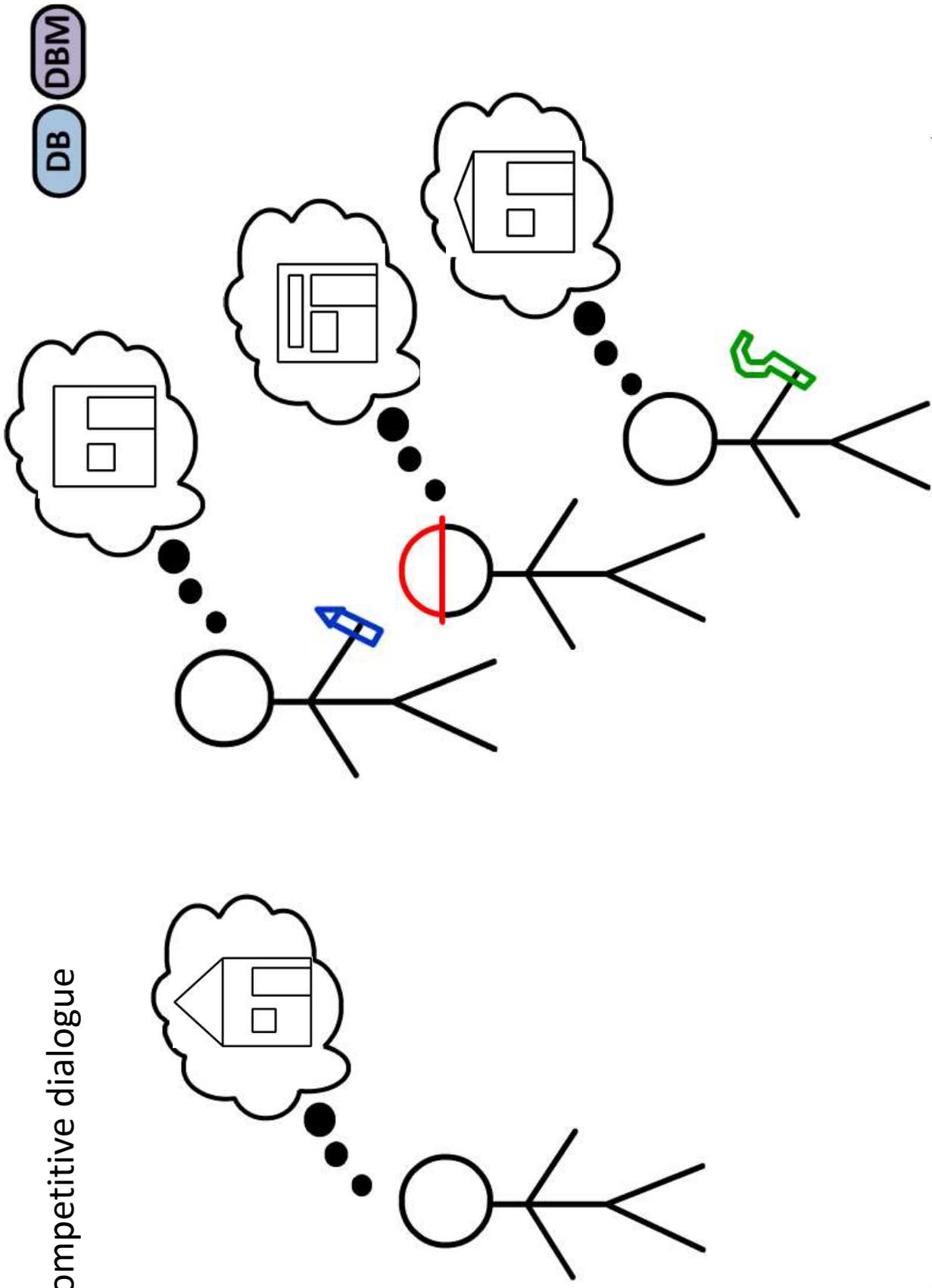


Energy objectives:

- Obtain label BBC.
- Minimum thermal energy use reduction of 30%, with warranty of results.

Tendering and contracting

Use competitive dialogue



Design

Invite maintenance companies to participate in design phase



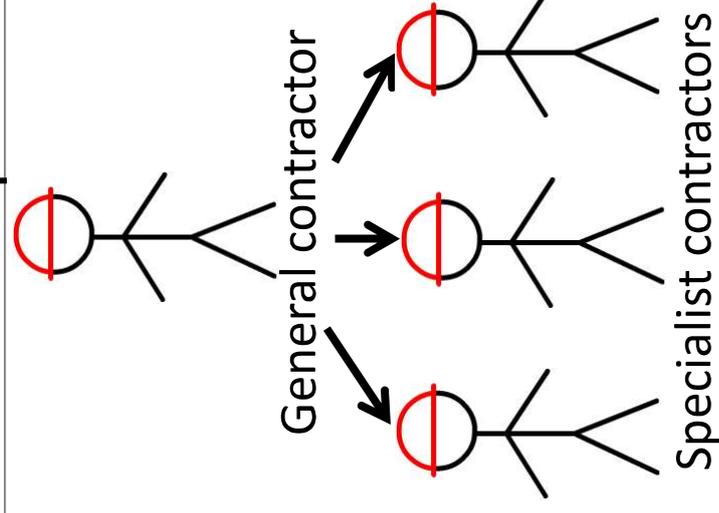
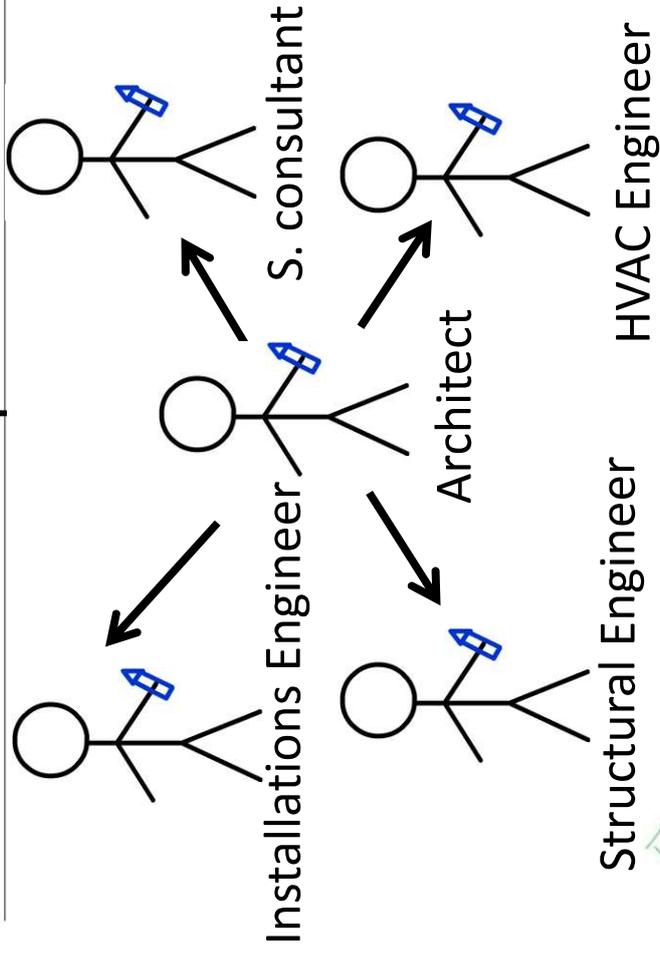
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	DC					
	CC					
	MC					
Design-Build	SHO					
	DC					
	CC					
	MC					

Construction

Organize at start meeting with all the contractors

DBB

Project Delivery Methods	Actors	Phases	Contractual relations
Design-bid-Build	SHO DC CC MC	<p>Design: Solid orange line</p> <p>Build: Dashed blue line</p> <p>Maintain: Solid red line</p> <p>Maintain: Solid green line</p>	





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Renovation vs Maintenance

