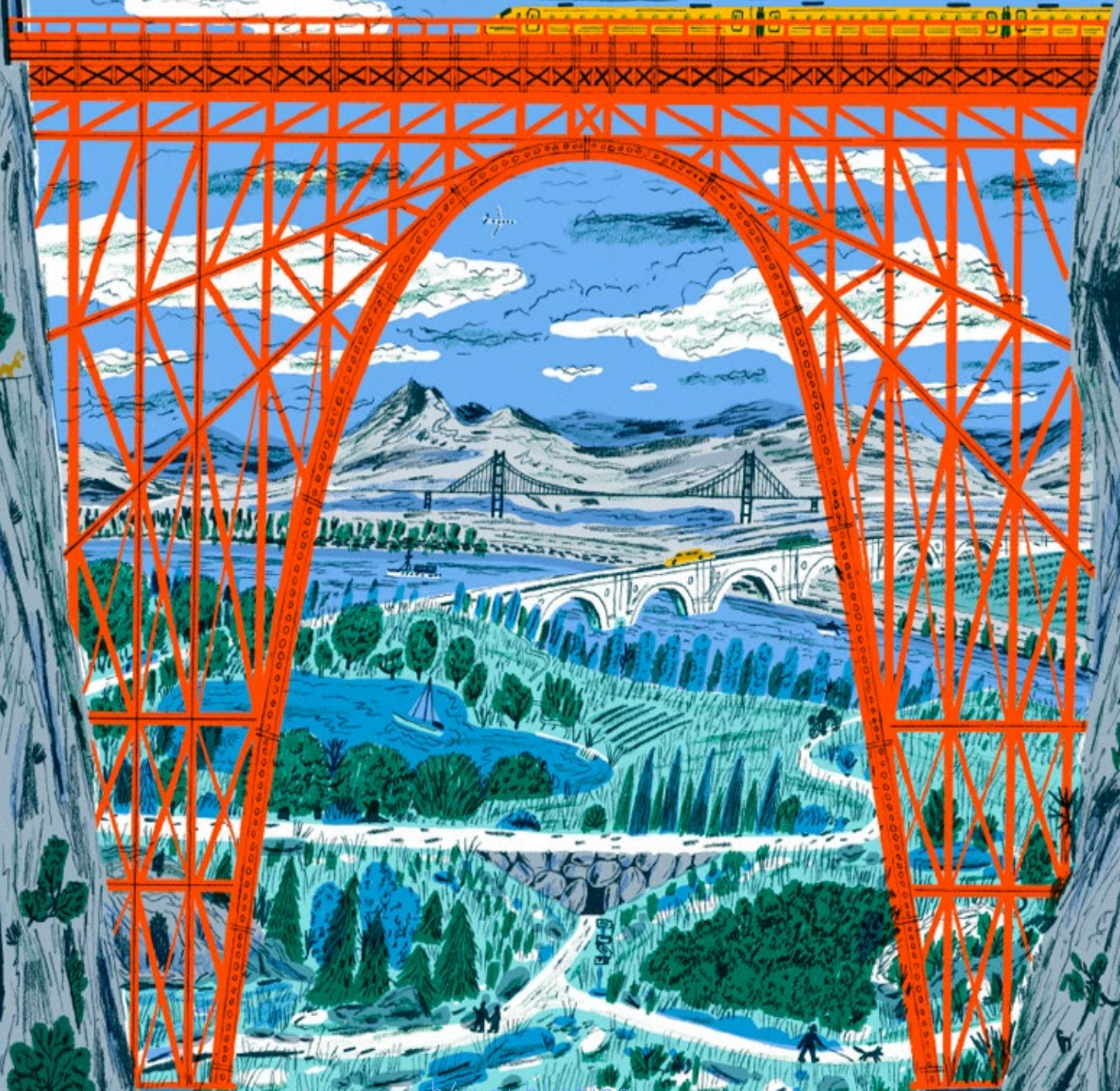


Magda Garguláková — Jakub Bachorík

# BRIDGES

Magda Garguláková — Jakub Bachorík

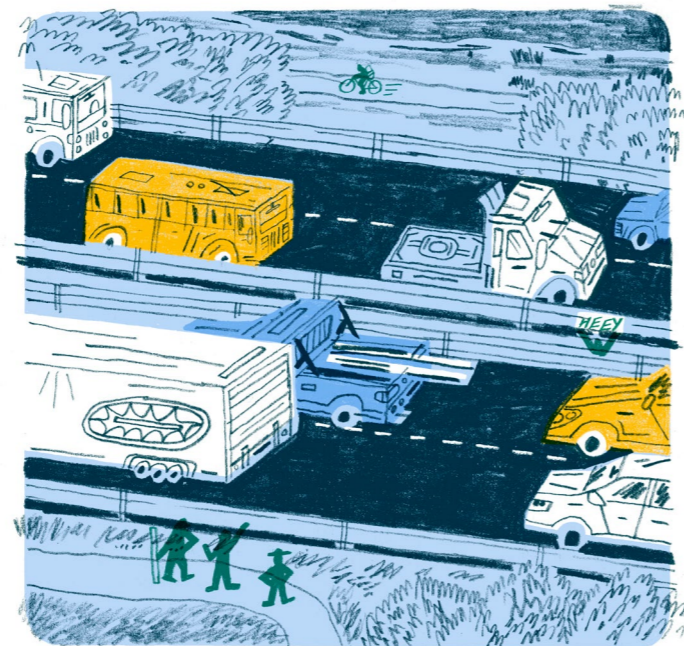
BRIDGES



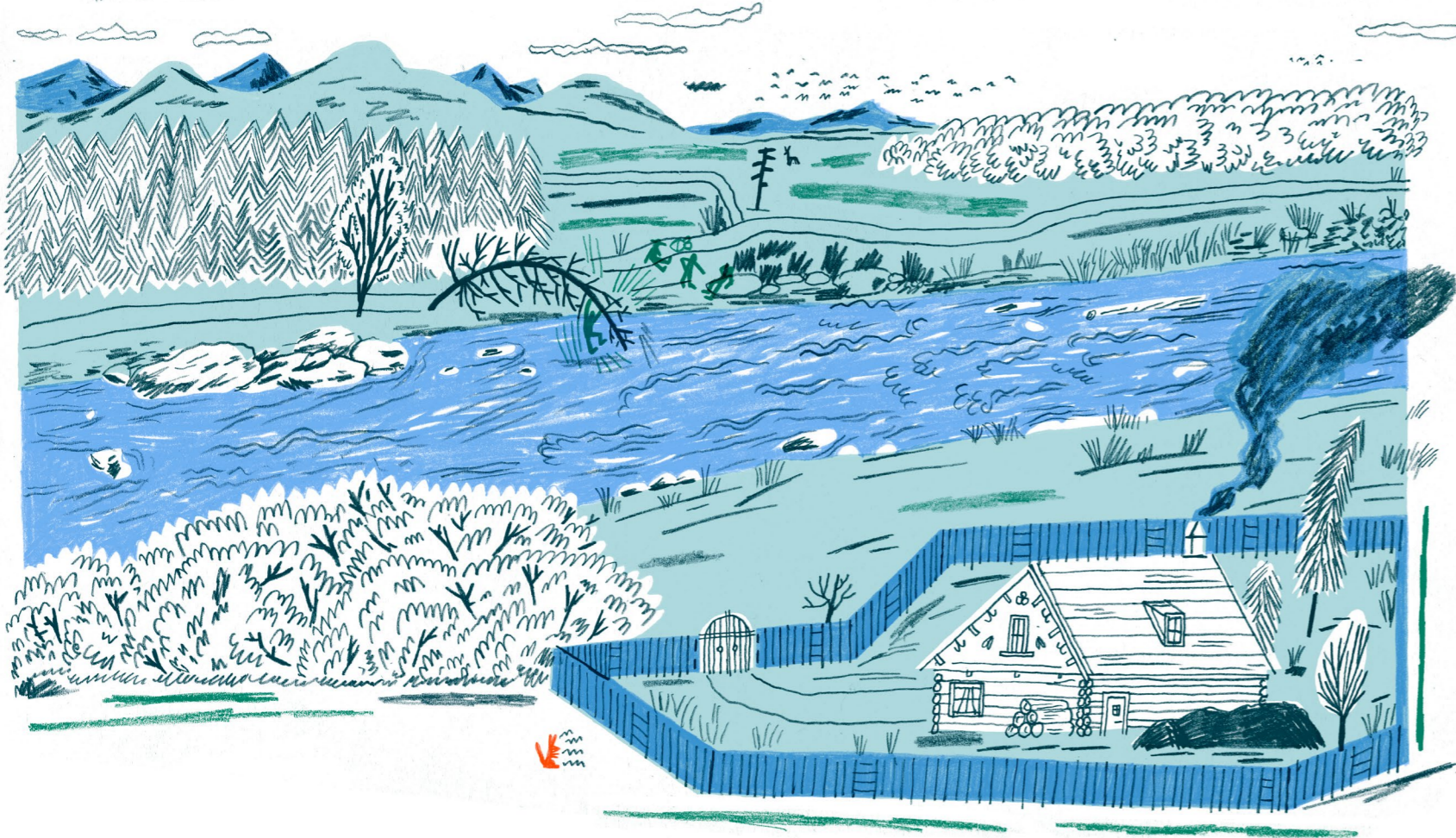
publishing

Albatros





What now?  
What's the solution



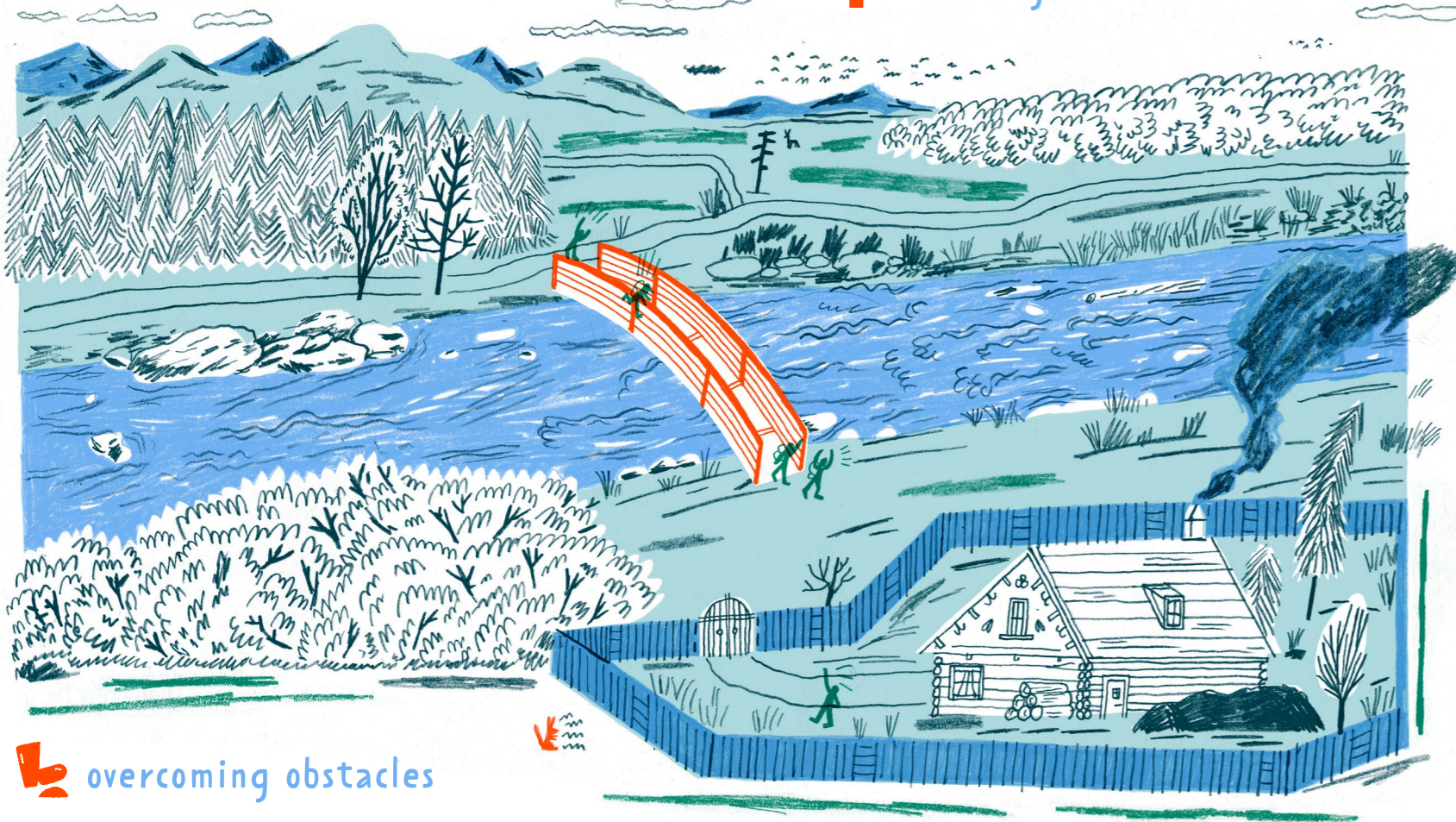
 connecting



 making life easier

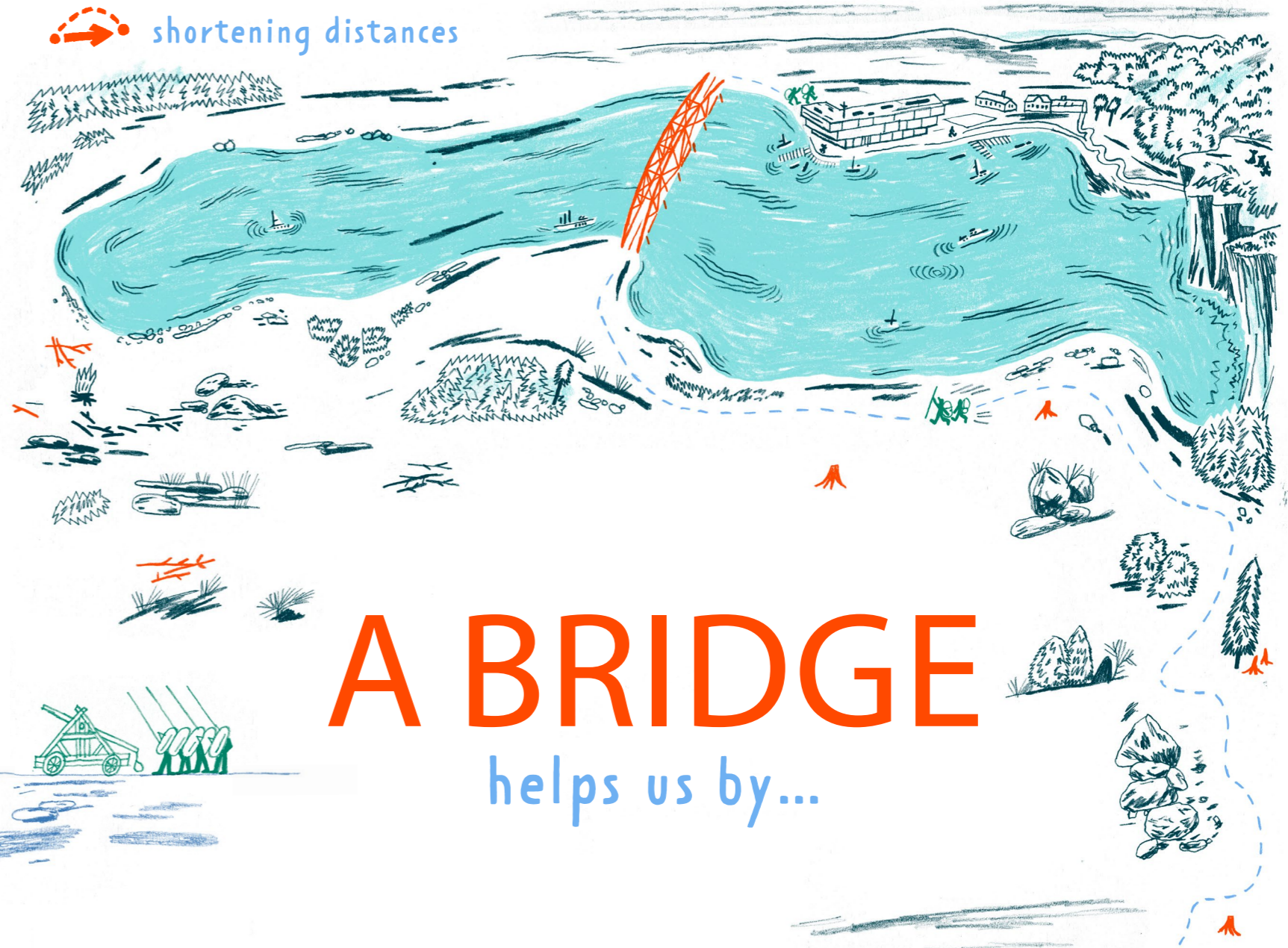


 rescuing



 overcoming obstacles

 shortening distances



# A BRIDGE

helps us by...

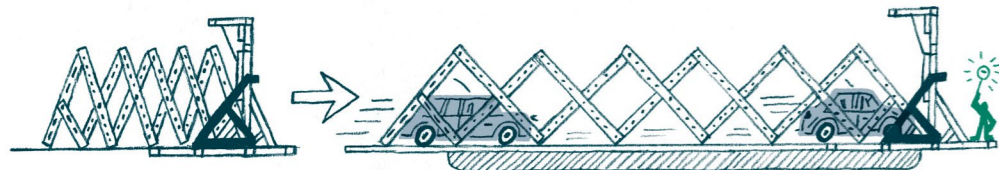


 making the scene special

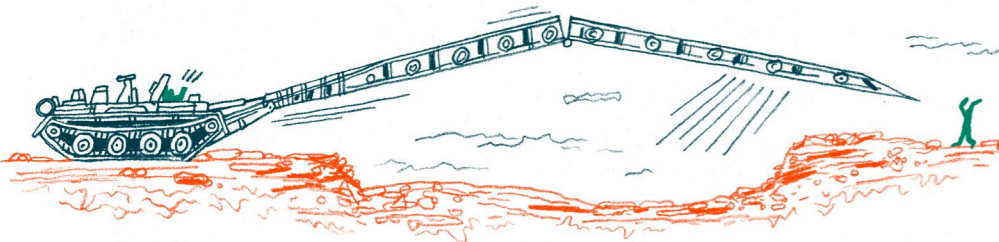
 extending our view



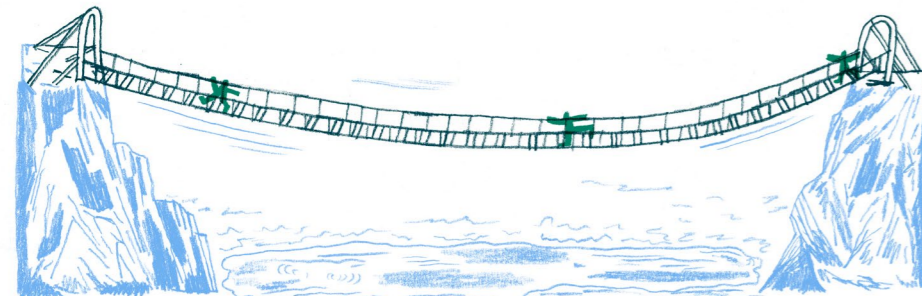
# BRIDGES COME IN MANY FORMS



movable folding bridge



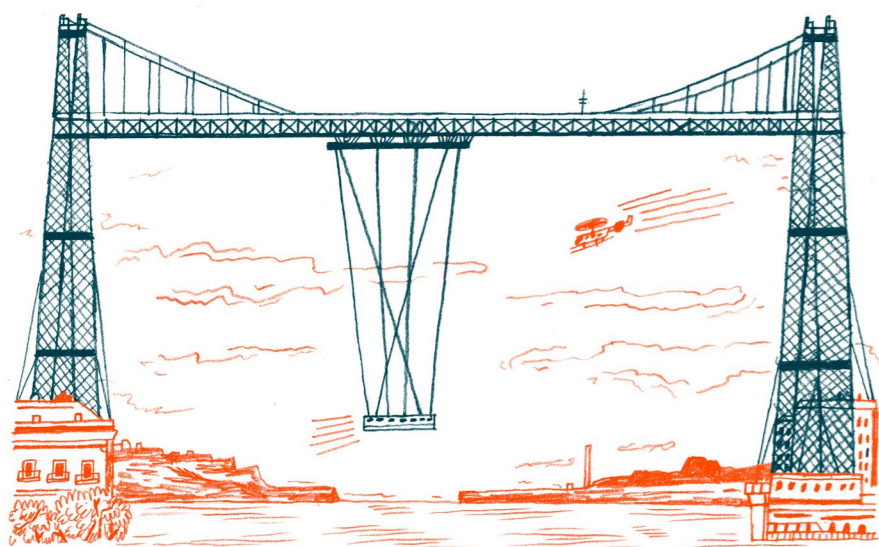
armoured vehicle-launched bridge



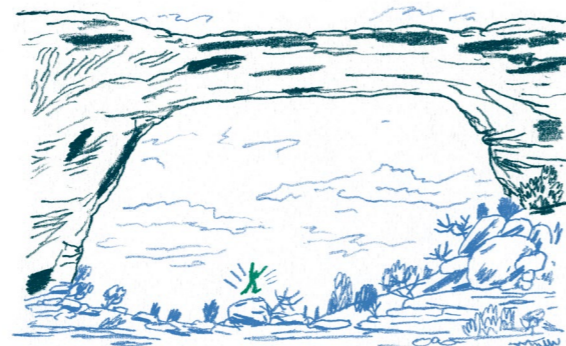
observation bridge



lifting bridge



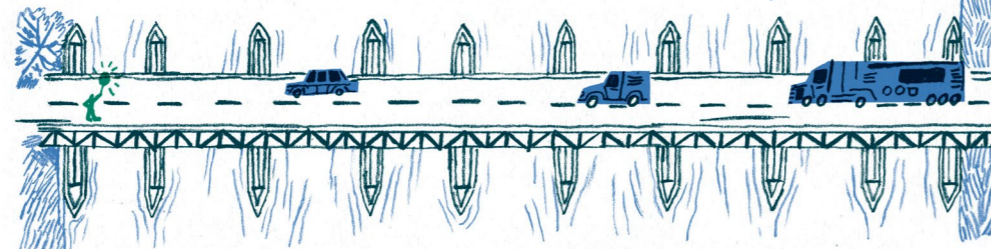
transporter bridge



natural bridge



suspended footbridge



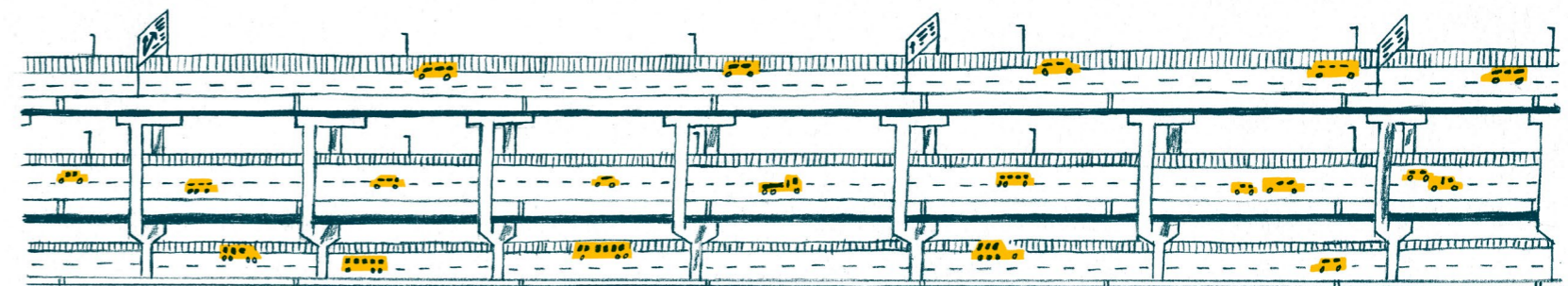
pontoon bridge



covered bridge



play bridge



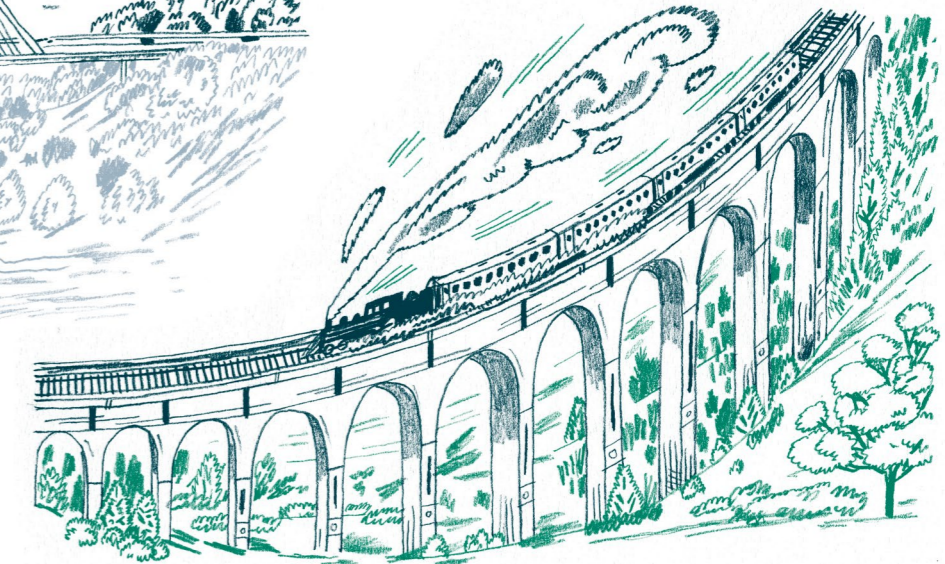
multi-level bridge



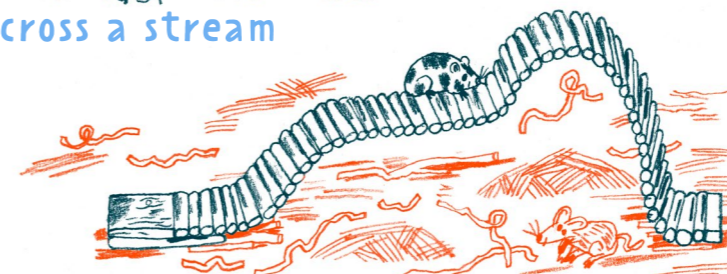
road bridge



log across a stream



railway bridge



hamster bridge



wildlife crossing



climbing bridge



aqueduct



improvised bridge

# WHAT MAKES A BRIDGE A BRIDGE?

Before we learn what to call it, we need to understand how it serves. We discover its advantages when we are very small, so no complicated explanation is necessary. But how would you describe a bridge to someone who can't see, or to an inhabitant of another planet who has no need of bridges because they fly over every hole and obstacle? How about this?

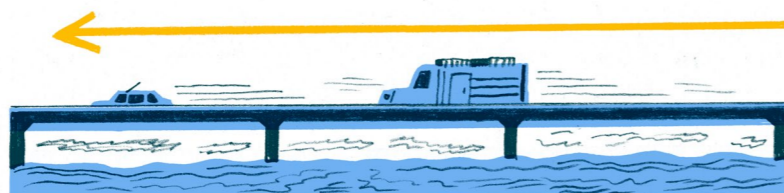
## FEATURES OF A BRIDGE

and how we recognize one:

IT CONNECTS



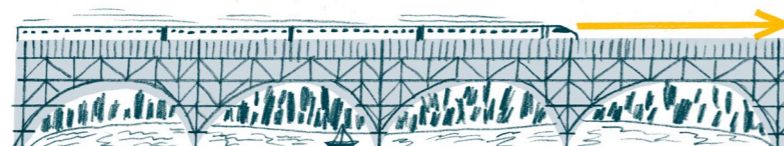
IT TAKES A PATH OVER AN OBSTACLE



IT IS MANMADE



IT SHORTENS DISTANCES



## PARTS OF A BRIDGE

Although bridges differ in appearance, each bridge is unique. Yet all have common structural elements that make them a bridge, without which they would lack the stability to take us from one side to the other.

**A FOUNDATIONS**  
Solid bridge "anchors", commonly made of concrete. They hold the

bridge firmly in place, even if the ground is moving.  
**B ABUTMENTS**  
These support the

bridge at its ends and absorb the forces acting on it.

**C SUPPORTS**  
Pillars or columns that hold up the bridge and absorb tension bearing down on its structure.

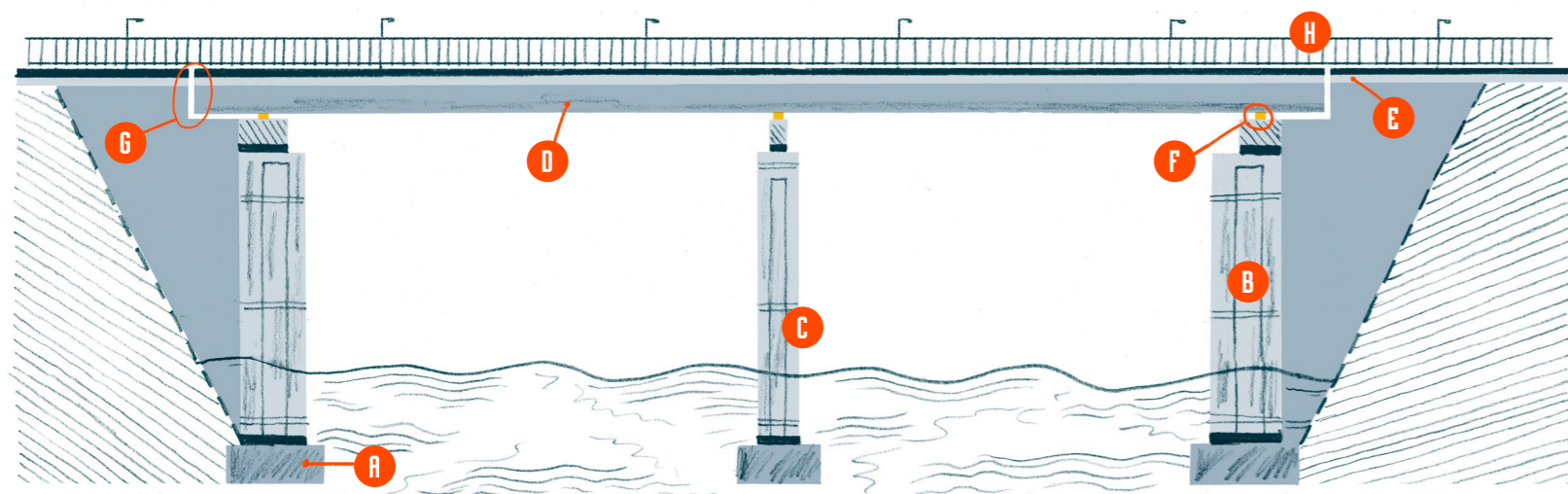
**D MAIN SUPPORT STRUCTURE**  
A horizontal support comprising a number of elements.

**E BRIDGE DECK**  
Distributes the load of means of transport to the main supporting structure.

**F BEARINGS**  
Transfer load from the support structure to the supports, so providing for movement in the structure caused by shrinking of material or tilted supports.

**G EXPANSION JOINT AND CLOSURE JOINT**  
The closure joint overlaps the expansion joint, which is there to allow for movement in the support structure caused by expansion of material.

**H FITTINGS**  
Railings, crash barriers, lighting, water drainage, etc.



Planning to build a bridge?

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# CHOOSING the right bridge



Bridges large and small. Some we barely notice; others go down in history. Hundreds of shapes and styles. A new bridge transforms, breathing life into any village, town or metropolis. It must be functional, resilient, reliable and, of course, safe. Choosing the right builder for your bridge is all-important. With us, you'll get a bridge that will last for centuries. We have the know-how!



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When choosing a **BRIDGE**, ask yourself these **QUESTIONS**:

## 1 What kind of **OBSTACLE** must it overcome?

NATURAL		MAN-MADE	NONE
valley 	wide expanse of water 	road, rails 	for decoration 
narrow expanse of water 	tectonic shift 	buildings, homes 	simply a bridge 
	impassable terrain 	pipelines 	

**OBSTACLE? WHAT OBSTACLE?**



## 2 WHO/WHAT is the bridge FOR? WE'LL BRIDGE ANYTHING

pedestrians 	cars 	animals 	mixed traffic 
cyclists 	public transport 	trains 	water 
			cables 

## 3 What **SPAN** do I need?

180 cm 	mini bridge 1 - 2 m		short-span bridge 2 - 15 m		medium-span bridge 15 - 75 m		long-span bridge 75 - 100 m		mega bridge 1 - xxx km
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## 4 Which building **MATERIAL** will I choose?

 <b>Wood</b> • cheap, readily available and easy to process • short lifespan and low durability • suitable for small bridges for pedestrians and cyclists	 <b>Brick</b> • cheap, readily available, looks good • limited lifespan • suitable for historic structures	 <b>Stone</b> • strong, resilient, reliable • looks good, can be decorated • suitable for renovation of historic structures	 <b>Steel</b> • strong, reliable • lightweight, suitable for long spans • subject to corrosion	 <b>Concrete</b> • strong, resilient, reliable • bears huge loads across long spans • improved options: ferroconcrete, pre-stressed concrete	 ordinary concrete	 ferroconcrete	 pre-stressed concrete
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