

# Societal transformations toward a net-zero future:

## Taking an 'ecosystem' perspective

November 29, 2022



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13 CLIMATE ACTION



# Climate Change 2022

## Mitigation of Climate Change



# The latest global science

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- **Highest** emissions in human history
- We are **not on track** to limit warming to 1.5 degrees C
- There is **real evidence** of sustained GHG reductions in some countries (Japan, UK, Germany)
- The cost of renewables has **plummeted**
- We have the **solutions** in every sector that can halve our emissions by 2030

# Climate Change 2022

## Mitigation of Climate Change



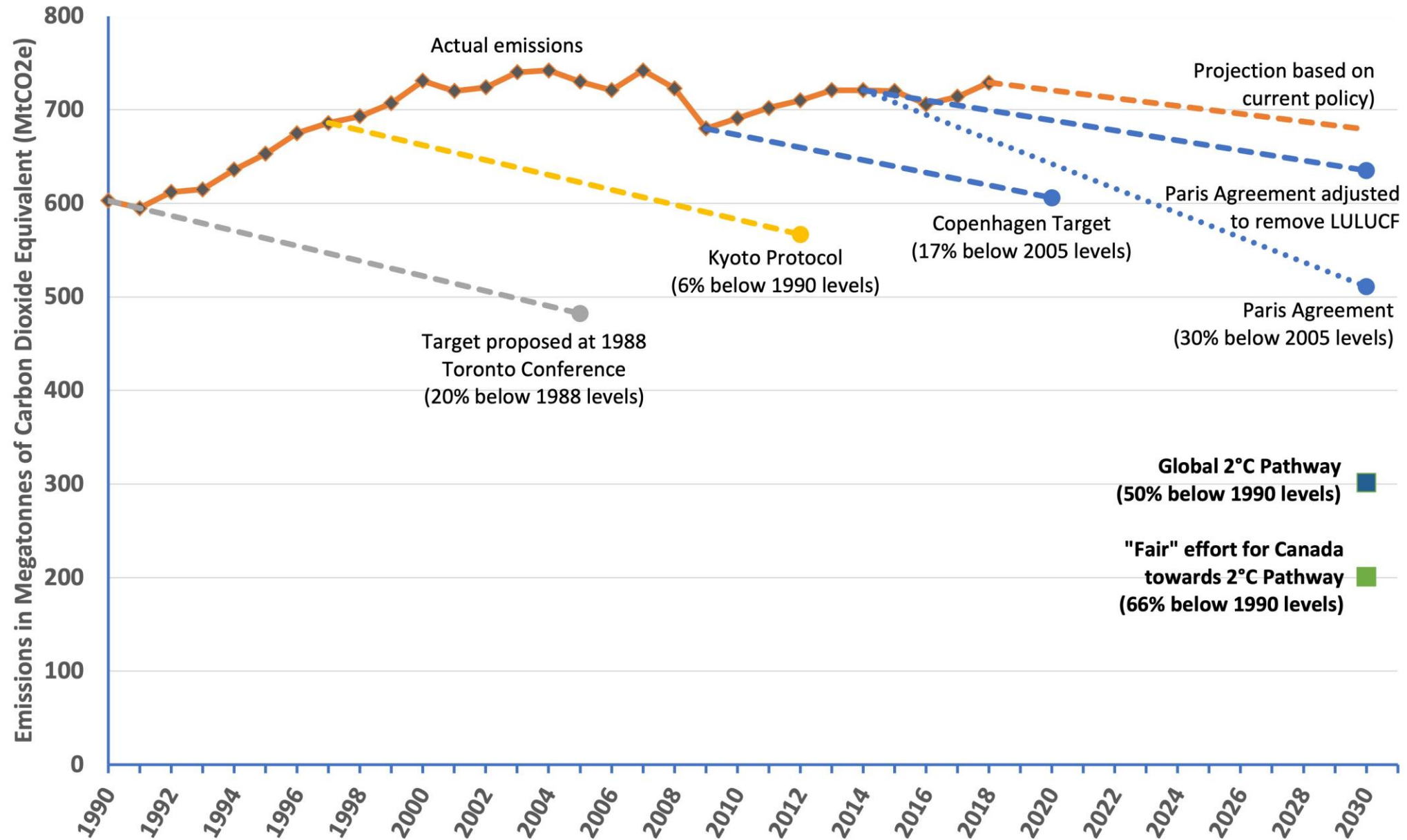
# The latest global science

- **Lifestyle change** can provide up to 70% of emissions reductions

BUT

- Individuals are **locked** into high-carbon pathways
- We can't achieve **Sustainable Development Goals** without dealing with climate change
- **Cities** are crucial

## Canada's GHG Emissions Reduction Targets



MIDRISE DENSITY to optimize energy efficiency with high building standards and shared walls

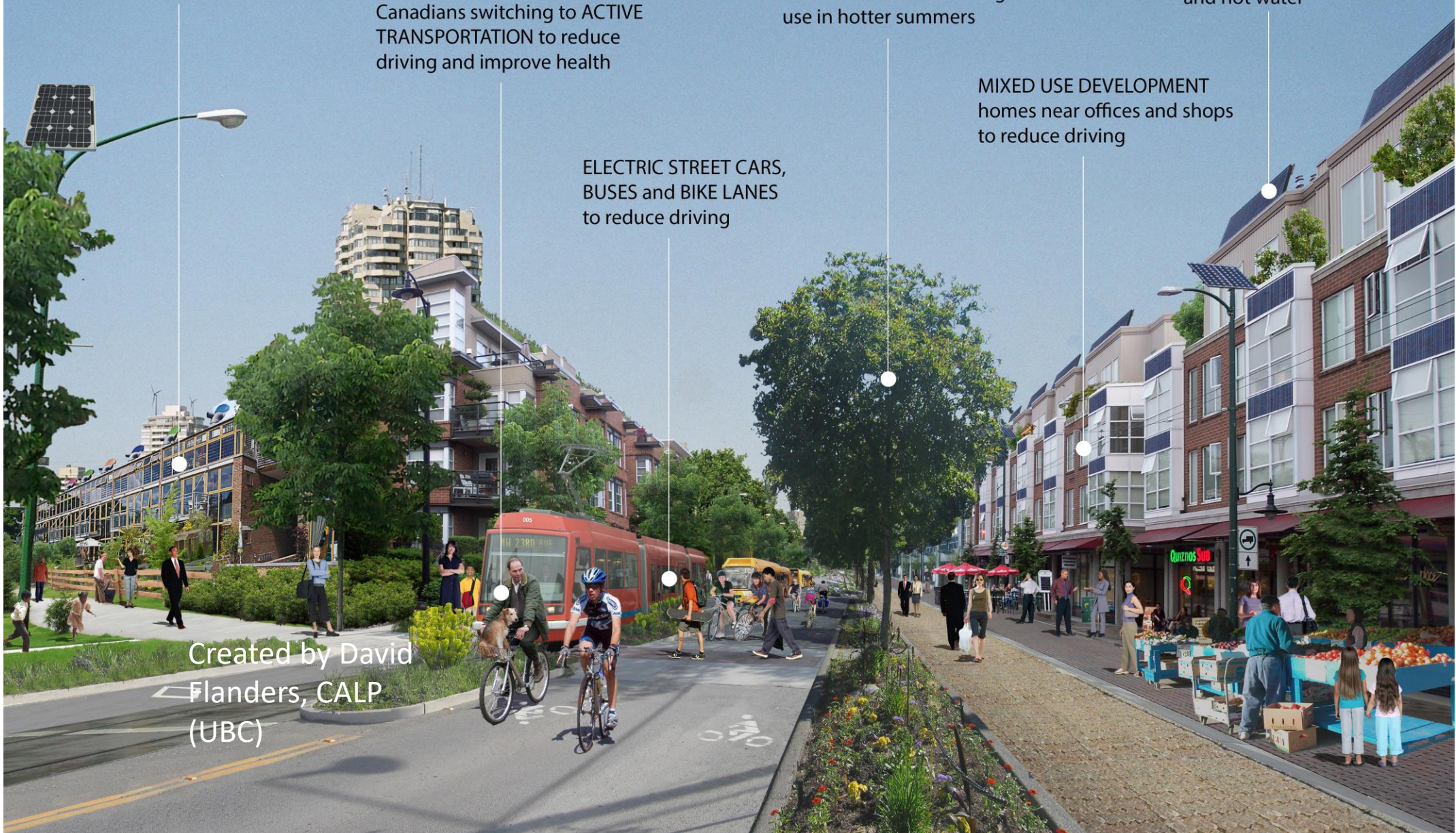
Canadians switching to ACTIVE TRANSPORTATION to reduce driving and improve health

TREE SHADING for cooling to reduce air conditioning use in hotter summers

SOLAR ELECTRICITY for renewable electricity and hot water

MIXED USE DEVELOPMENT homes near offices and shops to reduce driving

ELECTRIC STREET CARS, BUSES and BIKE LANES to reduce driving



Created by David Flanders, CALP (UBC)



## TRANSFORM

TRANSFORM is a vibrant global network of researchers and practitioners who work with small and medium enterprises to design sustainability **experiments**, build **capacity**, and accelerate **innovation** leading to more resilient, inclusive, low-carbon **communities**.



“The future is already here, it’s just unevenly distributed.”

# EXPLORING TRANSFORMATIVE SUSTAINABILITY PRACTICES WITH SMALL BUSINESSES

- **Worked with civil society partners and SMEs** to develop our research questions, sampling methodology, interview script and iterative validation process
- **Identified and invited SMEs** to participate in the research to map practices – successful and nascent sustainability-oriented projects
- **Carried out in-depth interviews** to key informants to reveal a trajectory of implementation
- **Mapped a supporting ecosystem** as seen through their perspective
- **Developed sequences** to understand resources, activities, people and knowledge related to implementation of individual practices
- **Convened wider group of actors** to mobilize findings, express ‘circles of control’ and envision future



# BENEFITS OF TRANSFORMATIVE CHANGE

## Organization Level

- Reduced operating costs (energy use, waste haulage, reduced process waste, water costs)
- Reduced risk exposure (government, reputational, competitive etc)
- Green branding (especially when there are numbers to prove it)
- Employee retention & attraction (people want to work where their values align)
- Enhanced innovation (as the status quo of operations is not sustainable)

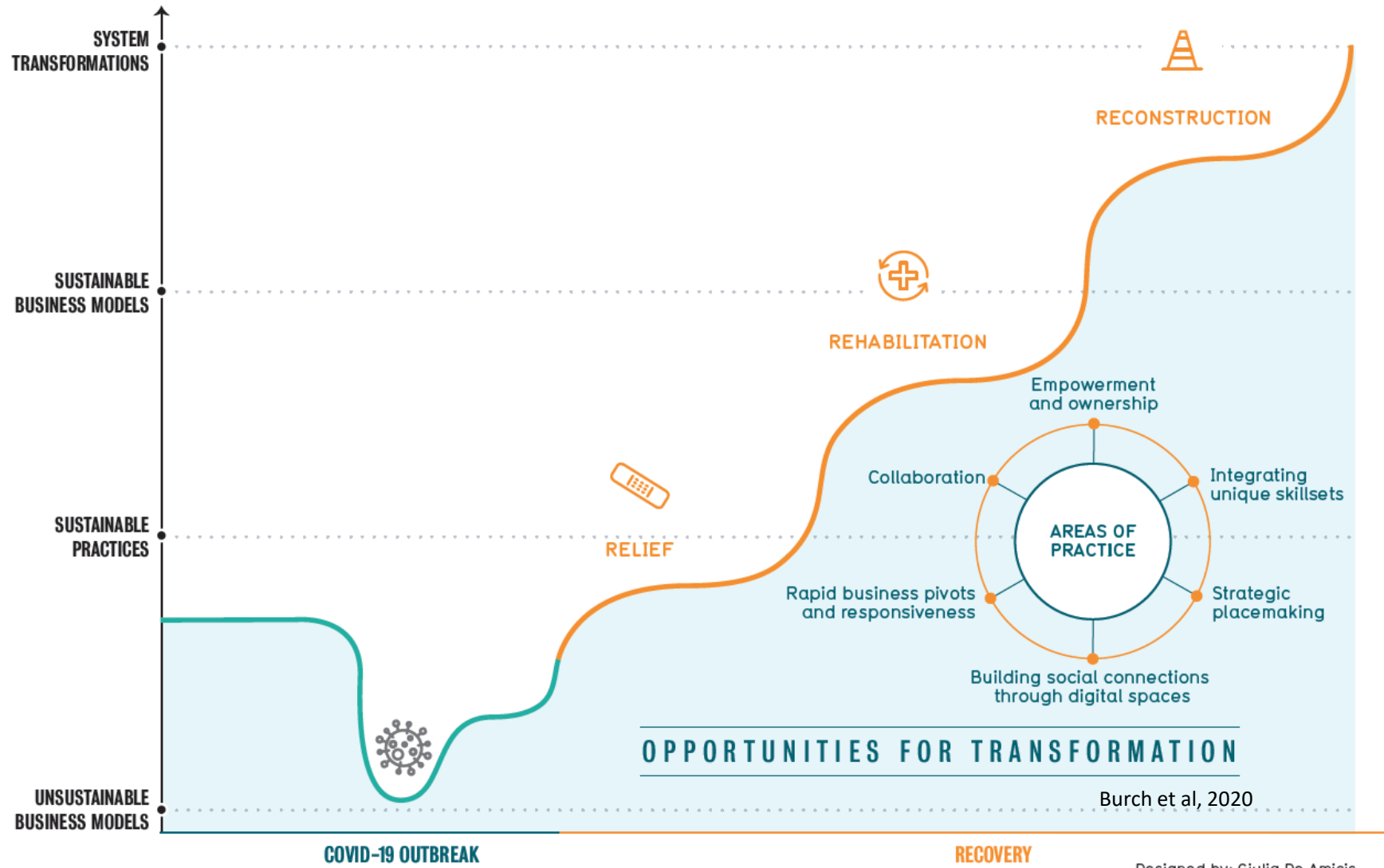
## System Level

- Diversified economy (building of an ecosystem and diversification)
- Reduced energy load (infrastructure load and GHG reduction)
- Competitive location advantage (attraction of companies)
- Attraction of foreign direct investment (innovative and leading community)





# A SUSTAINABLE SME-DRIVEN RECOVERY



Designed by: Giulia De Amicis



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## BROADER LESSONS

- Sustainability transformations are largely political, social and behavioural processes (and even the seemingly technical parts are social)
- Transformations are **collective** processes – so capacity needs to be built in the collective (the ecosystem) not just in isolated individual organizations
- Need to enable both business viability and transformative sustainability
- Scholars can participate actively in transformations through transdisciplinary work





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