

# LEARNING ADOPTION AND SCALE UP OF CDR AND SRM

PROF. GREGORY NEMET



Robert M. La Follette  
School of Public Affairs  
UNIVERSITY OF WISCONSIN-MADISON

June 2021



European Research Council  
Established by the European Commission



# 8 WORK PACKAGES

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1. Costs potentials

2. Bottlenecks

3. Social acceptance

4. Learning, adoption

5. Risks

6. Policy support

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7. Synthesis

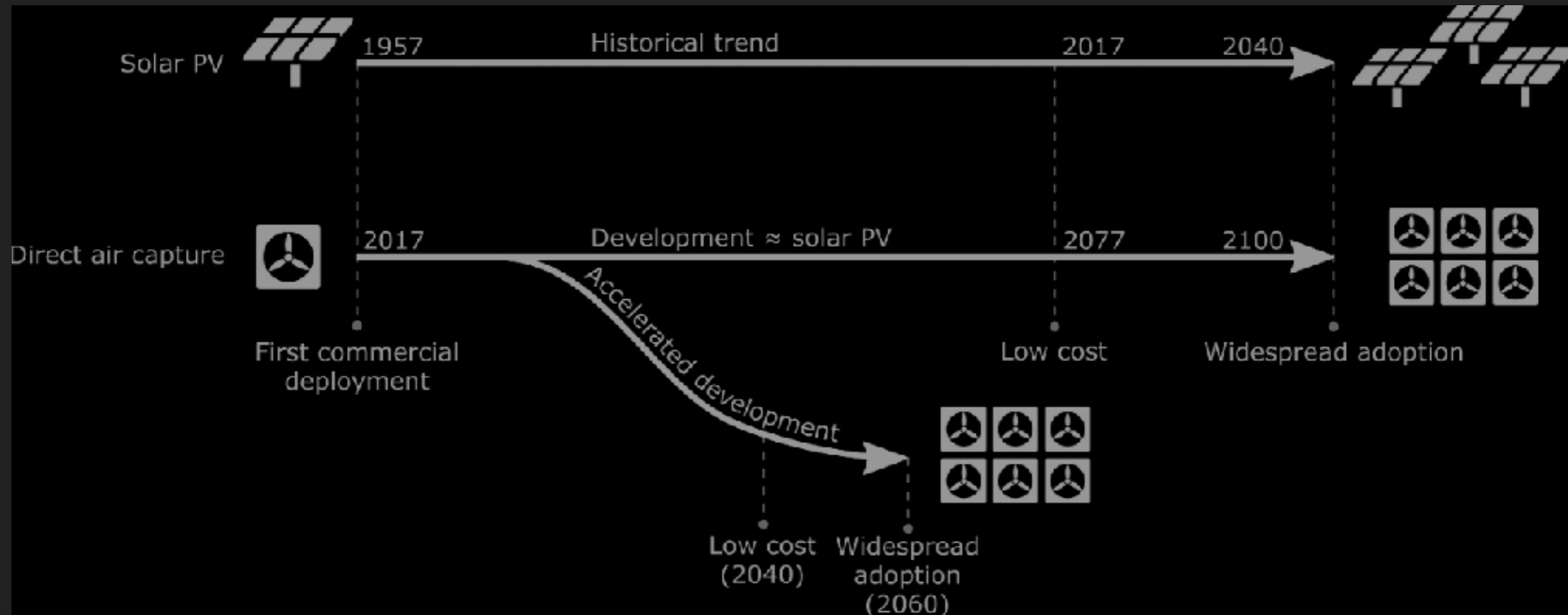
8. Outreach

## Motivation

1. GTs by 2050s
2. scale up lengthy
3. focus is on R&D
4. urgency for post-R&D innovation activities

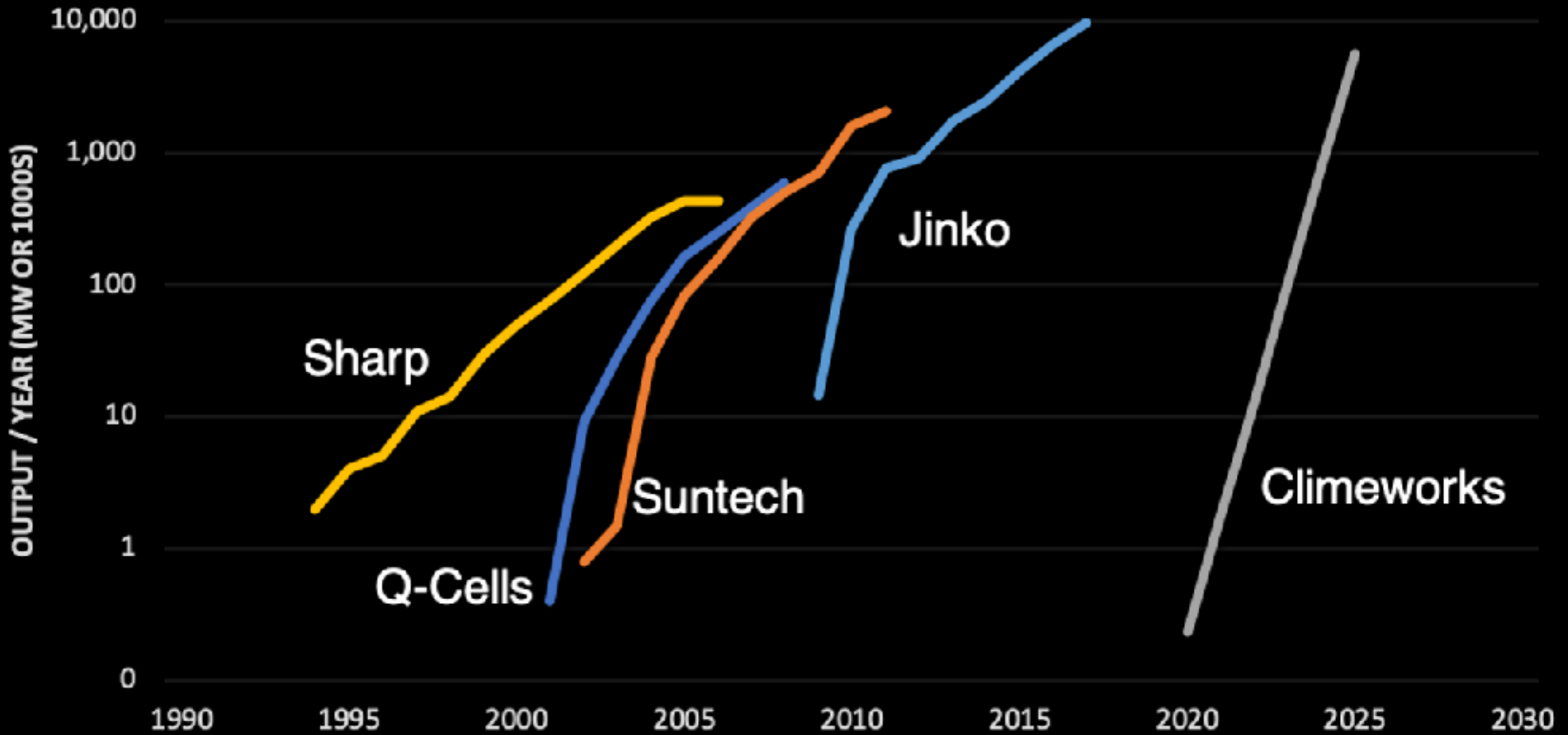
## Objectives

1. Inform scale up
2. Specify enablers
3. Identify barriers
4. Timing and pace
5. Insights for policy



- ▶ Accelerated = factor of 4 faster
- ▶ Operation Warp Speed was 4x faster

# HAVE ACCELERATED SCALE UP MODELS



▶ In some cases 2x is faster enough

## Technology type

## Innovation model

## Low-carbon target

1. High-tech, iterative, disruptive



Solar PV



Direct air capture

2. Low-tech, small, distributed



Green revolution



Soils

3. Large, system integration intensive

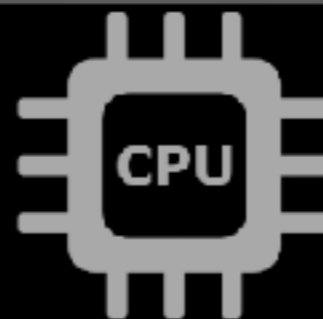


Chemical plants

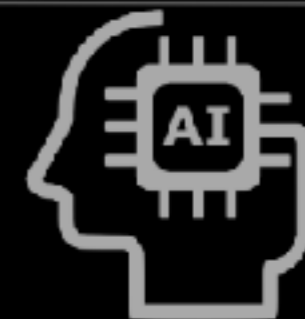


BECCS

4. General purpose

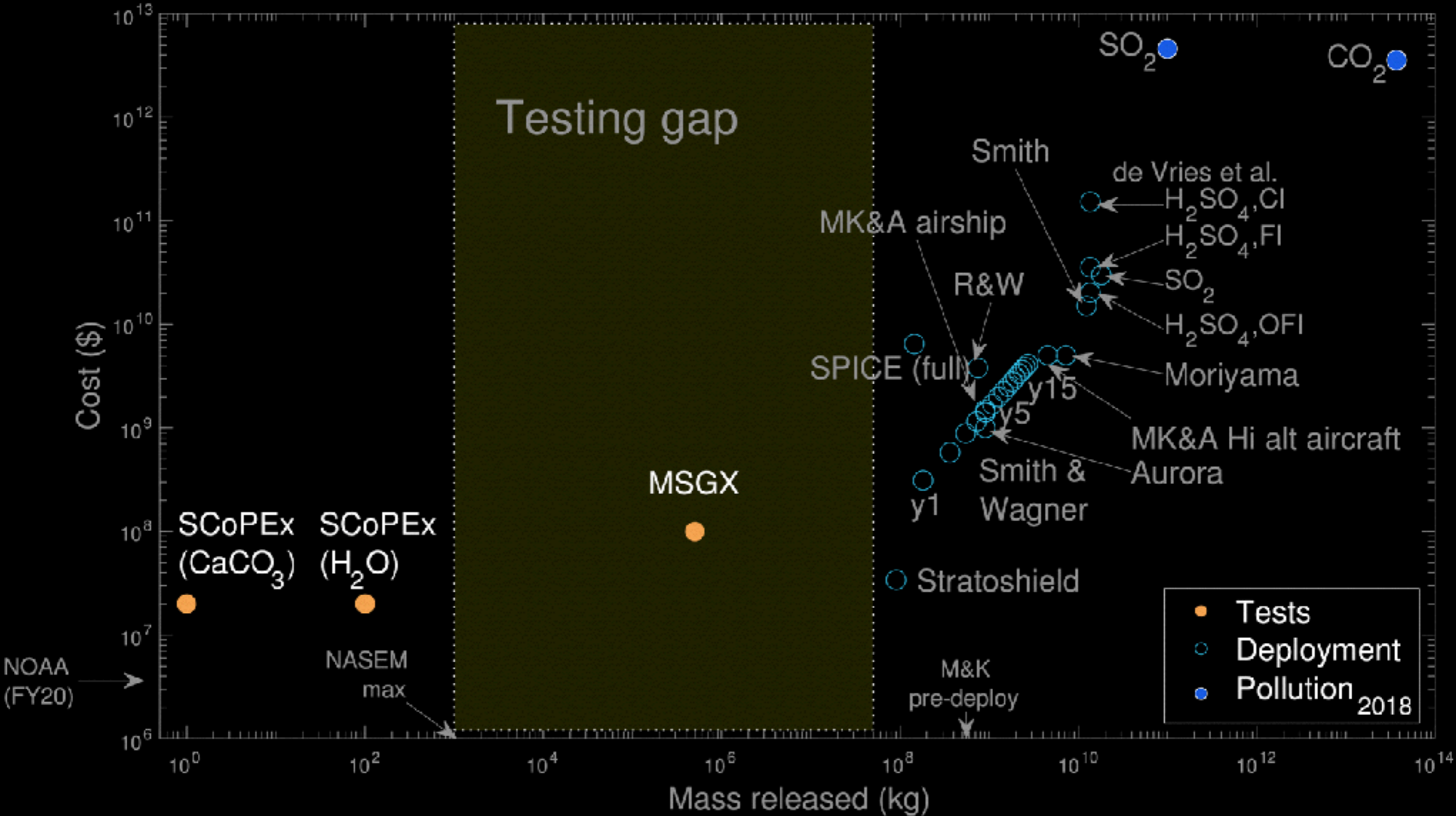


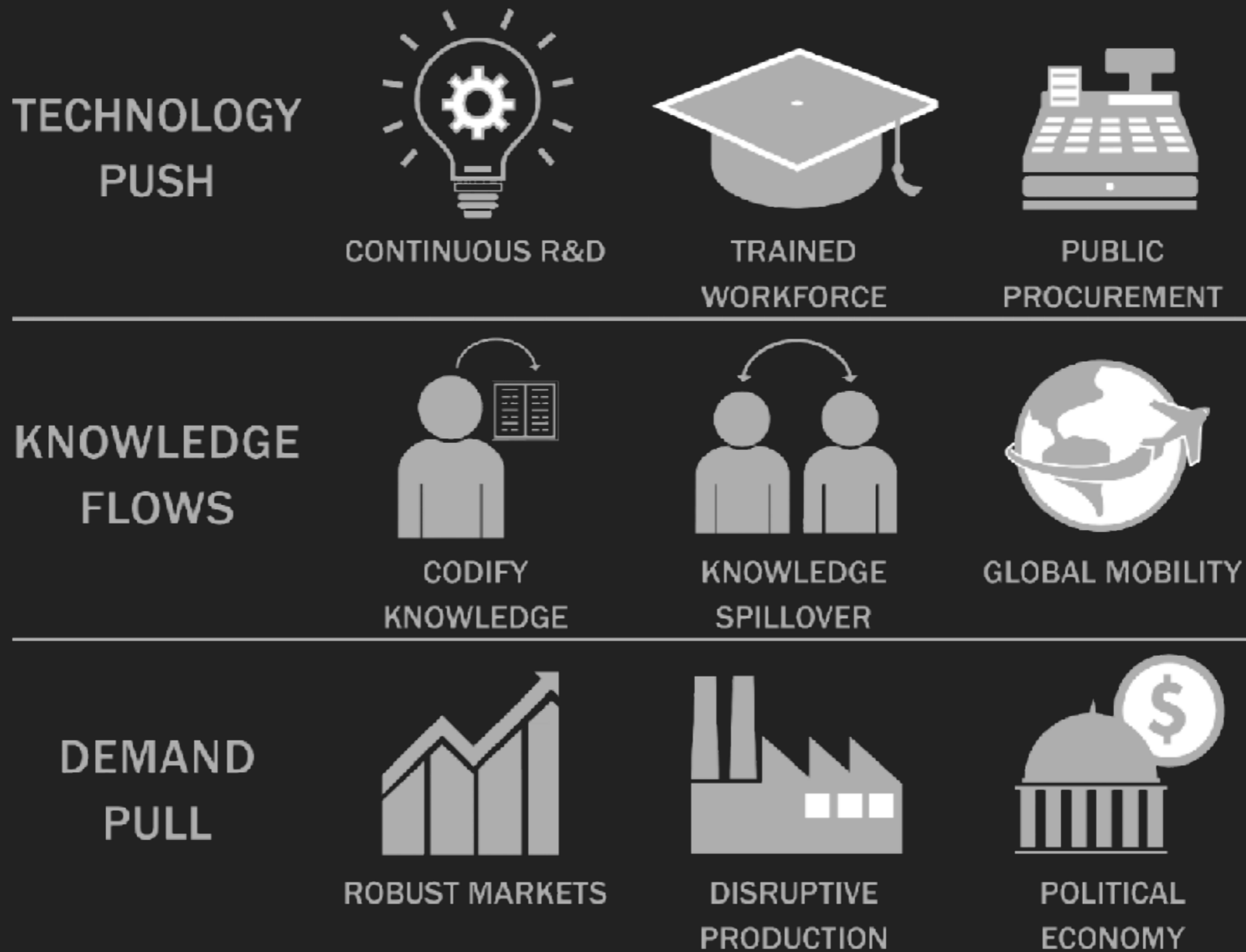
Micro-processors



Artificial intelligence

# SRM (SAI): UPSCALING WITHOUT ITERATION?





▶ Type-1 = High tech, small, iterative