

# 1. introduction

Vertical Concrete is very expensive,



Wall forming is **very costly**.

and carbon



Blowout!

Form pressure can be unbearable.



Shotcrete is **very hazardous** and wasteful.

intensive.

## 2. problem

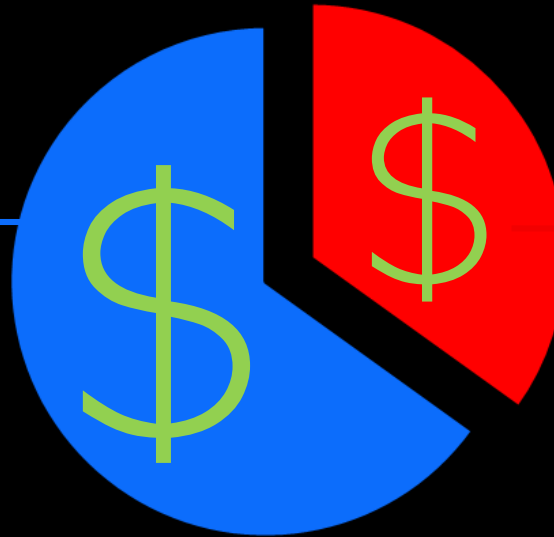
The costs are increasing.

### Labor

biggest cost of vertical concrete



### Worker Shortage



### Materials

present methods waste cement



### CO<sub>2</sub> Overload



### Hazards Exposure

How can we solve all of these problems?

### 3. solution

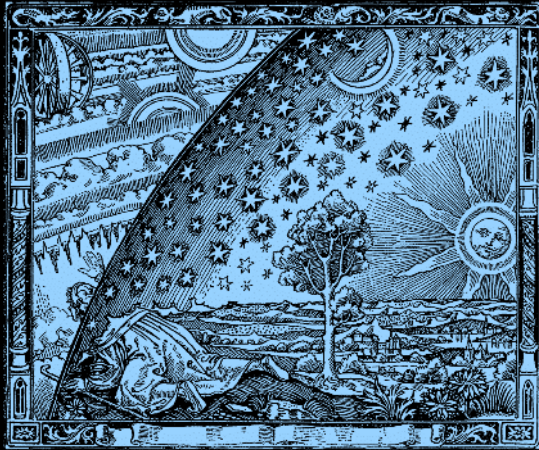
# Go Faster

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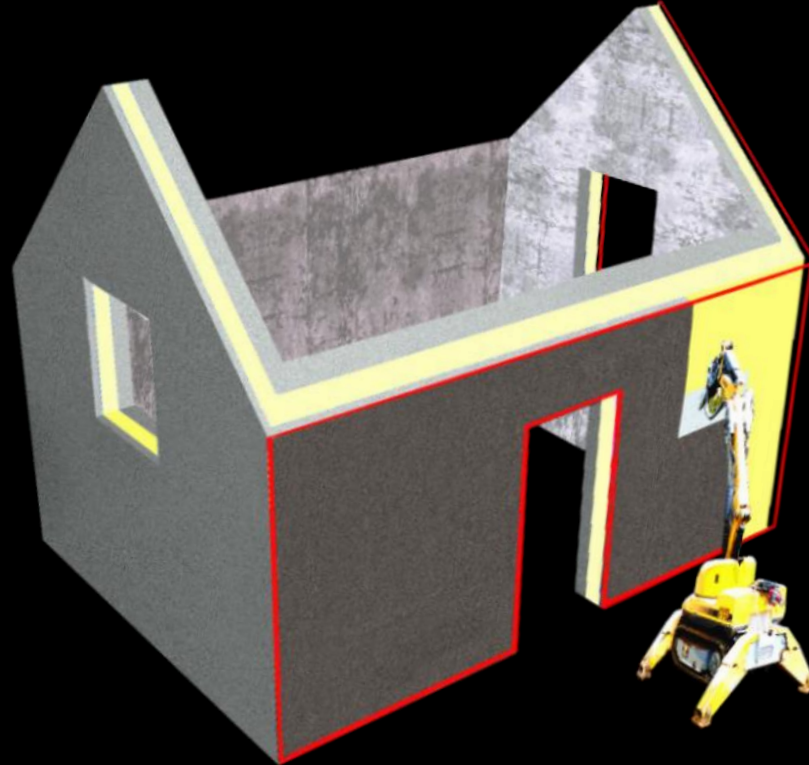
Use Less Cement!

More Local Cheaper-Greener Materials

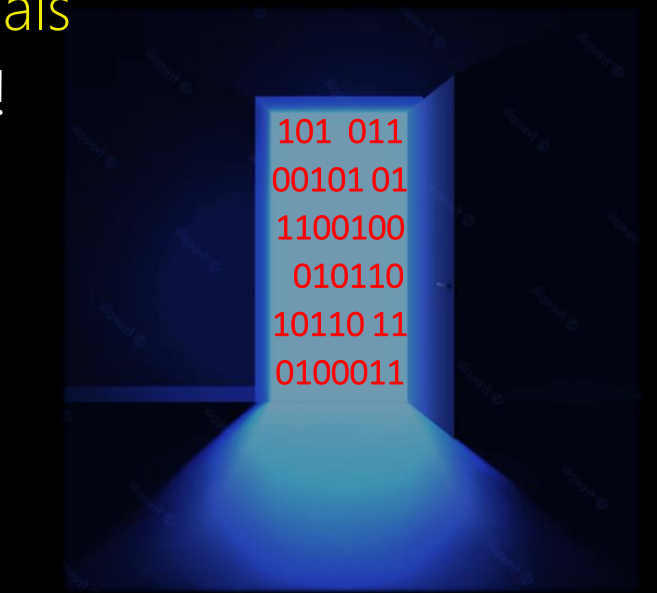
Eliminate Concrete Form Pressure!



expand horizons



inconceivable material properties



open a digital world

endless automation possibilities

Avoid Vertical Concrete Costs

Link available tech with common materials.

digital systems



SpaceCrete™  
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connect two worlds

ANY concrete



Employ existing equipment + cheap materials.  
Profit from new admix, hardware, robotics...

# 5. how

**ANY** concrete

Automate Onsite  
without forms or shotcrete

**UNLIMITED** possibilities

**EVERYDAY**



100% conventional

Concrete

Gel-Modified Concrete

Transform YOUR Concrete  
99.75% Concrete

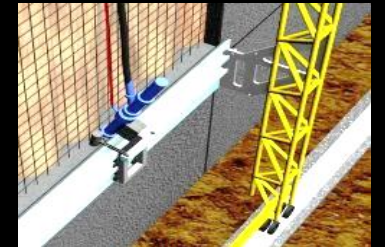
0.25% Modifier

Patented Inline Mixer



3D-Print

2D-Print



GPS-Guided

Marine Slip-Cast

Digitally  
Extrude



**GREEN**



alternative binders

**EXOTIC**



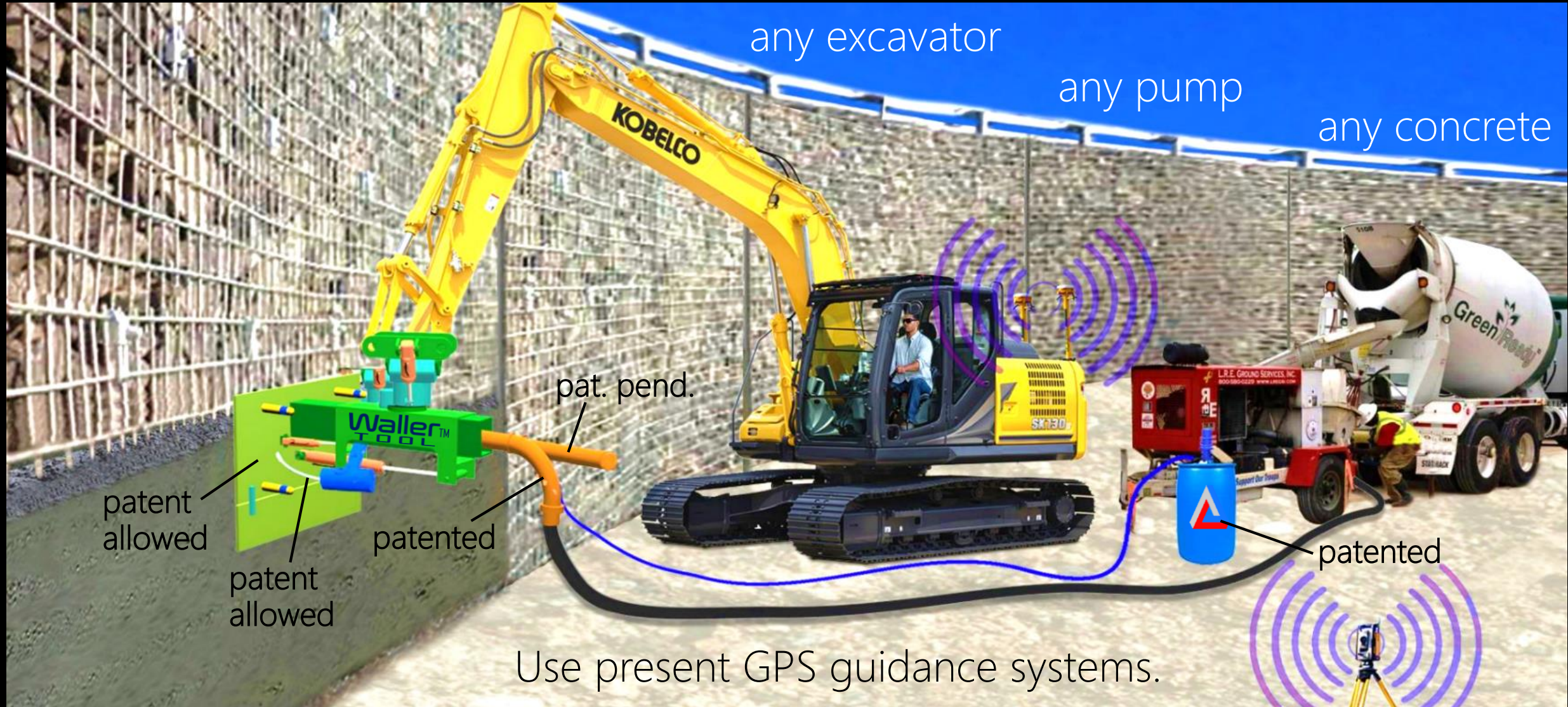
self healing

Infuse Gelling Agent or Geopolymer Activator  
Cement-free concrete now becomes practical.

## 6. example

Avoid MOST of the Cost

A Waller™ Tool vibrates gel-modified concrete into place and it stays put!

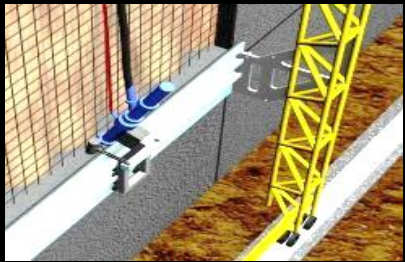


# 7. possibilities

## Phenomenal Options

New: Slip-Cast

Automated Placement



Buildings  
Basements  
Housing...

"The Fastest Vertical Rate"

Digital Extrusion

Shafts  
Towers  
Chimneys...

7 Pats. Pend, 2 Allowed

Gel-Modified Concrete  
"Defies Gravity"

This Changes Everything.



3D-Admix™  
MODIFIER

1 Patent, 3 Pending

*Speed Up* Existing Practices

3D Print  
Shotcrete  
Slip Form...



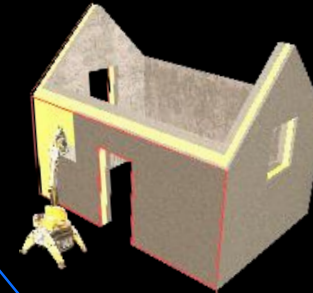
New: Waller™ Tool

Articulated Placement



Retaining Walls  
Canals  
Tunnels...

"A Fraction of the Cost"



Digital Layering

Single-Pass Stucco  
Wildfire Hardening  
Extrude Foam...

5 Pats. Pend, 1 Allowed

# 8. proven

# Full-Scale Tests



Huge Success  
Delivered Concrete  
Fastest Vertical Rate  
4"-Thin Walls  
Youtube Videos



all seismic reinforcing

fresh concrete



slip-cast vertically as fast as a foot per minute

first test of a Waller™ tool prototype

13' tall wall



## 9. traction

Meets All Existing Building Codes

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### Real Reinforced Concrete

- 6 Permitted / Permanent Projects
- No Special Inspections Required
- Higher Quality / Less Shrinkage
- Broad Pragmatic Patents




2023 World of Concrete  
Most Innovative Product  
because the Contractors  
blew their minds!



new lab / test project



# Broad Patents Pending

1. Inline Mixer **US Patented**
2. 3d-Admix **Patent Allowed**
3. Excavator/Robotic **Patent Allowed**
4. Rapid Slip-Cast **PCT Allowed**
5. Improve Sequence **PCT Allowed**
6. Rebar-Lifting Automation
7. New Non-Stick Tech
8. Sonic Consolidation 



9. Single-Pass Stucco
10. Wildfire Hardening **On Hold**
11. 3D-Print Mix Correction
12. Electro-Mag Ties
13. Radial-Tower Extrusion
14. Window Receptacles
15. Pump Modulator **PCT Allowed**
16. Sync w Analog Pumps

Unique construction experience allows creative insight.



Michael Butler  
Civil Engineer  
Product Developer  
Cal Poly SLO Architectural Engineering  
Top of Class + "Outstanding Graduate"  
43 Years in Construction / Engineering  
Concrete and General Contractor  
Housing – Commercial – Industrial  
High Rise to the Biggest Building in the World  
Over 1000 Unique Projects as Professional  
789 Construction Patents to Date  
World of Concrete Innovation of 2023



Realistic.

10 years in building trades. Then 33 in structural engineering


# 12. infrastructure


Use the excavator already onsite.



Old

**! DANGER**

 Respirable crystalline silica. May cause cancer. Causes damage to lungs. Wear respiratory protection in this area. Authorized personnel only.



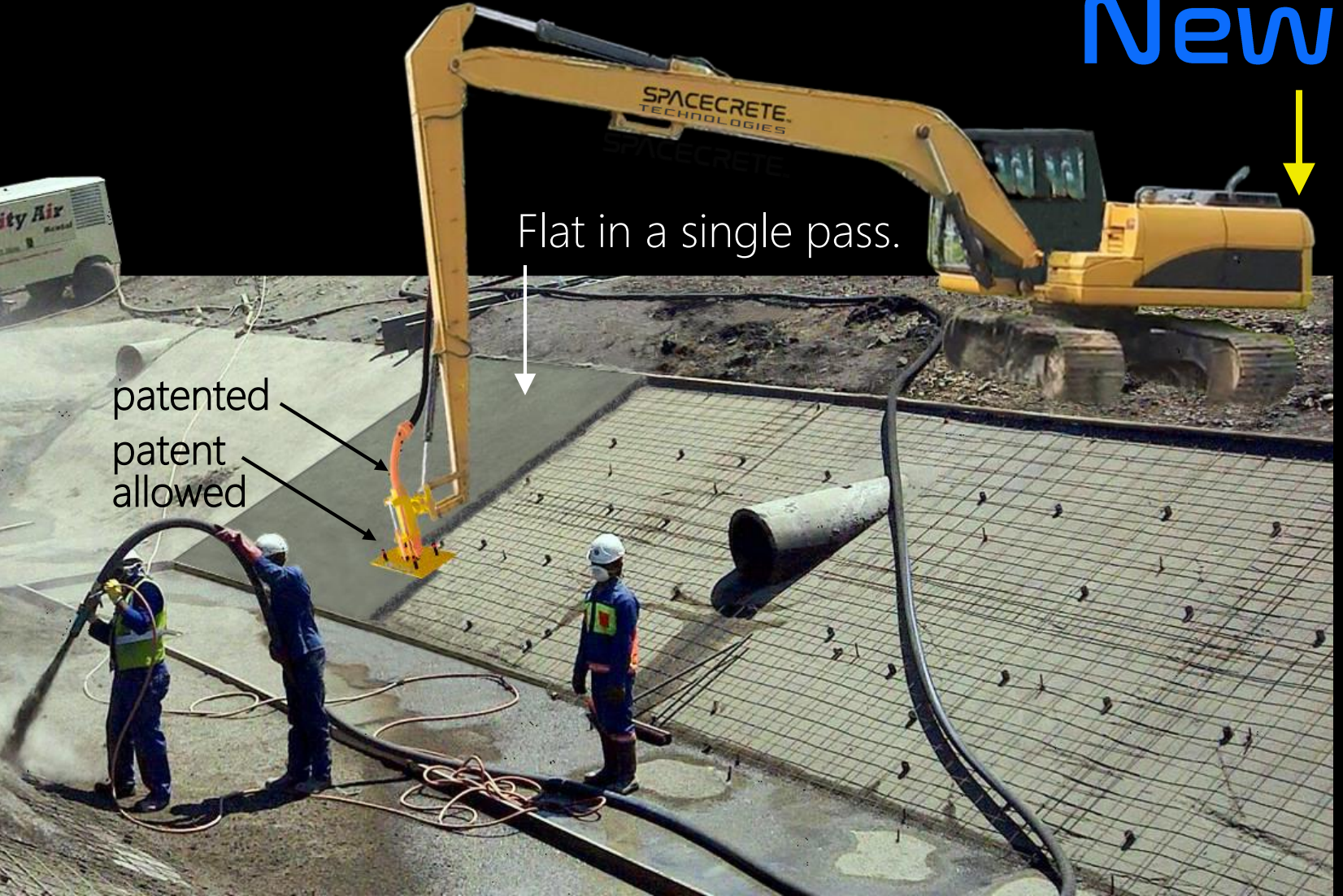
Labor Intensive



New

Flat in a single pass.

patented patent allowed



# 13. commercial

**Old** = Waste

3x Faster  
Half the Cost

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Speed = **New**



Tediously spray and overspray, then hope enough sticks to trim it flat...

Better Result

Automate Slip-Casting, in one pass.  
Move as fast as your concrete pumps.



patented  
pat. pend.

pat. pend.

Vibrate concrete into place, instead of spraying it all over.

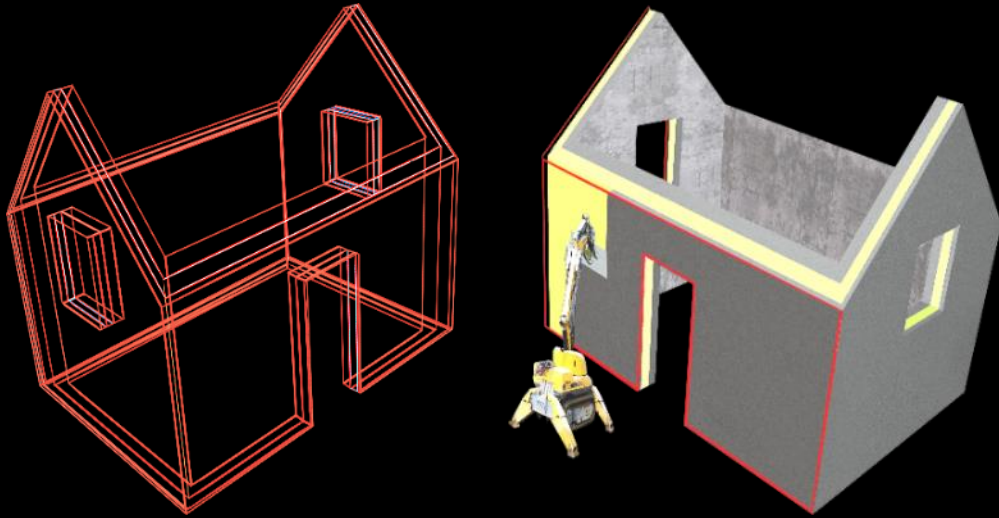
14. unlimited

Go Vertical.

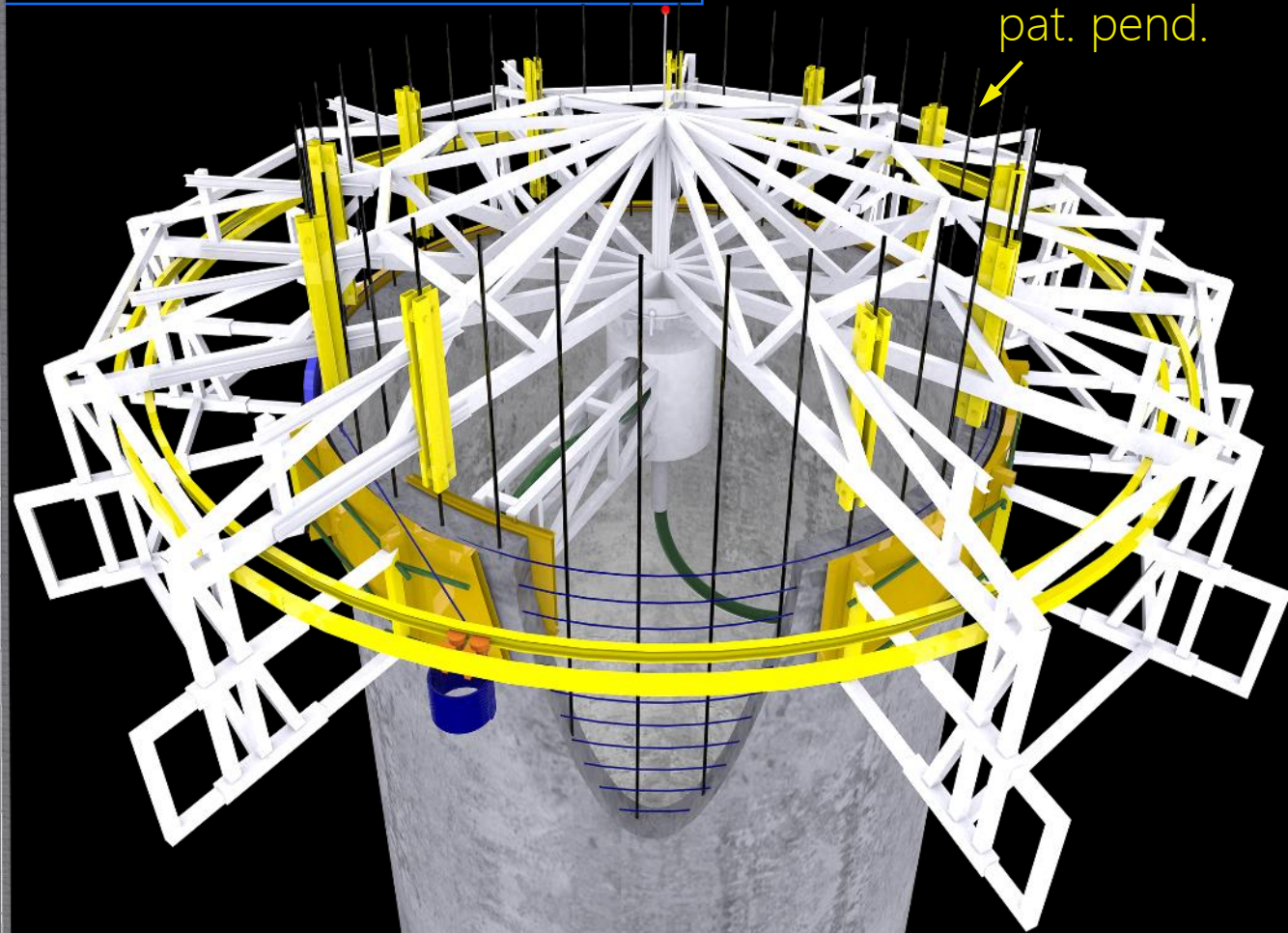
Many Times Faster.

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**BIM2CON**™  
TRANSFORMATION



Your Digital Model Becomes Concrete  
Automate the **entire** structure.



Rapid Slip-Cast allows all the rebar and less cement.  
Digital Control climbs the rebar for fastest build.

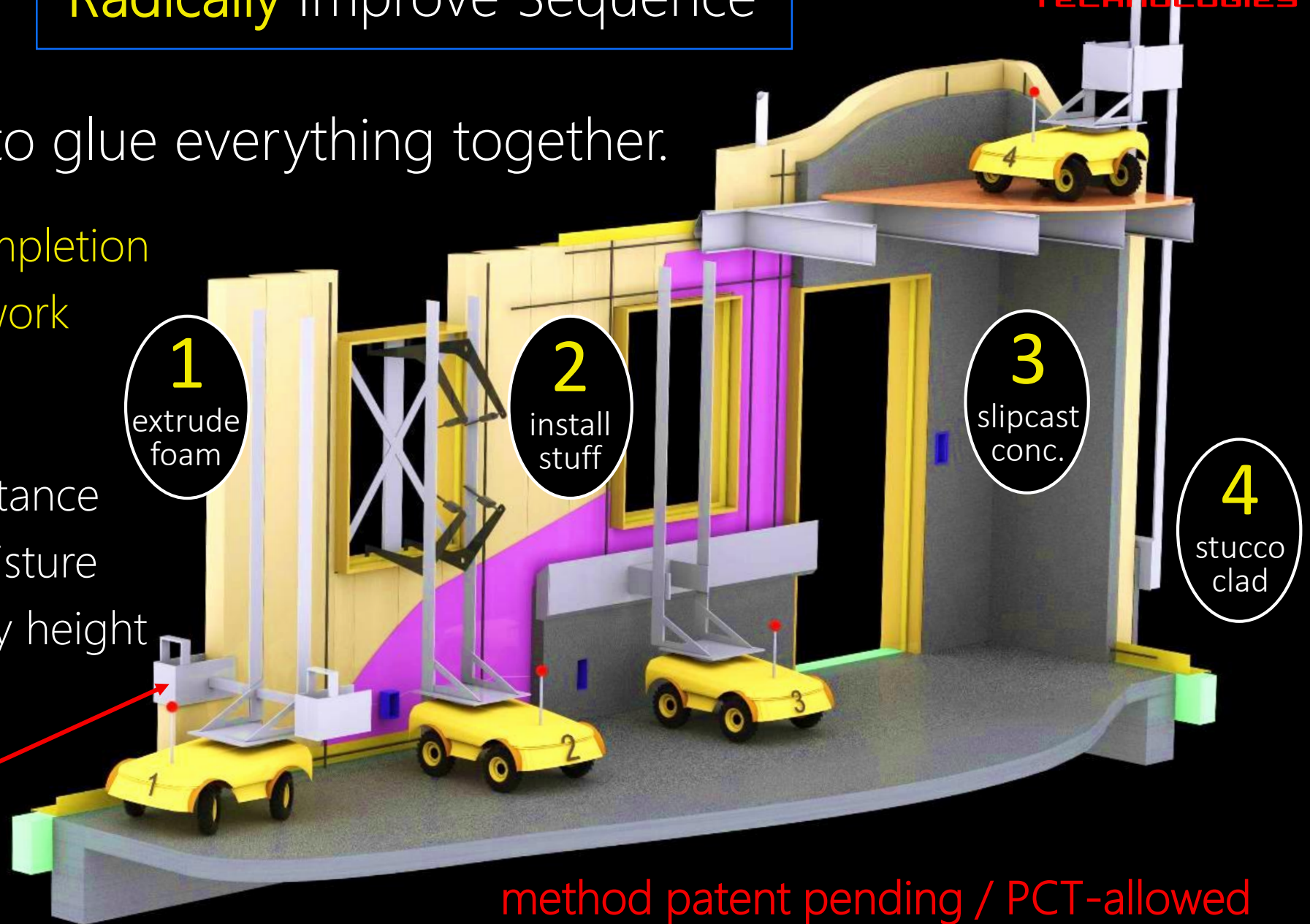
## 15. housing

# Radically Improve Sequence

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Use the concrete to glue everything together.

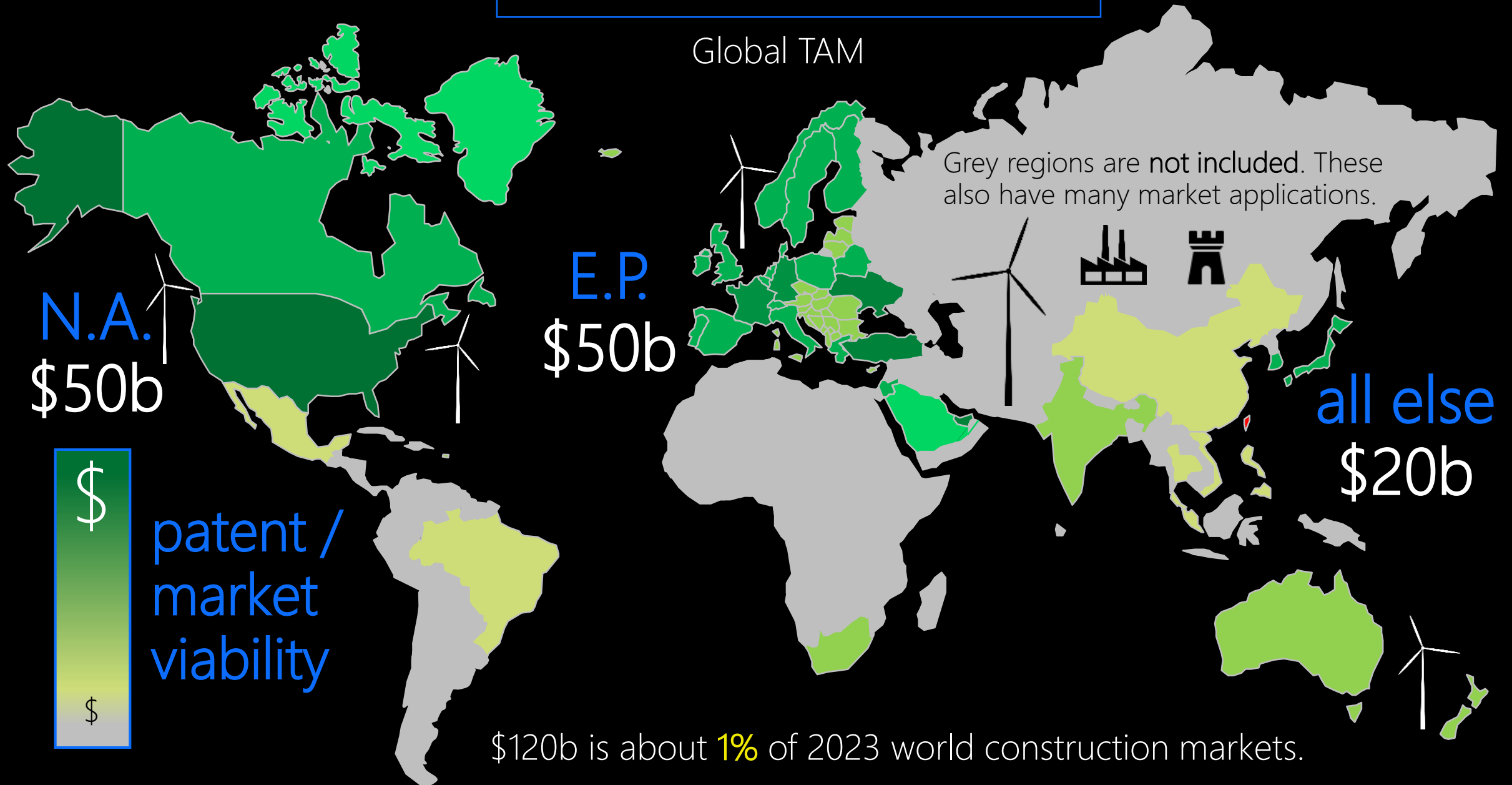
- screaming-faster completion
- eliminate follow up work
- lower total cost
- ultimate hazard resistance
- the best thermal/moisture
- meets all codes – any height



16. markets

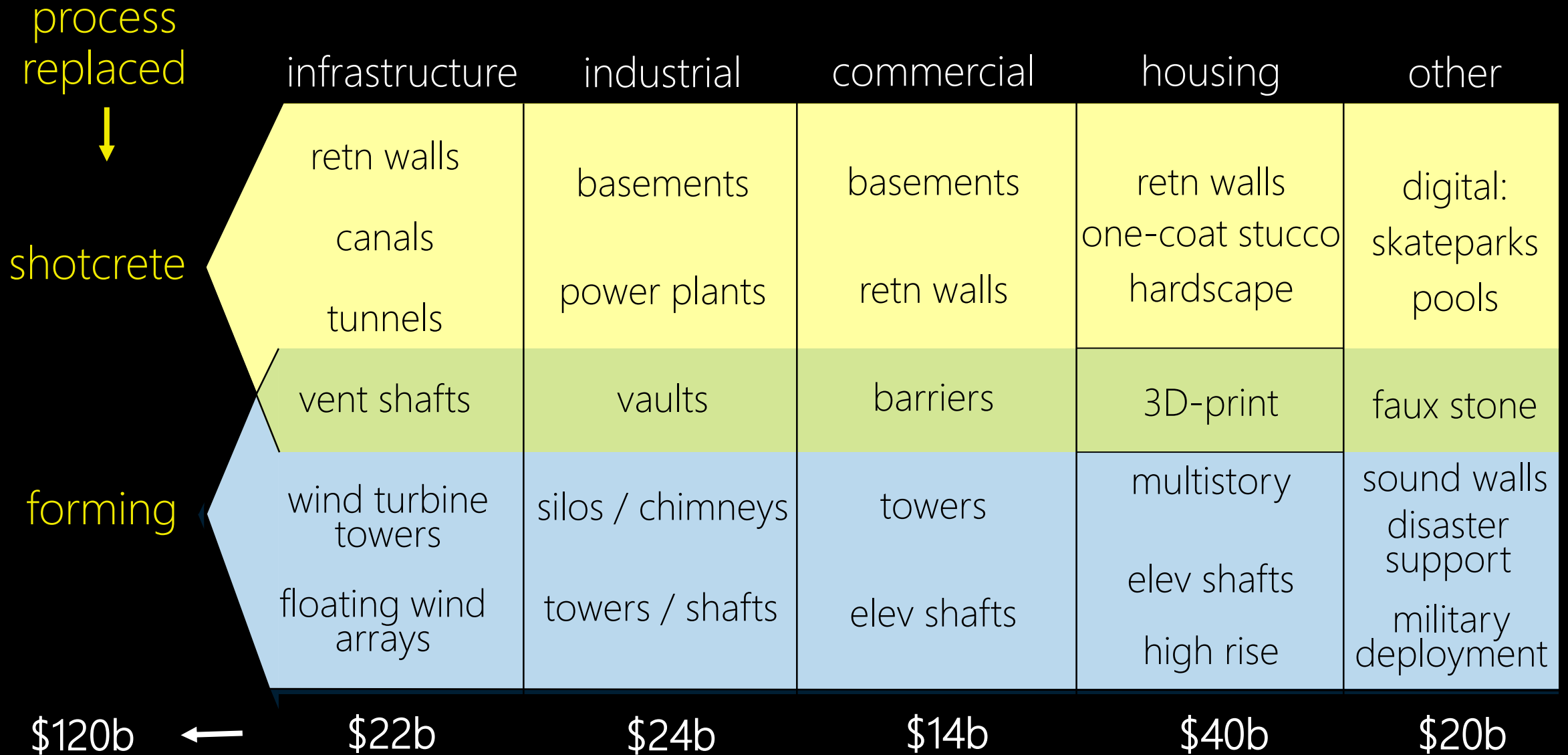
Valuable all over the World

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**Boundless** Favorable Applications

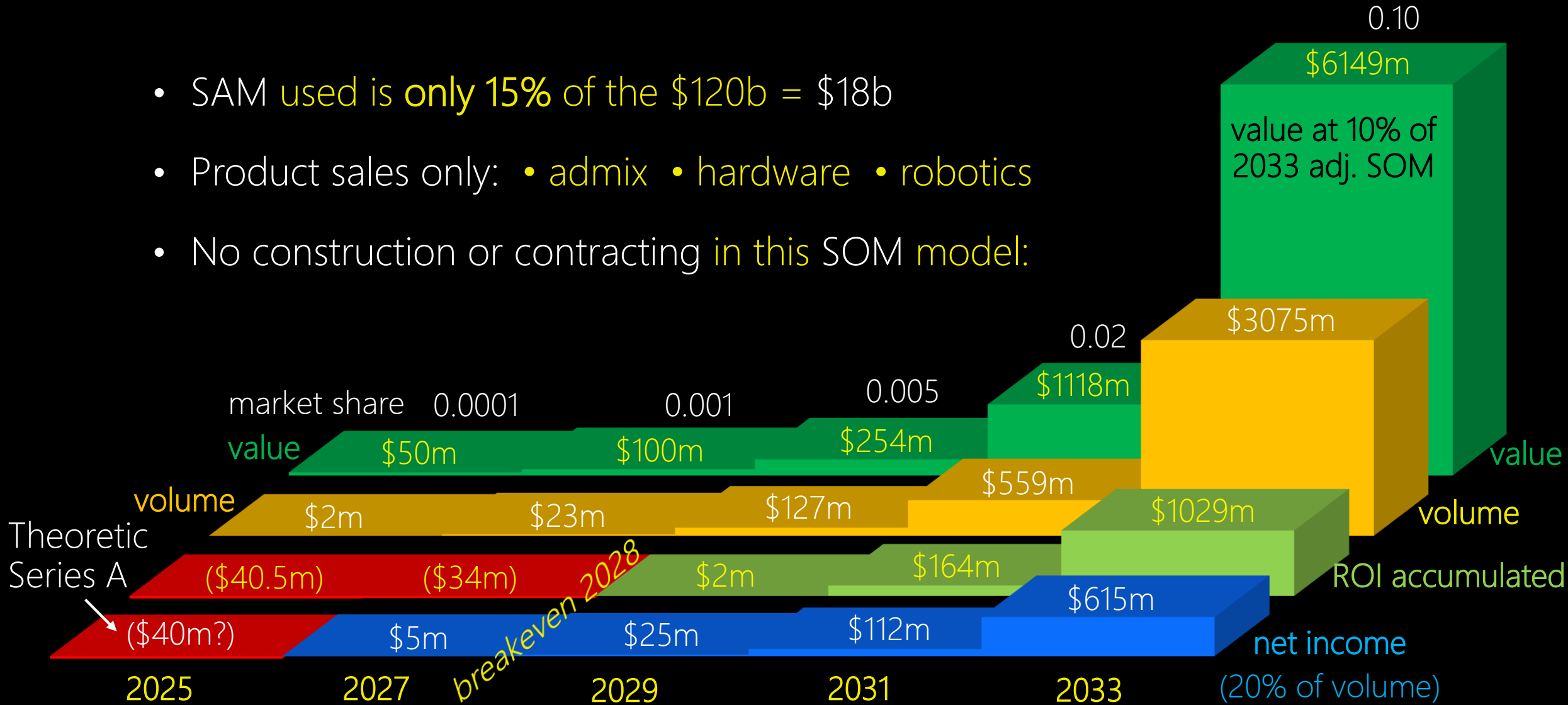


# 18. return

## Patents Protect Profits



- SAM used is **only 15%** of the \$120b = \$18b
- Product sales only: • admix • hardware • robotics
- No construction or contracting **in this SOM model:**



## 19. summary

SpaceCrete™  
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Most Innovative  
in the World  
of Concrete

inevitable

less time  
less labor  
less cement  
less waste  
less cost  
less CO<sub>2</sub>

