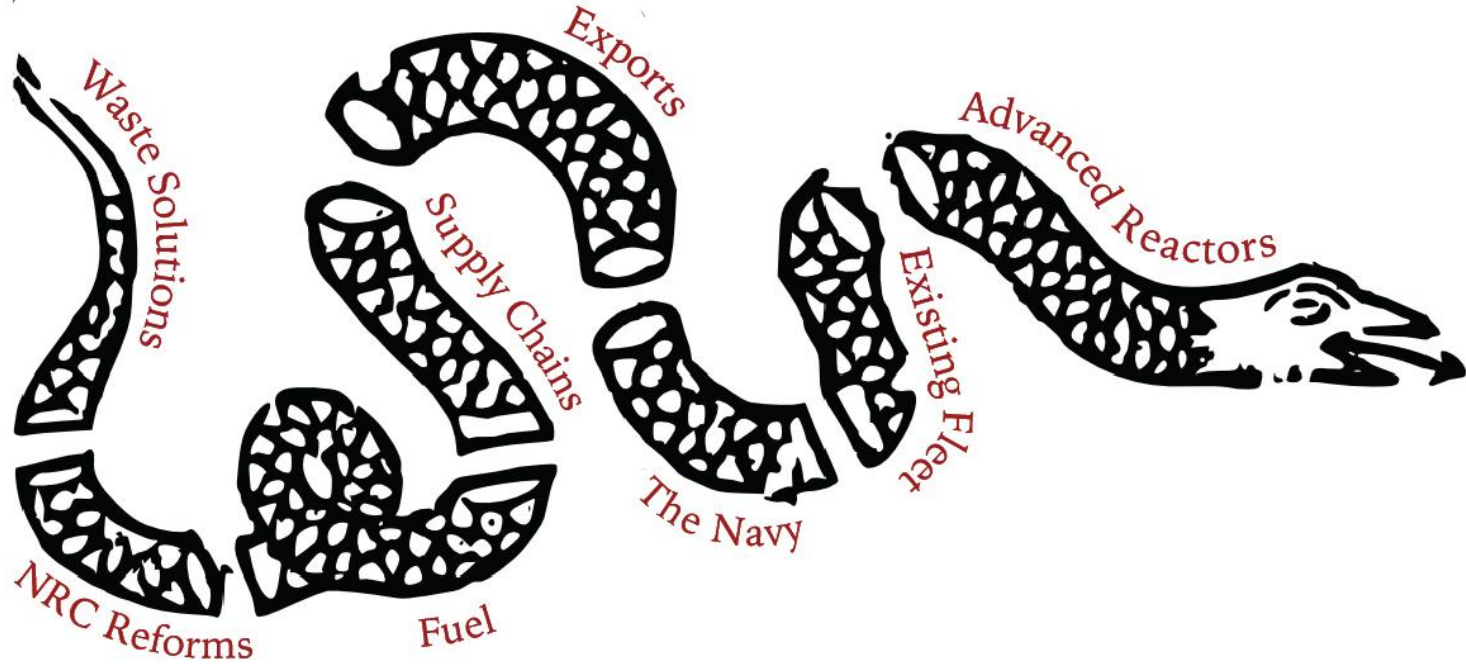


Nuclear at a Crossroads



INNOVATE, or DIE

1. How we got here: Nuclear's Decline

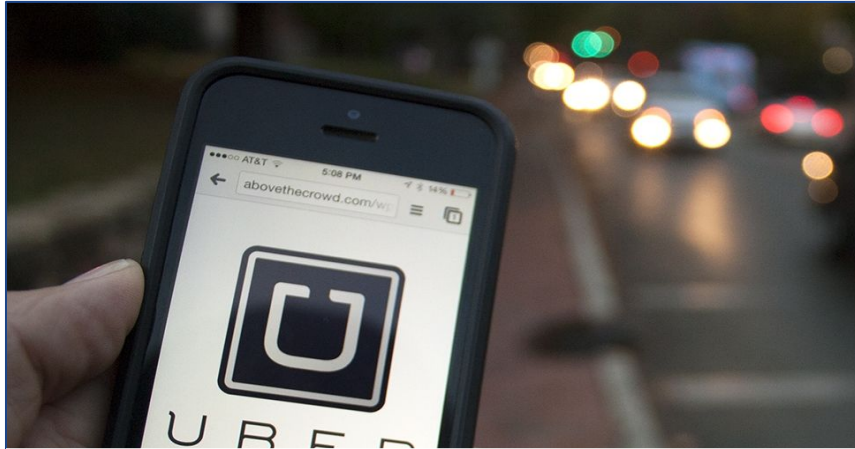
2. The Crisis: Losing to China and Russia

3. The Significance: Non-Proliferation, Navy, Economy

4. The Solution: Better stories, better policy, more innovation

Two Very Different Kinds Of Innovation

Silicon Valley Innovation



- America dominates
- Small initial capital
- Agile and lean workforce
- Software engineering
- Creative destruction is good
- Global supply chain
- Gov't policy is "NICE to have"



Two Very Different Kinds Of Innovation

Silicon Valley Innovation —————→ **Big Industrial Innovation**



- America dominates
- Small initial capital
- Agile and lean workforce
- Software engineering
- Creative destruction is good
- Global supply chain
- Gov't policy is "NICE to have"



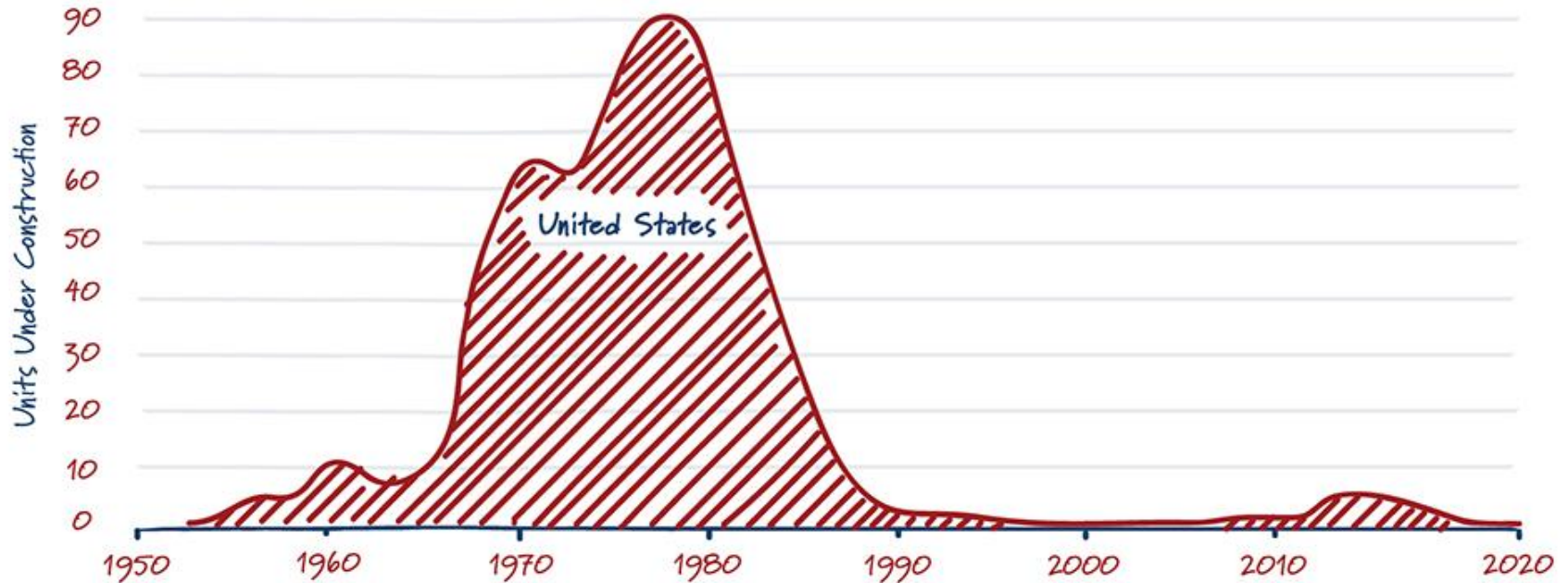
- ■ China and Korea dominate
- ■ Big capital spend with long payback
- ■ Large skilled workforce
- ■ Heavy physical engineering
- ■ Big barriers to entry
- ■ Domestic supply chain required
- ■ Gov't policy is "NEED to have"

This is One Massive Garage



Nuclear Priority → 3 Mile Island → 20 Year Hiatus

Nuclear Reactors Under Construction - Year by Year



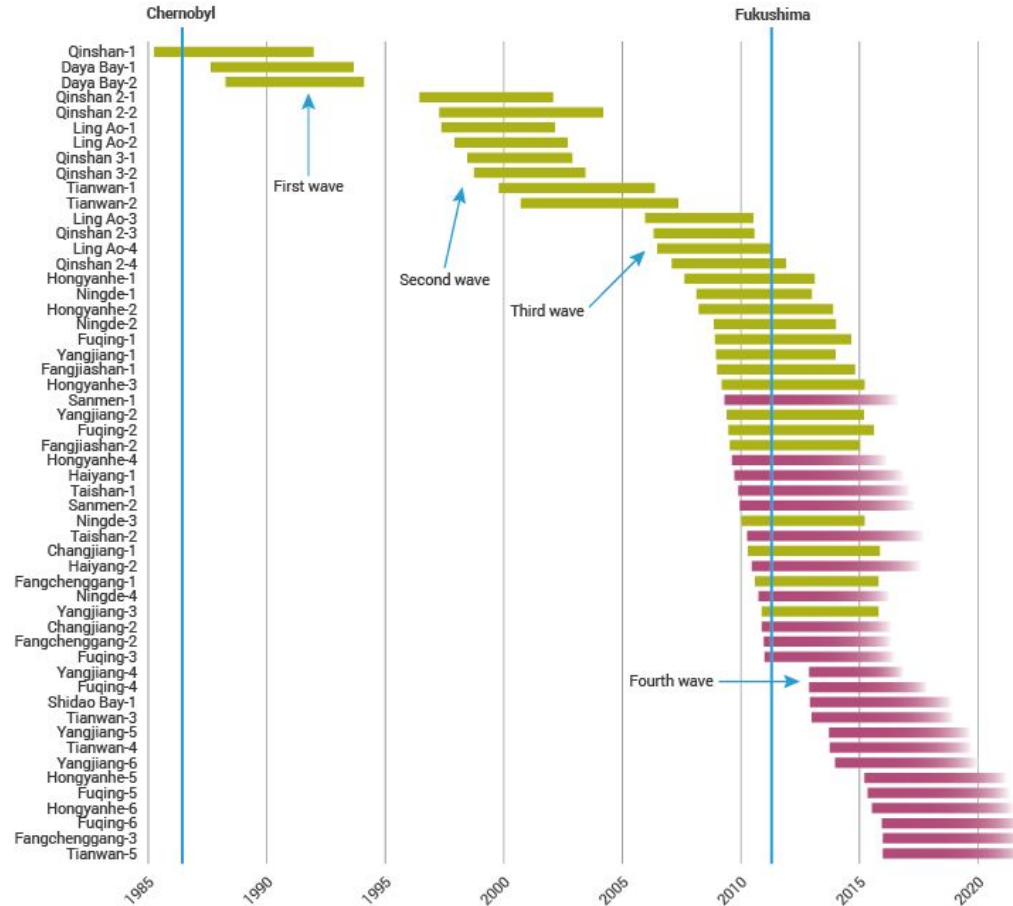
1. How we got here: Nuclear's Decline

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China - “Steady advance in an orderly manner”



**If you were Saudi Arabia,
who would you buy from?**



Reactors under construction

China: 22

USA: 4

Potential future reactors

China: 136

USA: ??

Time to build a nuclear reactor

China: 5 years

USA: 10 years

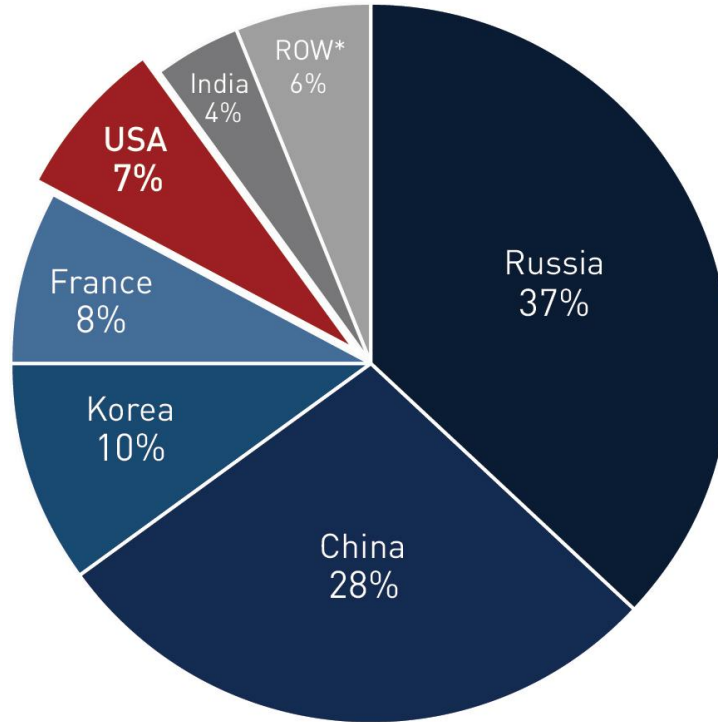
Cost to build a nuclear reactor

China \$2,500/KW

USA: \$5,000/KW

We're Losing the International Nuclear Market

Reactors Planned and Under Construction By Home Country Vendor

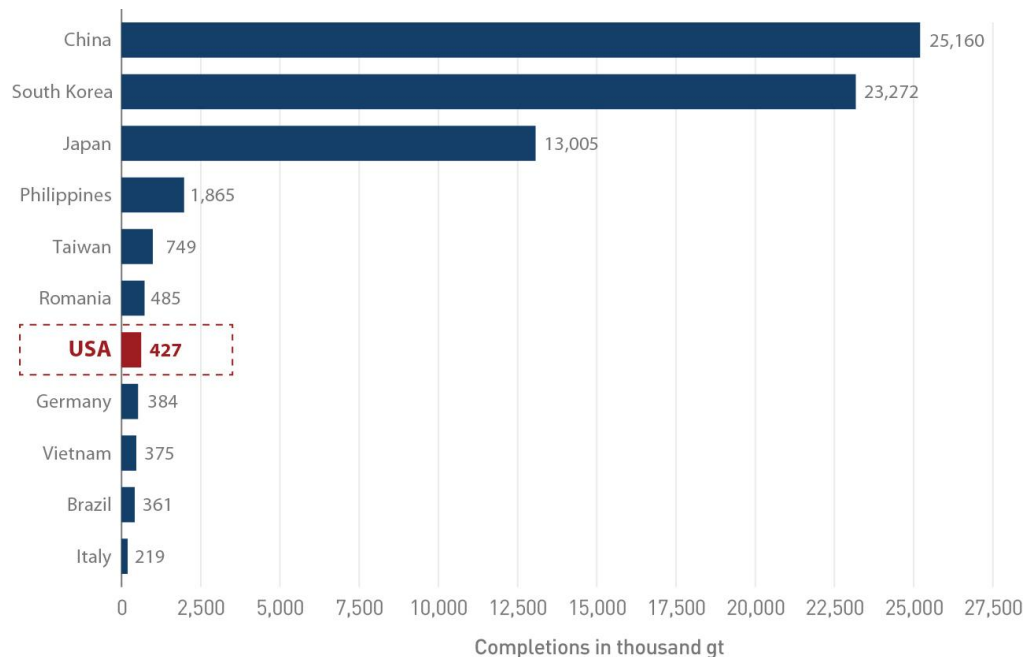
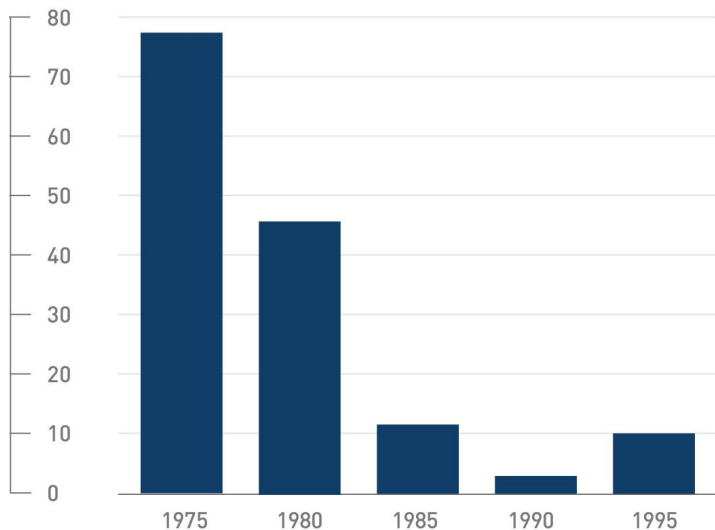


So what if nuclear goes the way of shipbuilding?

From first in building ships...

To under 1% of ships today

Ships built by US



1. How we got here: Nuclear's Decline

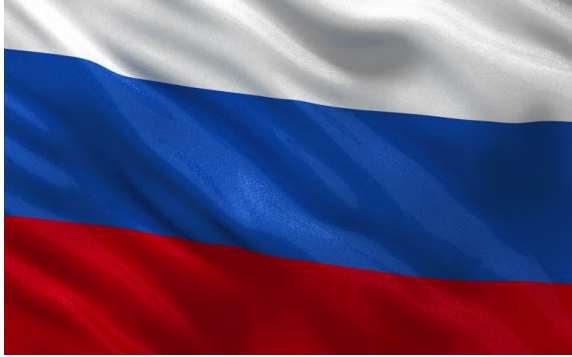
2. The Crisis: Losing to China and Russia

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Proliferation - We Won't Have a Say

Nuclear energy exports:



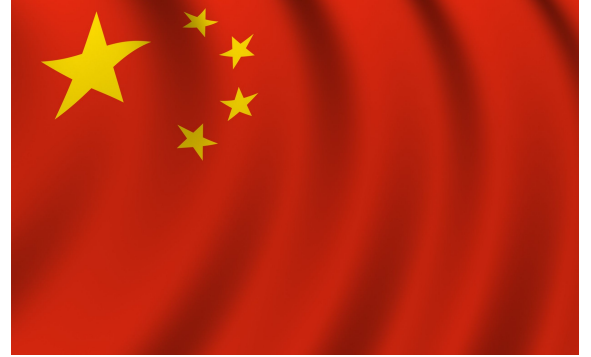
Russia:

Iran
North Korea
India



America:

South Korea
Japan
France



China:

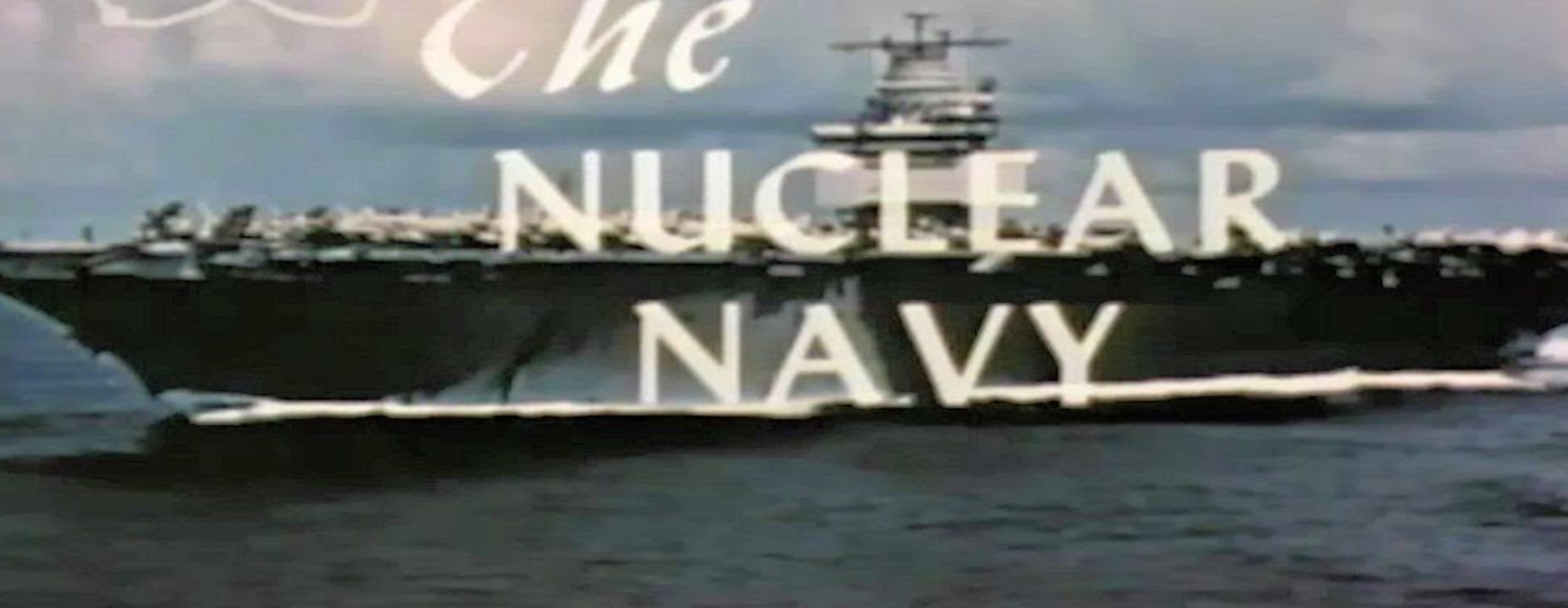
Iran
Pakistan
England



The

NUCLEAR

NAVY



A Huge Industry at Risk



Nuclear Could Be \$500B - \$1T Market



1. How we got here: Nuclear's Decline

2. The Crisis: Losing to China and Russia

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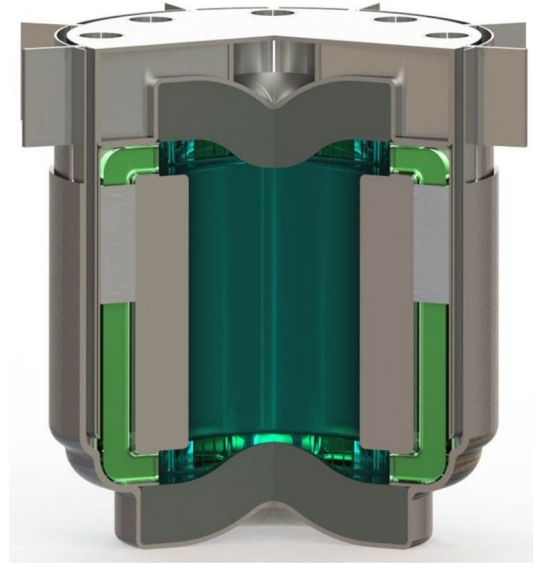
4. The Solution: Better stories, better policy, more innovation

Our Shot: Advanced Nuclear Reactors

NuScale Small Modular Reactor



TerraPower Molten Chloride Fast Reactor



China Is Hungrier Than We Are

**Finishing 1st advanced
nuclear plant this year**

**Two more in the
pipeline**

**Signed MOU to build
these in Saudi Arabia**



China Is Beating Us with Our Ideas



Invented In America

1967, The Army



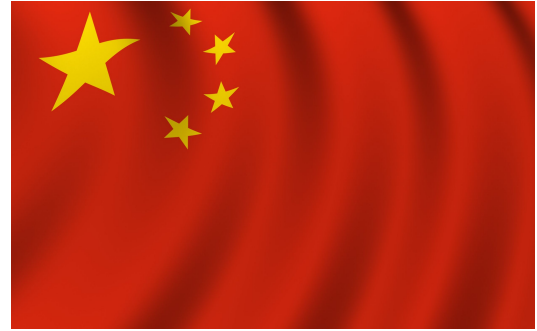
1966, General Electric



1955, Argonne Lab



1964, Oak Ridge Lab



But Being Made in China

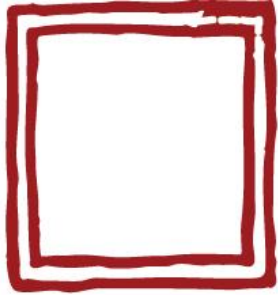
A Floating Reactor

High Temperature Gas Reactors

Sodium Fast Reactors

A Molten Salt Reactor

Nuclear Policy - A Low Priority



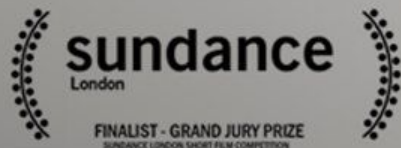
NOW



NOT NOW

THE ELEVATOR PITCH

DIRECTED BY SIMON RYNINKS
WRITTEN BY ZAK KLEIN
PRODUCED BY TIBO TRAVERS

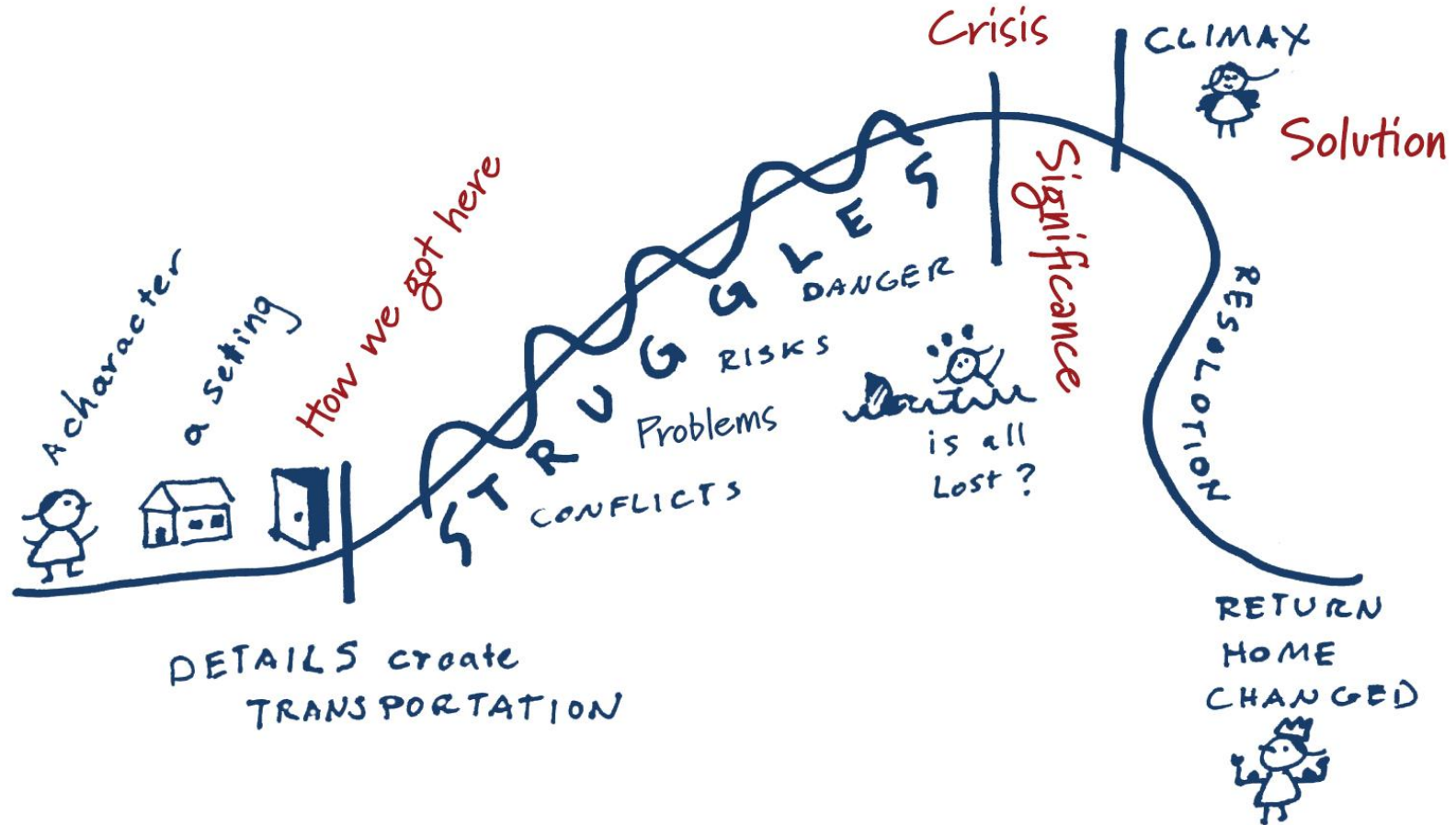


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DOH!**

Story Arc



The Ask



National
Priority
Statement

Example: The US nuclear industry is a priority for our national security, economy and diverse energy systems.

Goals

Example: 4 advanced reactor demonstrations underway by 2026

Policy

Example:

- Advanced fuels
- HLEU
- NRC reform
- DOE support

Needed - National Priority Statement



“The United States knows that if the fearful trend of atomic military build-up can be reversed, this greatest of destructive forces can be developed into a great boon, for the benefit of all mankind.”

- President Dwight D. Eisenhower

JayListens@clearpath.org