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Perspectives from abroad

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Nobel prizes Economic Sciences 2025> The role of Innovation

KUNGL. VETENSKAPS-AKADEMIEN
THE ROYAL SWEDISH ACADEMY OF SCIENCES

13 October 2025

The Royal Swedish Academy of Sciences has decided to award the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2025 to Joel Mokyr, Philippe Aghion and Peter Howitt

"for having explained innovation-driven economic growth"

with one half to

Joel Mokyr
Northwestern University, Evanston, IL, USA, Eitan Berglas School of Economics, Tel Aviv University, Israel

"for having identified the prerequisites for sustained growth through technological progress"

and the other half jointly to

Philippe Aghion
Collège de France and INSEAD, Paris, France, The London School of Economics and Political Science, UK

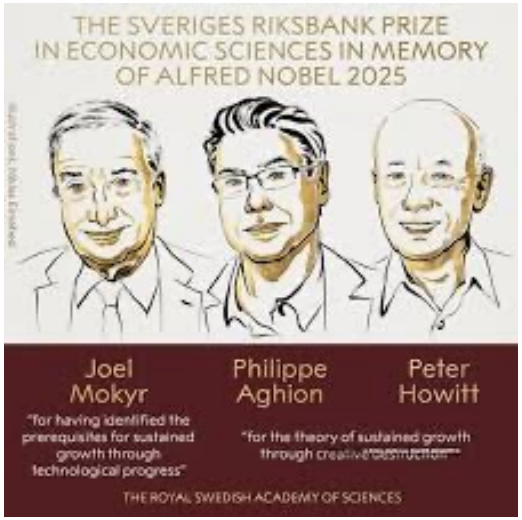
Peter Howitt
Brown University, Providence, RI, USA

"for the theory of sustained growth through creative destruction"

A Wake-up Call for Europe

Philippe Aghion, Peter Howitt, and Joel Mokyr revived *Schumpeterian* ***growth theory***:

innovation emerges from **creative destruction** — the tension between new entrants and incumbents.



- Schumpeterian growth explains why innovation arises from the vital conflict between new entrants and old incumbents — the dynamic process of creative destruction – **competition** is a vital driver
- Institutions must reward innovation but prevent incumbents from blocking newcomers.
- The current digital economy shows the opposite: Big Tech dominance and AI oligopolies risk stifling creativity.

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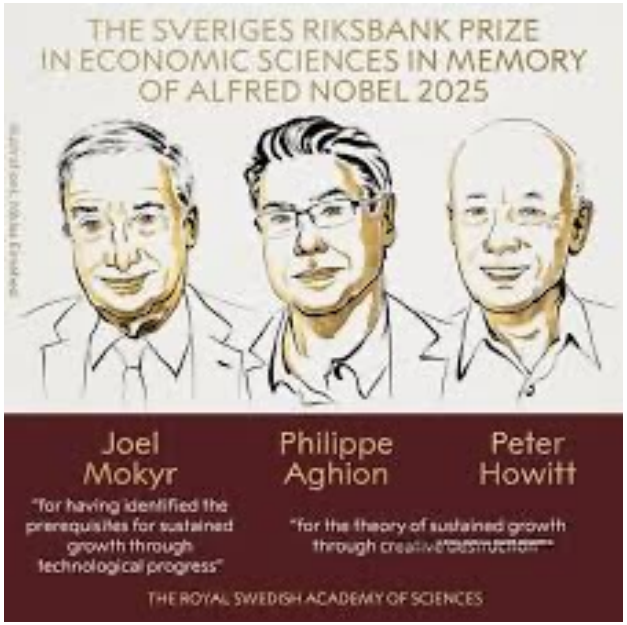
Nobel prizes Economic Sciences 2025> Innovation

- Europe once led innovation
- Today it lacks risk capital, a unified market (…Draghi’s report)
- Excessive regulation and bureaucratic inertia block frontier innovation.

“We must reconcile industrial policy and competition policy — not sacrifice one for the other.”



- Foster scientific freedom and mobility of ideas:
- limit digital monopolies.
- rewards experimentation rather than compliance.

Without competitive dynamism, even AI becomes sterile.
Europe must choose between creative destruction and comfortable stagnation.

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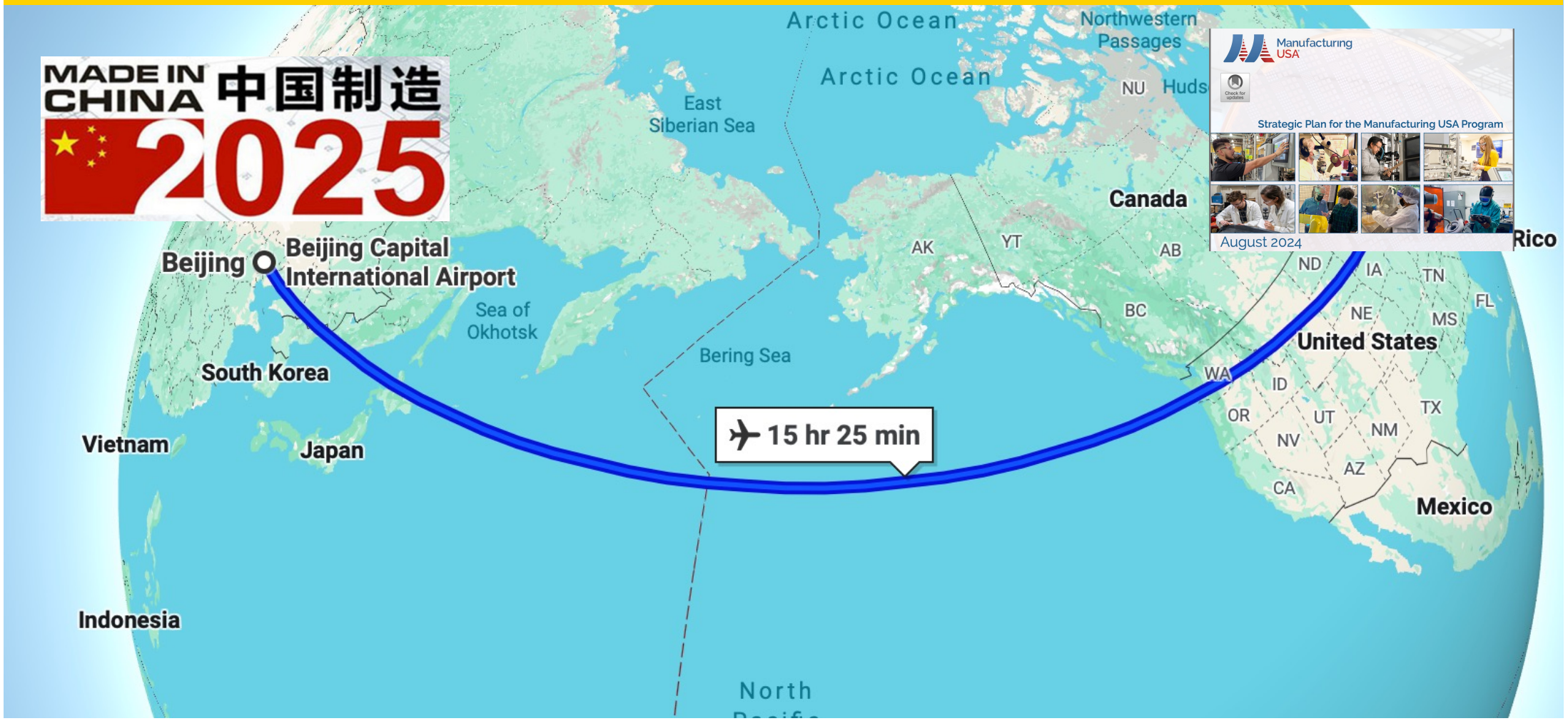
Similar concerns > the US perspective



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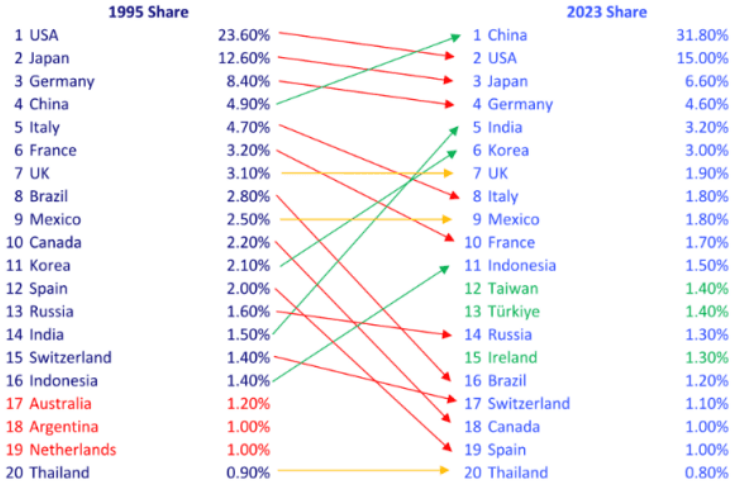
Similar concerns > **The US perspective**

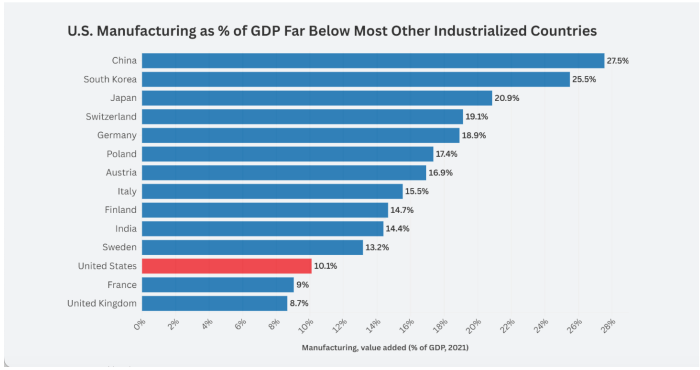
Figure 1: The loss of manufacturing share by the US and Western allies to China over the past 30 years is the most important trade theme amidst all the tariff noise...



Source: Deutsche Bank, UN Industrial Development Organization

U.S. Manufacturing's Shrinking Share Of GDP And How To Catch Up

ANDREW RECHENBERG 11/08/2024



U.S. manufacturing has fallen from **21-25%** of GDP in 1950s to about **10%** today**.**
The result is an unbalanced economy excessively dominated by services and imports.

Obj: boosting manufacturing to at least 15% of GDP to balance goods vs services and exports vs imports

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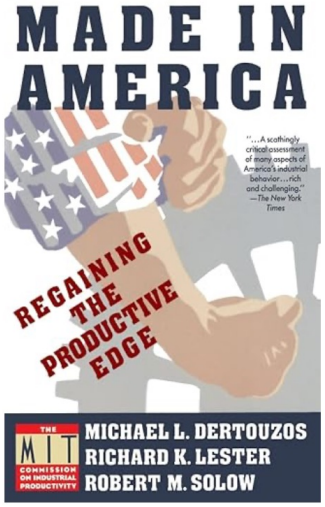
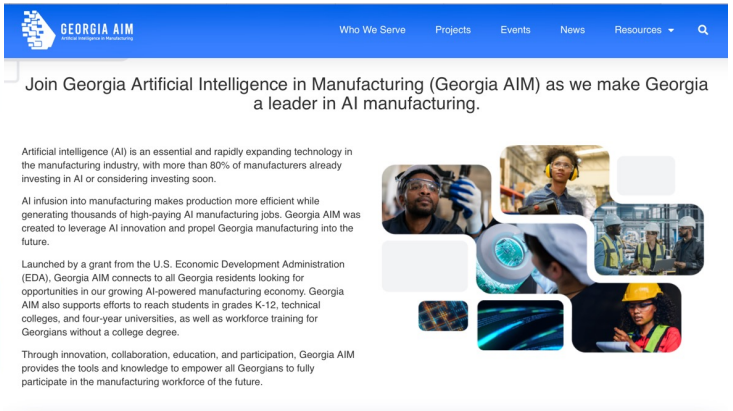
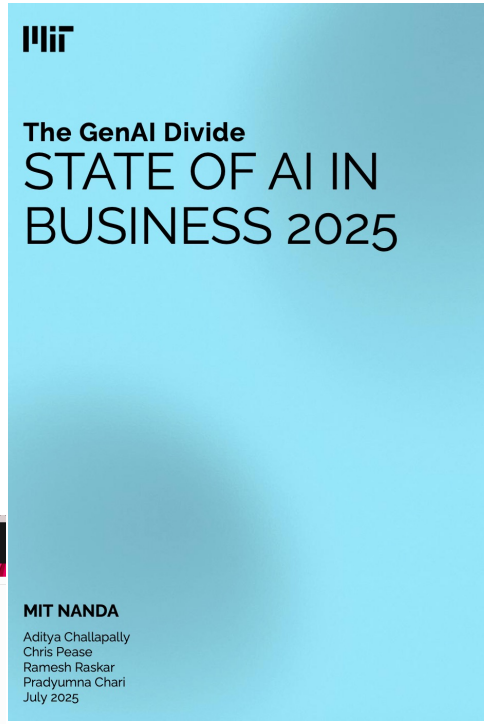
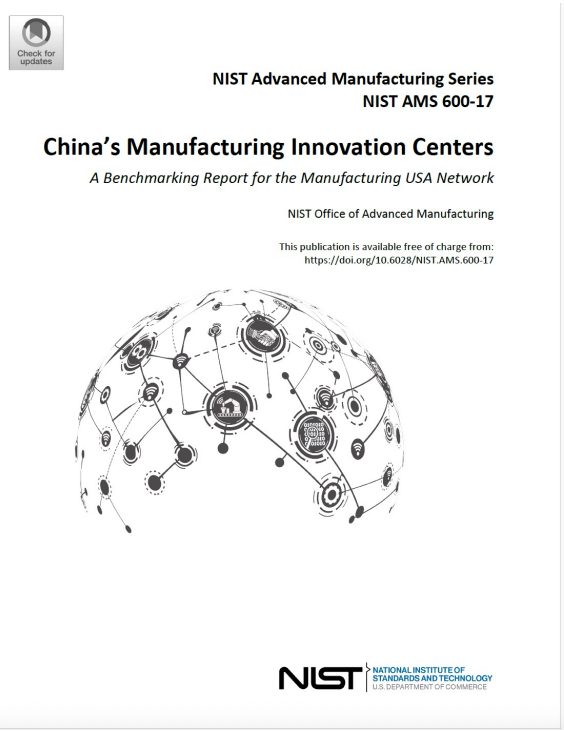
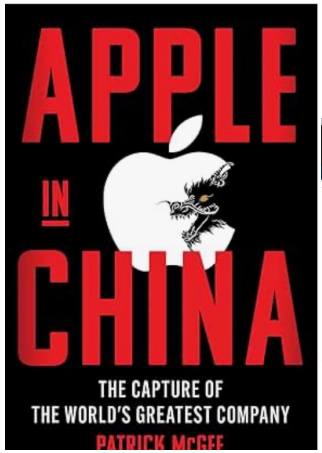
Technology dominance> The US











The U.S. Model: The Inventing economy

- Over the past fifty years, from production to conception (design, patents, software, platforms, but little domestic manufacturing).
- American companies control the most profitable stages of the value chain — R&D, IP, marketing — and outsource production to China, Mexico, and Taiwan.
- “light economy”: rich in intelligence, poor in workshops.

This model is not robust to disruptions — pandemics, wars, sanctions — America discovers that *inventing* is not enough if there is no one left to *make*.

The Other Side of the Coin

Deindustrialization carries deep consequences:

- Loss of **technical know-how** (the skills gap).
- **Dependence on foreign suppliers** for strategic components (chips, batteries, pharmaceuticals).
- Rising **social polarization**: a few win with algorithms, many lose manufacturing jobs.
- erosion of **execution capacity**: America designs but no longer always produces at scale.
- Product innovation versus process innovation

bridging the gap between inventing and making,
rebuilding a production ecosystem aligned with innovation.

Manufacturing> Manufacturing Innovation Centers in China

Made in China 2025: **self-sufficiency** and **global leadership**

- China's 13th Five-Year Plan (2016-2020) with the goal of becoming "a strong country in manufacturing." with a 300 billion USD investment over 2016-2020
- From 2015: a significant part of the plan was the creation of **Chinese "manufacturing innovation centers,"** or **MICs**, initiated in 2015, stimulated by U.S. developments with Manufacturing USA.
- China 14th Five-Year Plan (2021-2025) - reduction of foreign dependency on critical components (e.g., semiconductors)
- In 2024, China's investments in manufacturing grew by 9.2 %, with increasing investments in the following sectors: rail, shipping, and aerospace (+34.9 %); non-ferrous metals smelting and processing (+24. %); metal products (+16.6 %); and information technology (+12 %)

NIST Advanced Manufacturing Series
NIST AMS 600-17

China's Manufacturing Innovation Centers

A Benchmarking Report for the Manufacturing USA Network

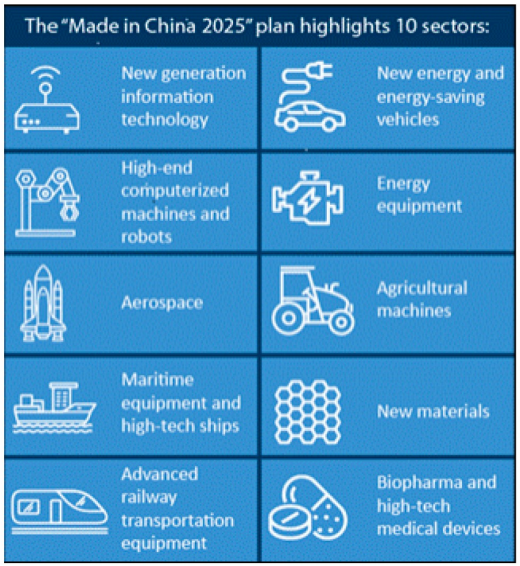
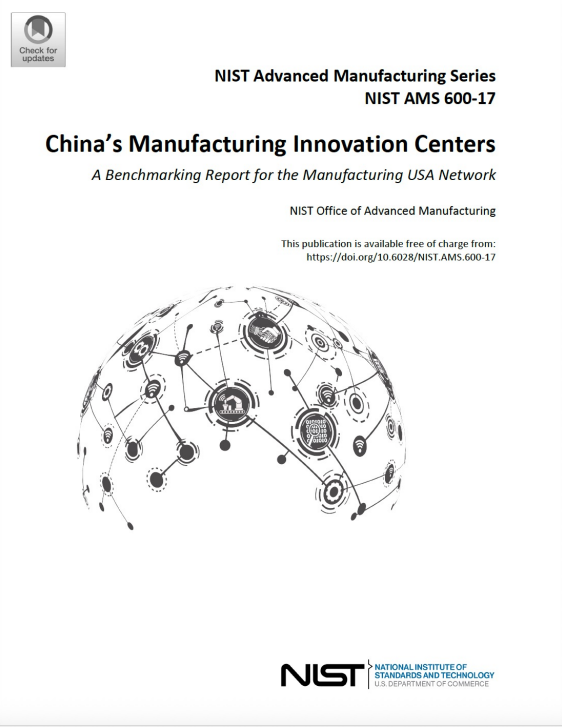


Figure 3: China's Industrial Priorities (2015-2025)

Source: Notice of the State Council on Issuing Made in China 2025, PRC State Council. (2015). No. 28. [16]

Technology dominance> China Manufacturing Innovation Centers(MICs)

- 2016 to 2025: 33 MICs - 40 by 2025.
- Each MIC focuses on **a priority technology area**
- **Co-managed** by the government, state-owned enterprises, and universities, and operate under a strong national mandate
- Initial funding comes from the Ministry of Industry and Information Technology (MIIT), but after a few years each center must become financially self-sustaining through industrial contracts.
- Unlike the U.S. Manufacturing USA Institutes, China's MICs are **vertically integrated**: the central government sets priorities, provinces compete in implementation, and firms are required to participate in partnership



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Technology dominance> China – ecosystem

Example: Additive Manufacturing for aerospace and defence

Bright Laser Technologies - BLT
11,075 followers
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We're wrapping up an incredible BLT Global Distributor Conference with some great smiles and amazing team spirit!
Our partners had a firsthand look at where the magic happens, touring our large-format production site and our small-format factory. We're proud to share that we now have over 900 BLT machines & systems actively in service, a milestone that has our distributors in awe of our scale.

These moments—sharing ideas, exchanging experiences, and celebrating together—are what make our global network so strong. A huge thank-you to all our distributors who joined us in Xi’an. Together, we are building the future of metal additive manufacturing!

We also invite more partners to join the BLT family and be part of this exciting journey. If you are interested, please feel free to reach out to us at sales.global@xa-blt.com.

#BLT #GlobalDistributors #AdditiveManufacturing #Teamwork #Innovation #3

China’s thriving metal Additive Manufacturing industry: An outsider’s perspective

Company	Technology	City	Chinese name	Website
Aixway3D	PBF-LB	Kunshan	云耀深维	www.aixway3d.com
AmPro	PBF-LB	Suzhou	倍丰激光	www.amproinnovations.com
Avimetal	PBF-LB	Beijing	中航迈特	en.avimetalam.com
BLT	PBF-LB/DED	Xi'an	铂力特	www.xa-blt.com
CHAMLION	SLM	Nanjing	铖联激光	www.chamlion.com
DMAMS	PBF-EB	Xi'an	智熔	www.dmams.com
EasyMFG	BJT	Wuhan	易制科技	en.easy3dmade.com
Enigma	DED	Nanjing	英尼格玛	i-enigma.com.cn
Eplus3D	PBF-LB	Beijing	易加三维	www.eplus3d.com
Farsoon	PBF-LB	Changsha	华曙高科	www.farsoon.com
Fenghuazhuoli	BJT	Foshan	峰华卓立	www.fhzl.co
Han's Laser	PBF-LB	Shenzhen	大族激光	www.hanslaser.net
HBD	PBF-LB/LACM*	Shanghai	汉邦科技	en.hb3dp.com
Hit3D	PBF-LB	Wuhu	哈特三维	-
HUAYANG	PBF-LB	Shenzhen	华阳新材料	www.hylaser.cn
KOCEL	BJT	Ningxia	共享装备	www.kocel.com

The EU manufacturing space


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