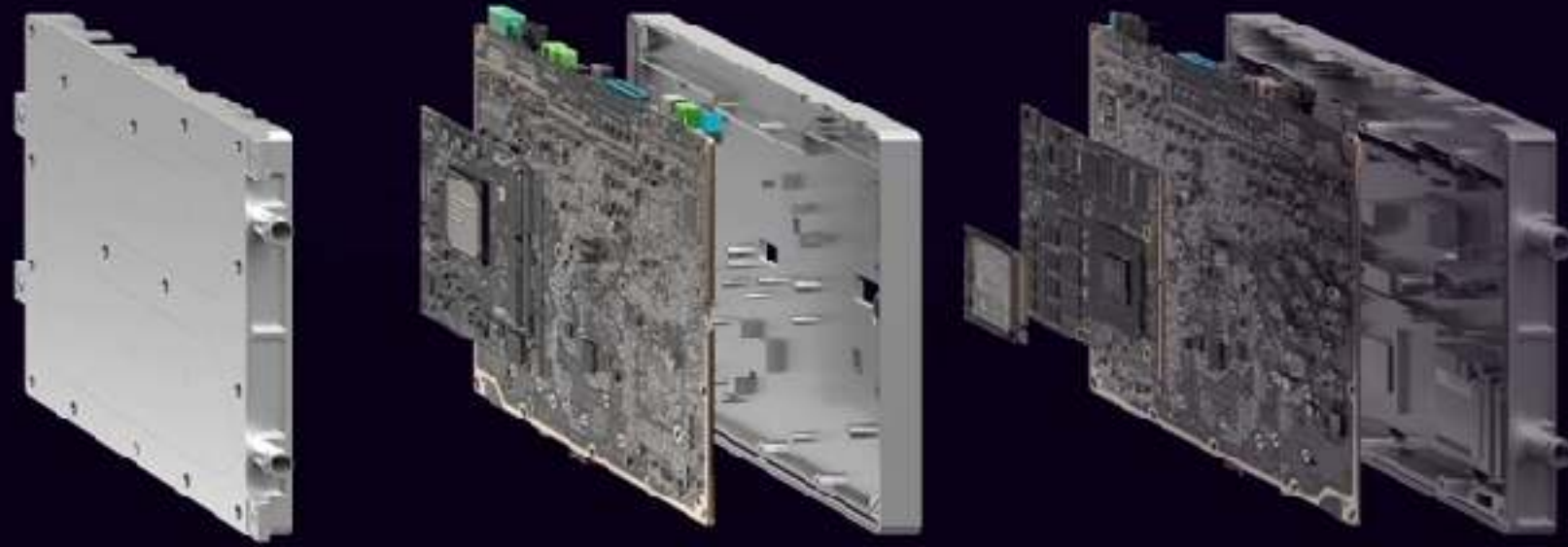


# CHALLENGE: SUSTAINABLE HUB-TO-HUB LOGISTICS



High Computing Power    High Power Efficiency    High Safety Level

ANALYSED BY | NIUCAP VENTURES



Introducing



targeting

# SUSTAINABLE HUB-TO-HUB LOGISTICS

ANALYSED BY | NIUCAP VENTURES



# SDGs TACKLED

**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE

**11** SUSTAINABLE CITIES  
AND COMMUNITIES

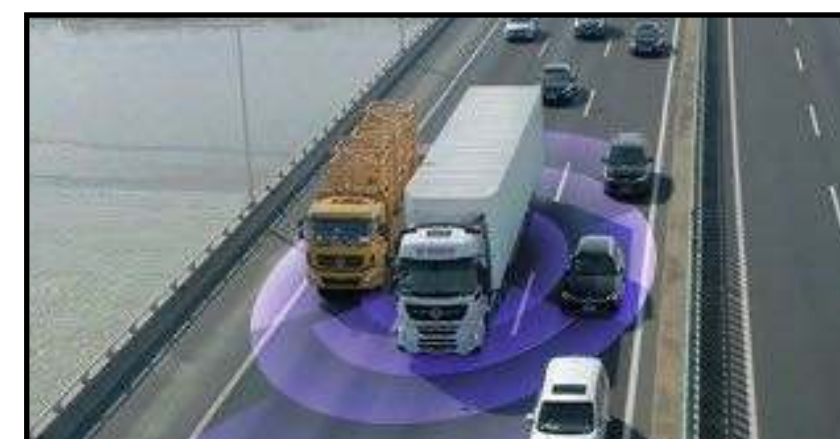
**13** CLIMATE  
ACTION

<https://sdgs.un.org/>

ANALYSED BY | NIUCAP VENTURES

## KEY FACTS

<b>INDUSTRY:</b>	<b>Autonomous Hub-to-Hub Logistics</b>
<b>YEAR OF FOUNDATION:</b>	<b>2018</b>
<b>FUNDING STAGE:</b>	<b>Series B+</b>
<b>URL:</b>	<a href="https://www.inceptio.ai">https://www.inceptio.ai</a>
<b>CHINESE NAME:</b>	Inceptio Technology (Shanghai) Co., Ltd. / 赢彻科技（上海）有限公司



## SOLUTION

<b>PRODUCT:</b>	<b>Full-stack autonom. truck technology + predictive maintenance + fleet mgmt.</b> for Line-Haul / Hub-to-Hub logistics
<b>VALUE PROPOSITION:</b>	<b>increased efficiency, cost savings</b> plus <b>decreased fuel-consumption</b> through AI powered autonomous operation of trucks (target customers: cargo owners, fleet owners)
<b>MONETIZATION:</b>	<b>biz model tbd</b> — research indicates holistic solution (autonomous + fleet management <b>SaaS</b> <sup>2</sup> & rel. partnerships)

## USP

- **10,000,000+ km / 600 days of commercial L3 operations** on CN highways with 650+ trucks driving ~550 miles/day for customers like Nestle, JD & China Post (hands-off with driver)
- **Trucking network covers main top tier hubs** in east China incl. Beijing, Shanghai, Hangzhou, Guangzhou, Shenzhen
- **L4 driverless road tests** conducted since Dec 2021
- **Ultra-long-distance 3D perception accuracy of <5%<sup>3</sup>**
- **Fast scaling:** considerable first-mover PLUS newcomer advantage, latest AI stack & close collaboration with China's tech giants

DATE: JUNE 2023 URL: <https://www.inceptio.ai> 1 software 2 software-as-a-service 3 acc. to INCEPTIO website

DISCLAIMER: Meant for informational purposes only, based solely on current public information deemed as (but not proven to be) reliable. No claim to be exhaustive or correct. Does not constitute a personal recommendation or take into account the particular investment objectives or needs of individual clients. Additional research and verification is recommended. No part of this material may be (i) copied, photocopied or duplicated in any form by any means without the prior written consent of NIUCAP VENTURES UG.



## FUNDING

<b>FUNDING STAGE:</b>	Series B+
<b>LAST ROUND:</b>	February 28th, 2022
<b>FUNDING RAISED:</b>	<b>\$ 678,000,000 Total Funding To Date<sup>1</sup></b> \$ 188,000,000 (Series B+) \$ 270,000,000 (Series B) \$ 120,000,000 (Equity Financing) \$ 100,000,000 (Series A)
<b>REGISTERED CAPITAL:</b>	\$ 720,000 (ca.) <sup>1</sup>

## MAJOR INVESTORS

- LEAD 1: Sequoia China
- LEAD 2: Legend Capital
- IDG Capital
- JD Logistics
- Meituan
- NIO Capital



## TEAM

- **Julian Ma, CEO:** MBA & Bachelor's degree from **Shanghai Jiaotong University**; previously, Corporate Vice President at **Tencent** (in charge of corporate strategy, location-based services (LBS) and autonomous driving business) and Board Member at **NIO**, **NavInfo**<sup>2</sup> & **ZOOX**<sup>3</sup>.
- **Dr. Ruigang Yang, CTO:** PhD in Computer Science from the **University of North Carolina at Chapel Hill** & respective Master's degree from **Columbia University**, undergraduate studies at Tsinghua University (Beijing); expert in AI & computer vision; IEEE fellow, 100+ academic articles with over 10K citations. At INCEPTIO, leads overall R&D; previously, Chief Scientist for 3D Vision at **Baidu** Research > established Baidu's Robotics and Autonomous Driving Laboratory (RAL).; holds several US research awards.
- **Key Management Staff:** Gary Huang (Executive VP & Head of Intelligent Vehicle Engineering), Dr. Chen Tian (VP & Head of R&D Center in Silicon Valley), Min Yu (CFO), Eason A (Executive VP & Head of Commercial Operations); **Offices: China, the U.S.**



## REMARKS



**PROBLEM EXPLAINED:** OPERATIONS: **Sub-optimal routes** and **idle times** leading to **increased costs** and **reduced efficiency**;  
SAFETY: Road accidents involving commercial vehicles can be costly & **dangerous**; driver fatigue & error being major factors;  
DRIVER SHORTAGES: In 2021 the EU faced a shortage of 400,000 heavy-goods vehicle drivers.



**COSTS:** Unknown, depending on size of the fleet, level of autonomy required and the geographic location of the operation.  
Optimisable costs include: (a) **Total Cost of Ownership (TCO)** of long-haul trucking (up to 30% savings potential), (b) **fuel efficiency**, (c) delivery time, (d) **down / idle times**, (e) **maintenance costs**, (f) **labor costs**



**RELATED CARBON EMISSIONS:** More consistent driving and **decreased idle times** expected to reduce fuel / energy consumption and **reduce emissions by 10-14%**.



**MARKET:** Estimations on market size and future development vary broadly. Conservative projections state a **CAGR<sup>1</sup> of 17%** (2021-2028) to **~\$2.5B in 2028**. Optimistic projections: **2x this size**.



**REGULATORY STATUS:** Regulatory frameworks differ globally, but China has been strong at creating favourable conditions for autonomous driving, introducing standards and implementing **test tracks (ICV test zones)** early on. In 2020, 12 ministries incl. the MIIT<sup>2</sup> jointly issued a strategy & goals for 2025, incl. **large-scale production** of L3 vehicles plus **market launch of L4** vehicles in selected scenarios, realisation of LTE-V2X area coverage + 5G-V2X network coverage in some cities and **on some highways**. In California, USA, where INCEPTIO operates its Silicon Valley office, the team is further required to implement and comply to U.S. regulations.



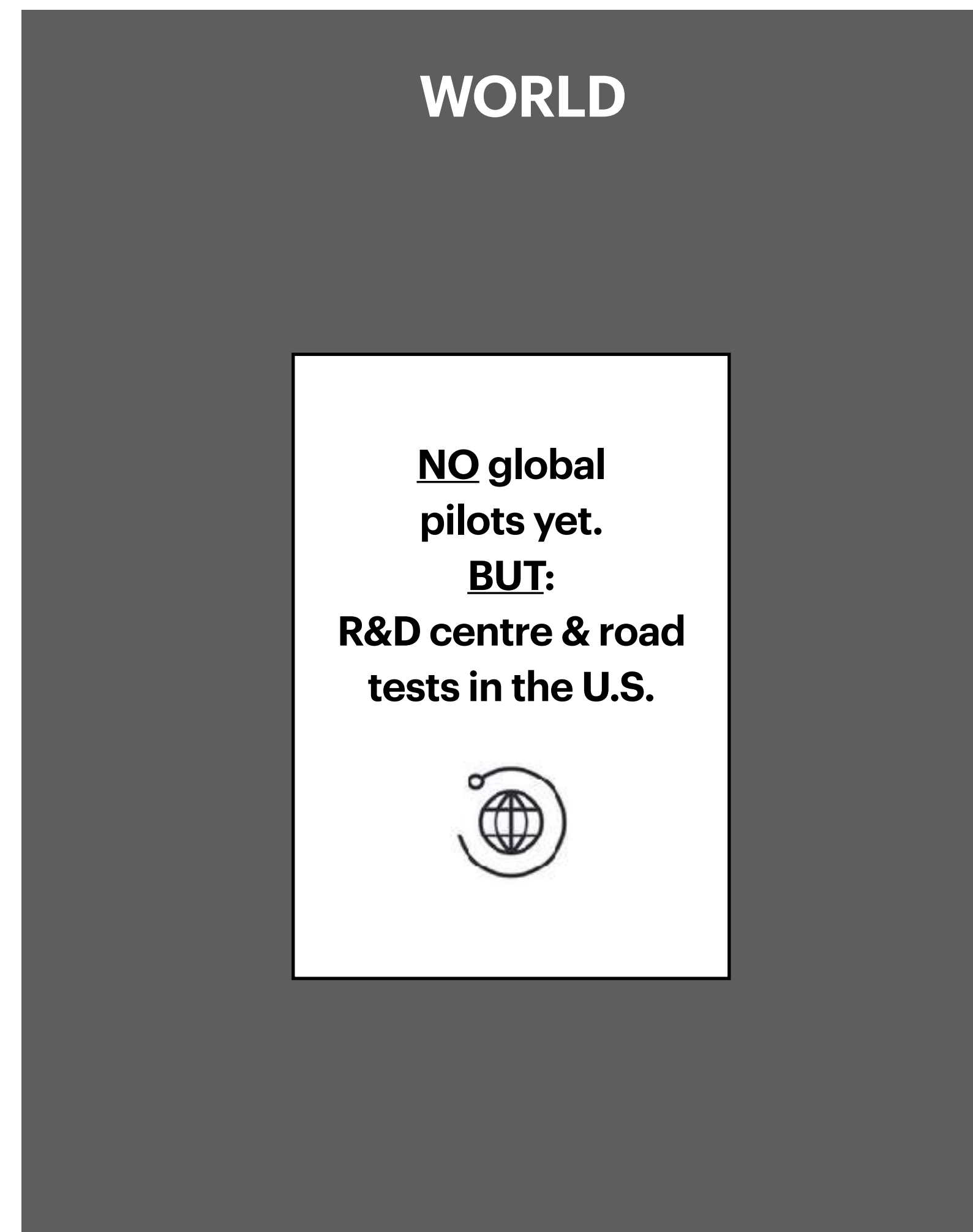
**SCALABILITY:** China provides the ideal platform for **fast domestic prototyping & scaling in China**. International scalability depends on intl. regulatory frameworks and the startups ability to comply with intl. safety standards. Within China, INCEPTIO has established **partnerships** with leading automotive and technology companies like Foton Motor, one of China's largest commercial vehicle manufacturers, and tech giants like Baidu & Intel. Risk: Competition for intl. partnerships will be high.



**IMPACT TIMELINE:** Immediate impact on hub-to-hub logistics in China.



## PILOTS





## CONCLUSION



### COMPETITIVE ADVANTAGE (TODAY):

#### I. SERVICE SPECTRUM:

**Autonomous driv. + pred. mainten. + fleet mngmt.**

INCEPTIO covers the full optimisation spectrum of fleet / cargo mngmt. and sells its monitoring solution via OEM partnerships to the fleet owners (SaaS model).

We assume that the startup will be able to

- **offer a highly competitive pricing,**
- **gain a significant market share** if it can close up to intl. competition in optimisation performance.

#### II. TECHNOLOGY:

Given the founders background in computer science and at companies like Tencent & Baidu, **deep vision, big data analytics** and **AI-based software algorithms** will play a key role in how I<sup>1</sup> approaches autonomous driving and, ultimately, logistics optimisation.

We assume that the startup will be able to **play a leading role globally** if it it's able to a) go beyond hub-to-hub OR b) show intl. top performance (see Outlook section on the right) whilst keeping prices low.

## OUTLOOK



### CHALLENGE — TCO reduction:

INCEPTIO's performance with regard to TCO<sup>2</sup> optimisation, which is the key metric for fleet owners, remains unclear.

Key KPIs for the team to optimise in order to outperform intl. competition include:

- **better fuel efficiency** (intl. benchmark: 10%; INCEPTIO currently 5%),
- **increase in annual per truck revenue** (intl. benchmark: 300%),
- **reduction in delivery time** (intl. benchmark: 40%)
- **per-mile cost reduction** (benchmark: 30+%)







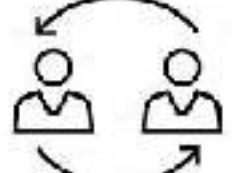















### OPPORTUNITY — EXTENDED SERVICE SPECTRUM:

China serves as an ideal prototyping platform for fast domestic scaling. Entry hurdles for **pilots with intl. customers within China** (via Chinese OEMs) should be relatively low.

Our hypotheses is that the startup will continue training its algorithms on accuracy and extend its service spectrum (> **access to even higher ARRs**<sup>3</sup>). Opening up a R&D centre in Europe might be the next international move.



## IMPACT ANALYSIS

		← TACKLED →				
 <b>IMPACT FACTOR</b>		local market excellence 	global scalability 	sustainable business model 	actionable solution 	educational & transformative 
 <b>YES / NO</b>		<p> <b>IN CHINA</b></p> <p> Technological leadership in China is given, and team is backed by high potential VCs that have formerly backed multiple Chinese unicorns.</p>	<p> <b>FROM CHINA TO GLOBAL</b></p> <p> The solution is being tested and applied in U.S., but team still has a mainly Chinese customer base.</p> <p><b>Expected intl. rollout:</b></p> <ul style="list-style-type: none"> <li>• China &amp; U.S.</li> <li>• Europe &amp; Asia</li> </ul>	<p> <b>MEASURABLE IMPACT FACTORS</b></p> <p> The economic impact of the solution has been proven &amp; is measurable.</p> <p> Once the business model has been set, the business should be feasible and sustainable.</p>	<p> <b>STAKEHOLDER AGNOSTIC</b></p> <p> The startup seems to tackle the key players in China with actionable solutions (short/mid/long-term).</p> <p> Intl. players still need to be addressed.</p>	<p> <b>DISRUPTIVE MODEL</b></p> <p> Concepts exist to disruptively transform the tech space with autonomous driving.</p> <p> The startup educates on the challenge it is solving via YouTube videos.</p>
		<p><b>&gt; The startup is solving a problem of <u>high global relevance</u>.</b></p> <p><b>&gt; <u>Educational campaigns</u> have been installed to <u>further increase the outreach</u> of the project.</b></p>				

DATE: JUNE 2023



“ ***INCEPTIO TECHNOLOGY has the potential to disrupt autonomous hub-to-hub logistics on a global scale if it moves fast and manages to outperform intl. competition in core KPIs like TCO, annual-per-truck revenue and fuel efficiency. China provides the perfect platform for early operations which will likely lead to fast acceleration and growth.*** ”