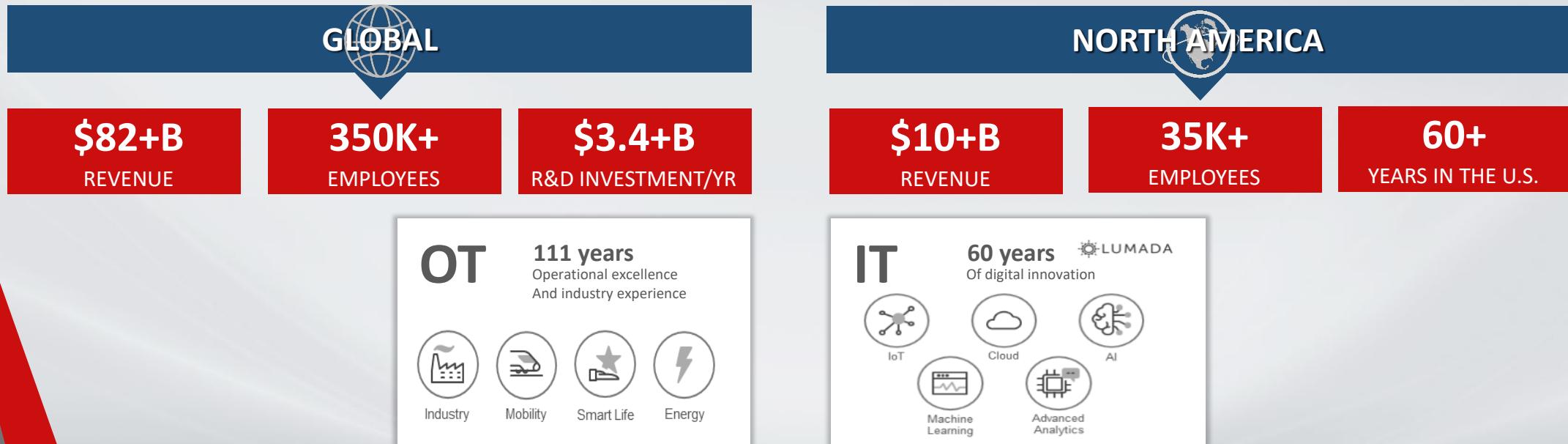




## Hitachi is Empowering EV Value Chain

Norio Hasegawa  
Director of Business Development  
Hitachi America, Ltd.

## Company Overview



Ensure sustainable growth and profitability through the Social Innovation Business

Improve Quality of Life | Add Value for Customers

Social  
Value

Environmental  
Value

Economic  
Value

**Deliver superior value to customers through collaboration among Group Companies with  
“One Hitachi Approach”**

## Automotive & Smart Life



## Industry



## IT



## Energy



## Mobility



## Materials, Construction, & Mining



## Major Group Companies

**Astemo**  
*Hitachi High-Tech*  
Hitachi America

**JR AUTOMATION**  
**SULLAIR**  
Hitachi Industrial Equipment & Solutions America  
Hitachi America

**Hitachi Vantara**  
**GlobalLogic**  
A Hitachi Group Company  
@Hitachi Systems Security Inc.  
**Hitachi Solutions**

**Hitachi Energy**  
Hitachi Transmission & Distribution Systems  
- EV Fleet Optimization & Maintenance  
- Power Grid for EV Charging

**Hitachi Rail STS USA**  
Hitachi Rail USA

**HITACHI**  
Hitachi Construction Machinery  
**waupaca**  
**BRADKEN**

## EV Related Solutions & Capabilities

- EV Auto Components
- EV Battery Life Cycle Mgmt

- EV Assembly Process & Applications

- EV Fleet Optimization & Maintenance

## Identify issues together with customers & co-create solutions

Silicon Valley
<b>Customer Co-creation</b>
Focus Verticals
• Manufacturing
• Transportation
• Energy
• Financial
AI/ Analytics/ Big Data
Industrial IoT
Cloud and IT Platform
5G Networks
Design Approach



Detroit
<b>Customer Co-creation</b>
Focus Verticals
• Automotive
• Manufacturing
Autonomous Driving
Automotive Components
Manufacturing Technology

### CO-CREATION APPROACH

#### ENGAGE

1

Engage Customer,  
Share Vision,  
Understand Challenges

Co-Design Methodology  
Service Design  
Ethnography  
NEXPERIENCE

#### GENERATE

2

Generate New Concepts,  
Develop Prototype &  
Demos

Technology Differentiators  
Hitachi / Partner / Open Source

#### PROOF OF CONCEPT

3

Proof of Concept,  
Proof of Value

Technology Differentiators  
Hitachi / Partner / Open Source

#### INCUBATE

4

Incubate  
Validate Business  
Model

Deploy to first  
few customers

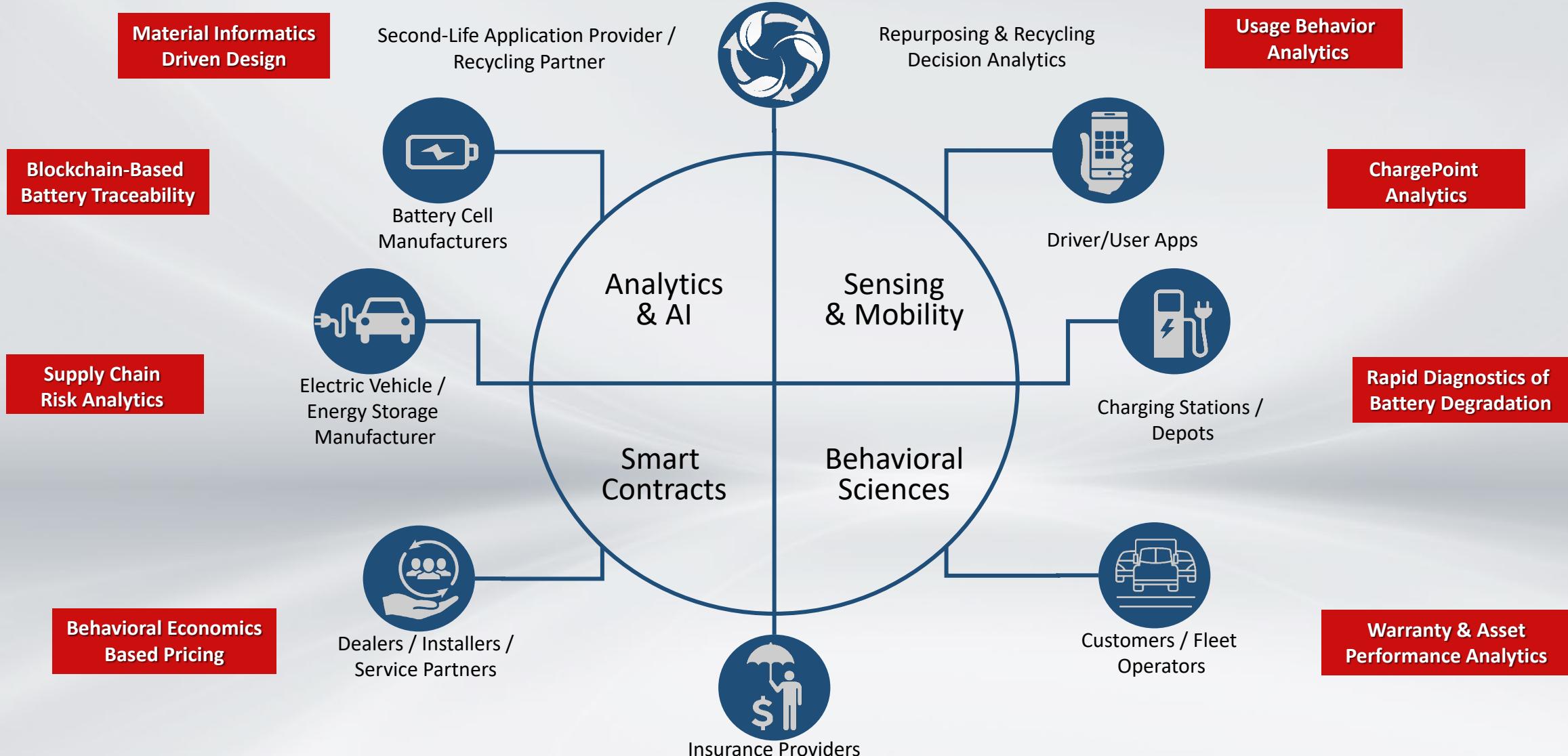
#### COMMERCIALIZE

5

Commercialize  
Develop/Deliver  
Solution

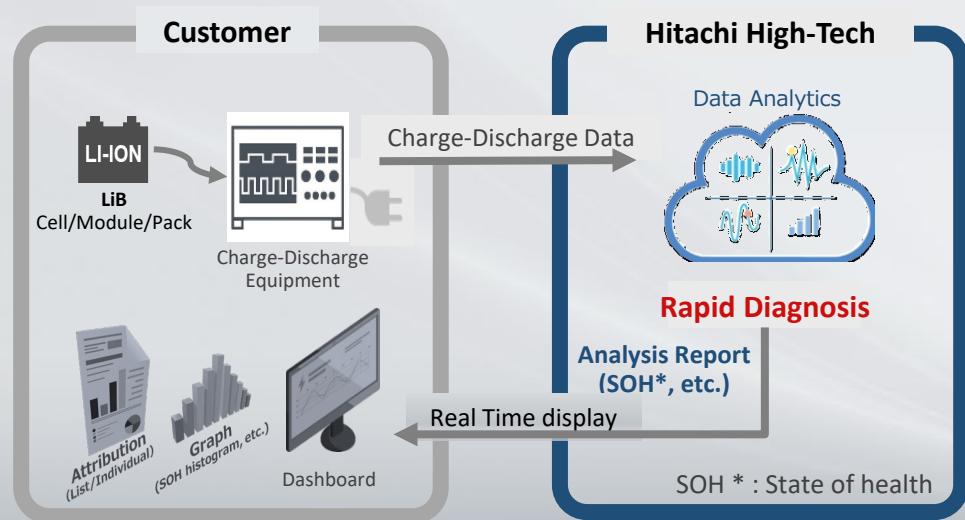
Scale to many  
customers

## Innovations for enabling circularity in the Battery Value Chain



Hitachi High-Tech developed Rapid Diagnostics of Battery Degradation.  
We instantly evaluate the performance degradation and remaining lifespan of LiBs.

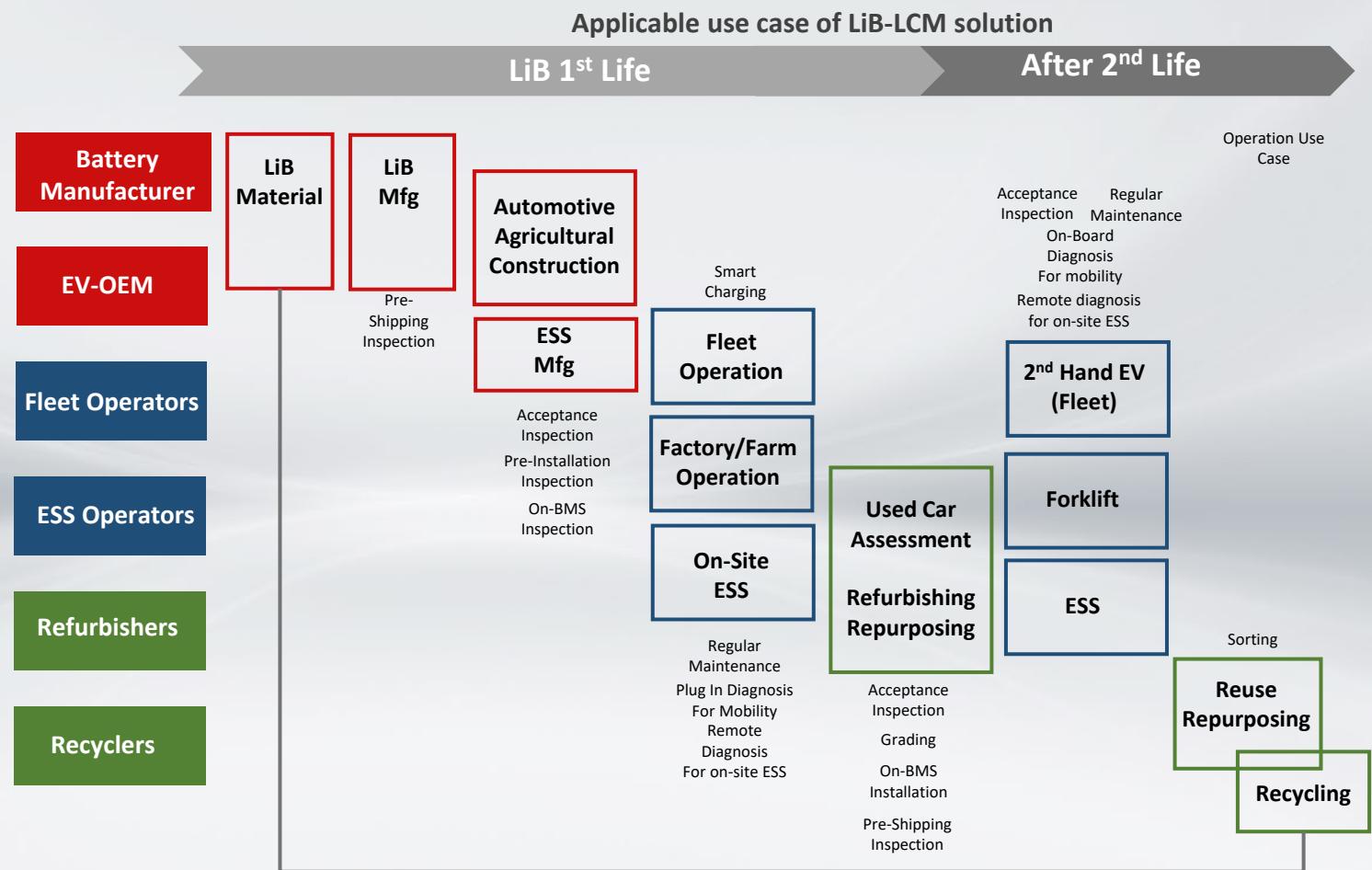
## Solution Outline



Instantly analyze charge-discharge information from general charge-discharge equipment on the cloud.  
Analysis results are displayed on dashboard.

**Features**

1. Rapid & Accurate Diagnosis <2min/time
2. Applicable with current equipment customers own
3. Cloud-based diagnostic system



## Key Contacts

Norio Hasegawa, Director of Business Development  
Hitachi America, Ltd.

<https://www.linkedin.com/in/noriohasegawa/>



Amit Kumar, Senior Manager, R&D  
Hitachi America, Ltd.

<https://www.linkedin.com/in/amitkumar-strategist/>



**HITACHI**  
Inspire the Next<sup>®</sup>