Unlocking Seamless Data Exchange Across the Built Environment

One Connection, Endless Possibilities

Jefferson Wong
Chief Operating Officer
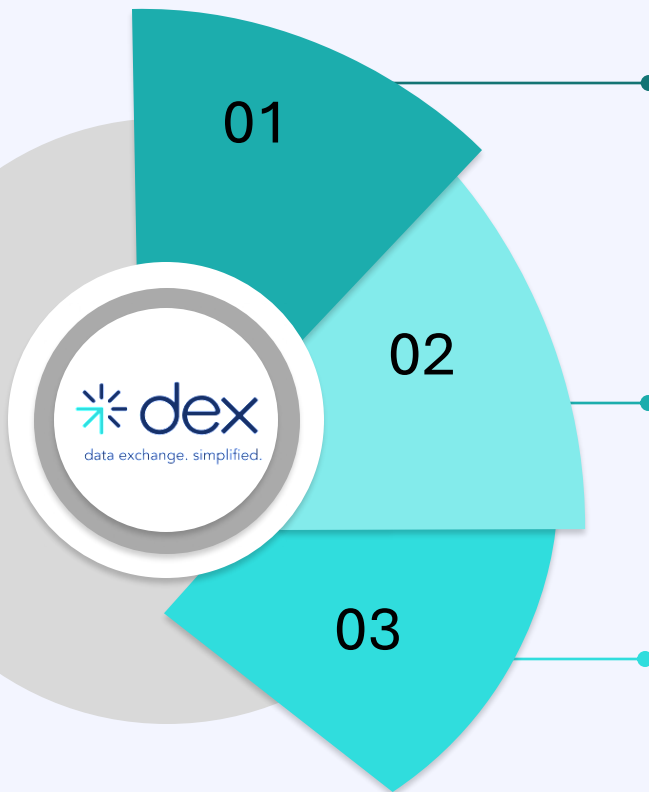IMDA (DEX)

Imagine A World of Connectivity

A Data Exchange Utility for All

01

Alliance for Action (AfA)

Industry-led coalitions, working in partnership with the Government, to prototype ideas in areas of opportunities or address a common challenge

A part of the Singapore Digital Utility Stack in Singapore's Digital Connectivity Blueprint

>270 Participants and **4 million** monthly transactions

dex
data exchange. simplified.

02

Supply Chain sgtradex

Powering SGTraDex for use cases in Maritime, Trade finance and Logistics

03

Construction SGBUILDEX

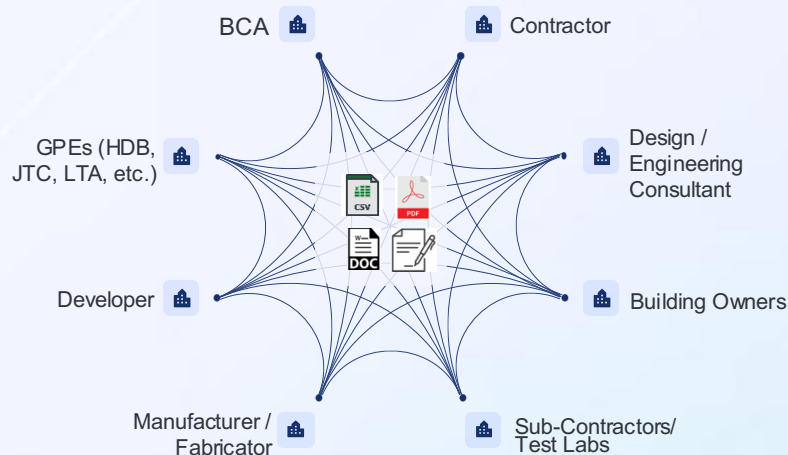Championed by BCA and HDB to power use cases in the Built Environment sector

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

DEX's Value Proposition

A simplified yet secure data sharing utility for sensitive and confidential data exchange.

Single Point of Connectivity

One time connection allowing data exchange with multiple counterparties. A single touch point to manage all data sharing relationships.

Hassle-Free Flexibility

Bridging connectivity for all organizations to connect and transact in their own preferred way.

Zero storage on our data highway. Data is only accessible by rightful parties in their own secured environment.

Quality and Consistency

Eliminate confusion and time-consuming data handling through data standardization.

Security and Control

dex
data exchange. simplified.

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Connect Once, Connect All

Your Data Sharing Experience Could Go From This…

Complicated webs of data exchange with your partners, suppliers, customers

BCA
Contractor
GPEs (HDB, JTC, LTA, etc.)
Design / Engineering Consultant
Developer
Building Owners
Manufacturer / Fabricator
Sub-Contractors/ Test Labs

...To This

BCA
Contractor
GPEs (HDB, JTC, LTA, etc.)
Design / Engineering Consultant
Developer

dex
Data Highway

Building Owners
Manufacturer / Fabricator
Sub-Contractors/ Test Labs

A single point of connection that unlocks access to all the data you to share and receive in a single individual and secured pitstop

Harmonized data schemas allowing consistency while eliminating downstream inefficiencies

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Our Proof-of-Concept (POC)

13 Contractors and Developers

4 API Integration with Solution Providers

52 SIT/UAT Test Flows Successfully Completed

5 Data Elements

3 Dashboards Built for Safety, Manpower, Piling

103 Data Exchange Validated and Verified Transactions

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Proof-of-Concept

Capps

Intercorp

Novade

SGBUILDEX

Data Highway

Facilitates data exchange between participants without storing data

HDB Dashboard

BCA Dashboard

REDAS RAPID

01 Single Connectivity that augments industry solutions

02 Standardized data elements enable productivity savings

03 Timely updates with no manual handling required

04 Ready for operational deployment

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

IMDA INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Key POC Takeaways

1. **Reduces** manual data entry **mistakes**

    Prevents costly delays, rework, and **non-compliance issues** through standardized, automated data exchange

2. Potentially **reduces** audit frequencies, **freeing up resources** for **higher-value** tasks

3. Substantial **productivity savings** per project

75%

of ISPs rate integrations as **"Very Easy"**

92%

of participants are **"Satisfied"** with the Proof-of-Concept

100%

of ISPs rate API specifications as **"Comprehensive"**

100%

of participants found **multiple value points** through the PoC

✳ dex

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Feedback from POC participants and Upcoming Partners

*"SGBuildex's goal of establishing a **single connection to multiple data sources** is an excellent additional enabler for REDAS' Real Estate Analytics And Performance Indicators Dashboard (RAPID) initiative, a digital platform aiming to provide business decision insights for users through quality data"*

Dr Gwee Seng Kwong
Project Director, REDAS

From Solution Providers

*…allows for **seamless data exchange***

*… **remove[s] the need of manual effort….***

*"[ensures] **Security ….***

*ensuring trust amongst the community…."***

*… **flexibility** and **control***

*… **maximising the value….**"*

INTERCORP   Novade   cApps

From Main Contractors

*…enables **multiple and collective***

values for construction sector's stakeholders

*…**better user experience***

accelerating data-driven decisions….

connected and efficient ….

exchange data seamlessly..

BOUSTEAD Projects   中国建筑（南洋）发展有限公司 CHINA CONSTRUCTION (SOUTH PACIFIC) DEVELOPMENT CO PTE LTD   中国交通建设 CHINA COMMUNICATIONS CONSTRUCTION

Upcoming partners…   FULCRUMHQ by LEAPTHOUGHT   digital build   125 Years & Beyond PENTA-OCEAN   CHEC 中国港湾 CHINA HARBOUR   SIM LIAN GROUP LIMITED Creating Space | Creating Homes   *and more…*

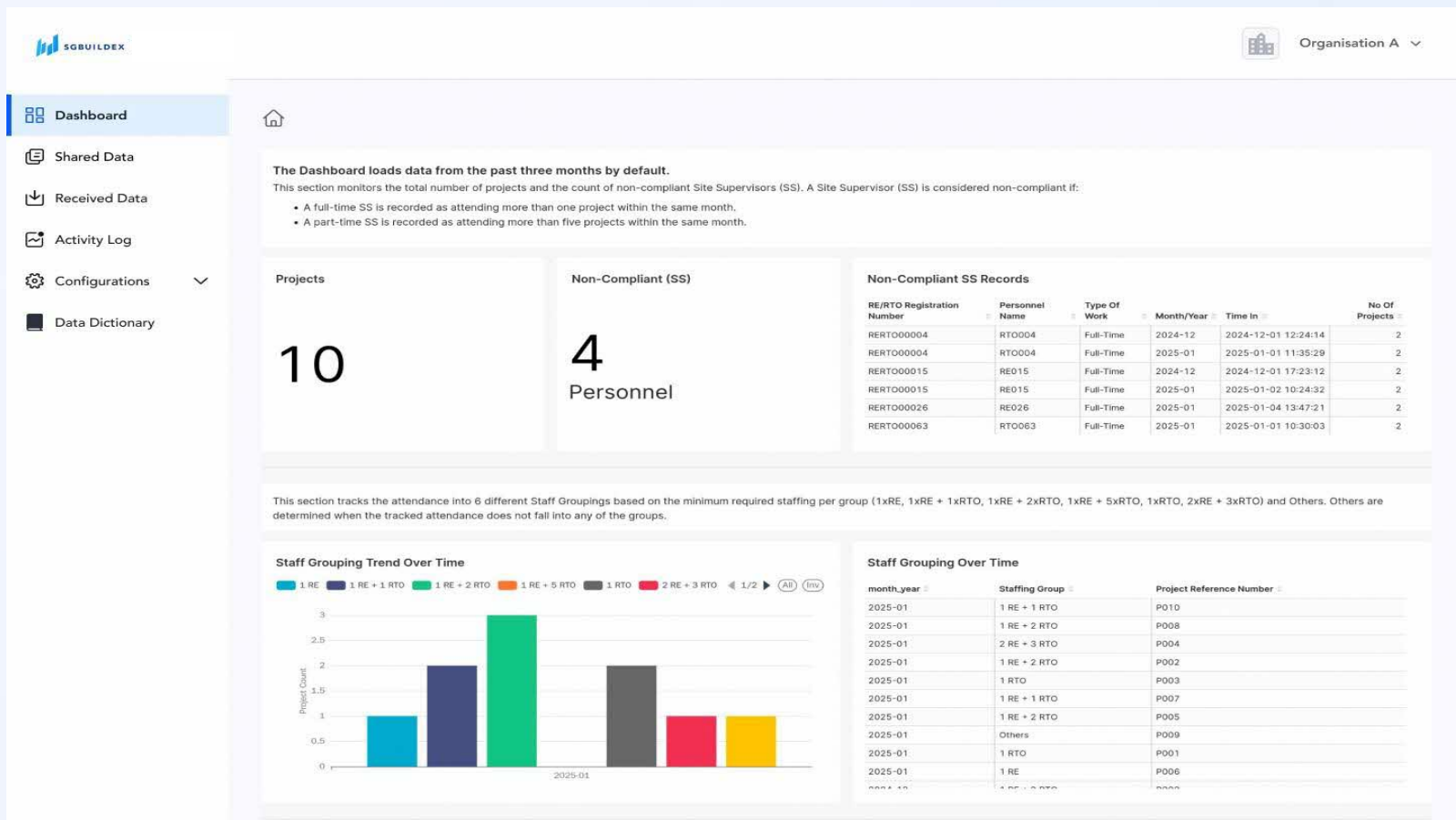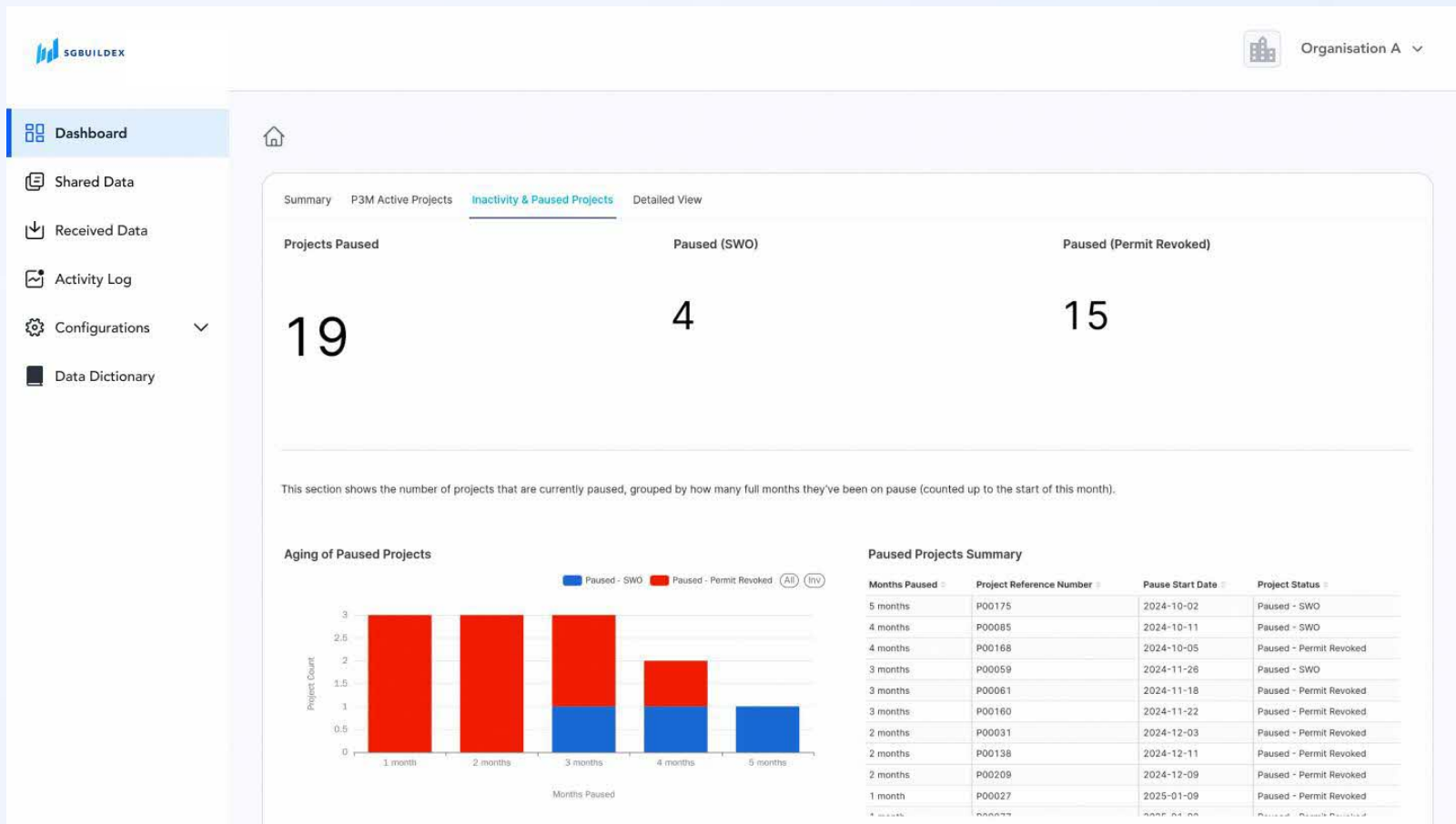Building and Construction Authority   HOUSING & DEVELOPMENT BOARD   IMDA INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Unlocking Project Insights with Timely Quality Data
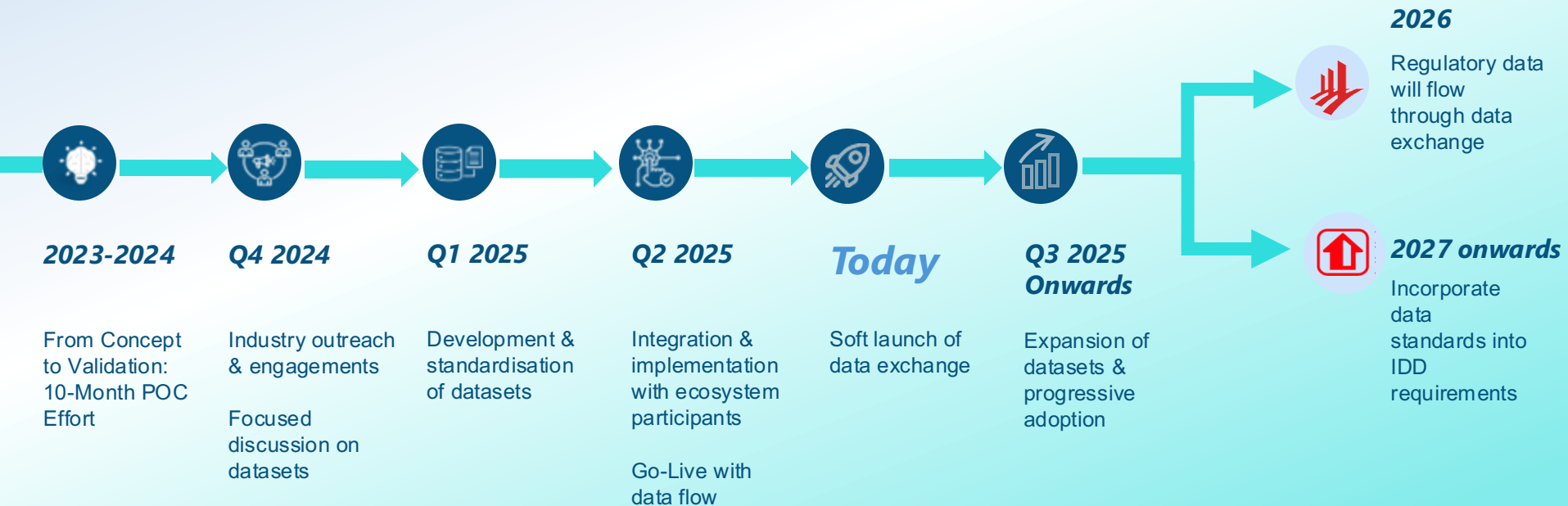
Unlocking Project Insights with Timely Quality Data

Overview of Data Standards

Area	Data Schema	Structured Data	Unstructured Data
Safety	• Environment Health and Safety (EHS)	• Safety Accident and Incident Reports • e-Permit To Work (ePTW) • Non-Conformity Report (NCR) /Site Negative Observation • Site Inspection Positive Observation • Environmental Management	
	• Structural Safety	• QP/SS Attendance • Site Progress • Piling Installation Record • Working Load Test • Ultimate Load Test • Instrumentation & Monitoring Records • Annex C1 ERSS Approval • Annex D Building Monitoring Settlement • Concrete Cube Test • Steel Rebar Test Report • Steel Element Test Report	• Commissioner of Building Control Notification • Pre-con Survey Report • Temporary Building Design • Welding Test Report • QP(D) Approval for Proprietary Product • 360 Captures • Piling Plan • Mass Engineered Timber (MET) Test Results
Productivity	• Manpower Management	• Manpower Data • Offsite Facility Data	
Quality	• Digital QA/QC Inspections	• Construction QA/QC Defects • Handover Status (Defects Monitoring at DLP)	

dex

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Overview of Data Standards

Area	Data Schema	Structured Data	Unstructured Data
Time	• Digital Progress Monitoring	• Progress Monitoring of Key Trades • Site Diary	
	• Digital Construction Scheduling & Sequencing	• Design Key Milestones • Construction Key Milestones	
	• Digital Production	• Production Schedule • Site Diary	
	• Digital Logistic	• Digital Logistic Delivery Records	
	• Digital RFI	• Request for Information (RFI) • Request for Approval (RFA)	
Cost	• Digital Submissions & Approvals	• Request Variation Order (RVO) • Progress Claims	

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

IMDA INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Next Steps and Key Milestones

2023-2024

From Concept to Validation: 10-Month POC Effort

Q4 2024

Industry outreach & engagements

Focused discussion on datasets

Q1 2025

Development & standardisation of datasets

Q2 2025

Integration & implementation with ecosystem participants

Go-Live with data flow

Today

Soft launch of data exchange

Q3 2025 Onwards

Expansion of datasets & progressive adoption

2026

Regulatory data will flow through data exchange

2027 onwards

Incorporate data standards into IDD requirements

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

IMDA INFOCOMM MEDIA DEVELOPMENT AUTHORITY

A Whole-Of-Government (WOG) Effort

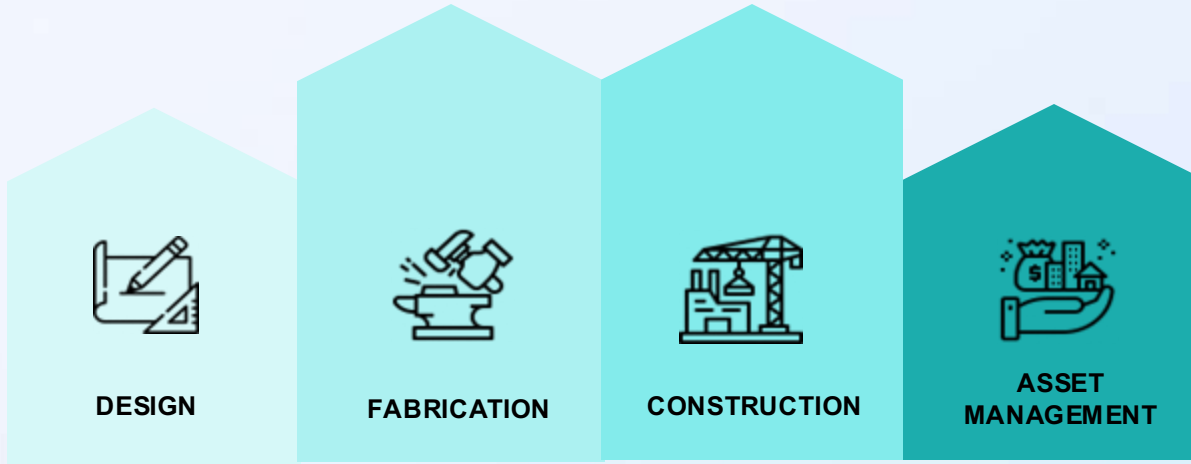SGBuildex is building the foundations for digital Singapore just as HDB and BCA have built the physical one…

SGBuildex has the potential to change and transform the industry…

SGBuildex enhances and expands ongoing sector-wide efforts across agencies… to deliver meaningful impact …

SGBUILDEX

6 FEBRUARY 2025

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

What the future holds

DESIGN

FABRICATION

CONSTRUCTION

ASSET MANAGEMENT

1. Scaling Through Modularity

Adding new data elements and personas
- Consultants/QP
- Sub/specialist contractors
- Test laboratory
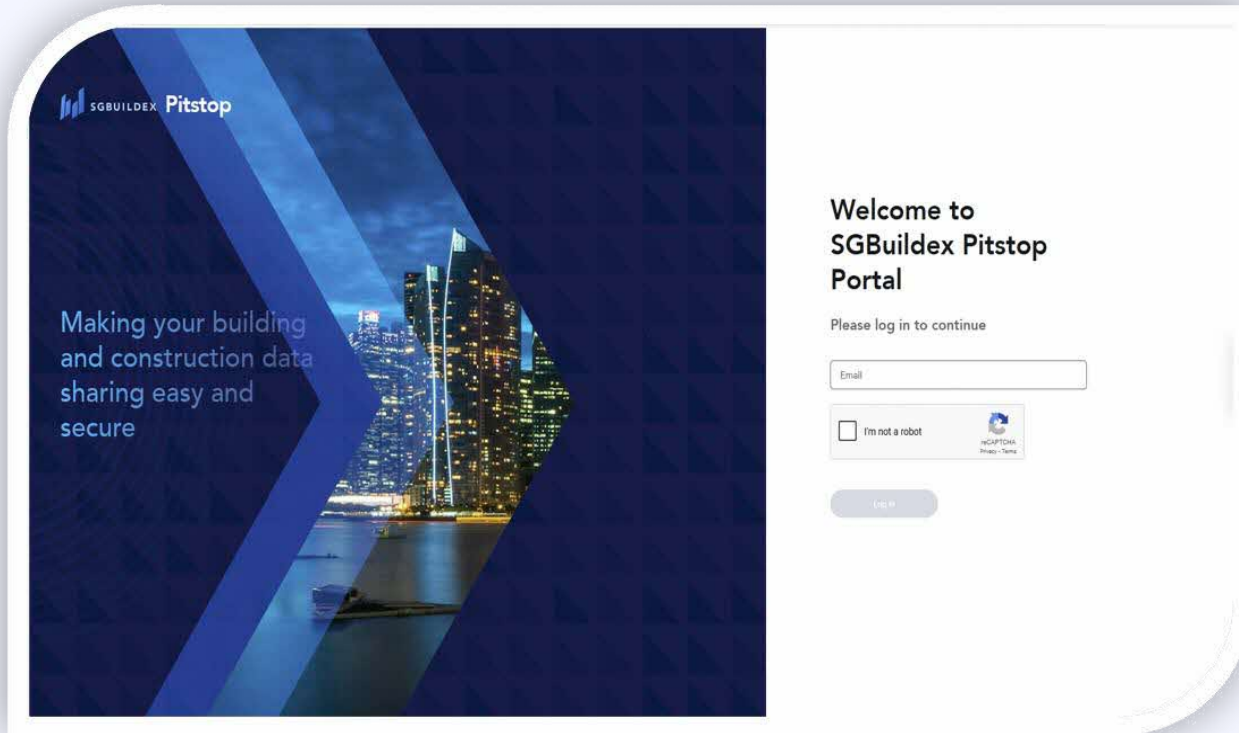- Certification bodies
- Developers/GPEs

2. Expansion to Design, Asset Management and Adjacencies

- Infrastructure
- Industrial
- Workplace safety & health
- Carbon & sustainability

dex

Building and Construction Authority

HOUSING & DEVELOPMENT BOARD

INFOCOMM MEDIA DEVELOPMENT AUTHORITY

Kickstart your data exchange journey

Your SGBuildex experience starts today.

Register Now!

Sign up for a **quick chat with our team to get you started!**