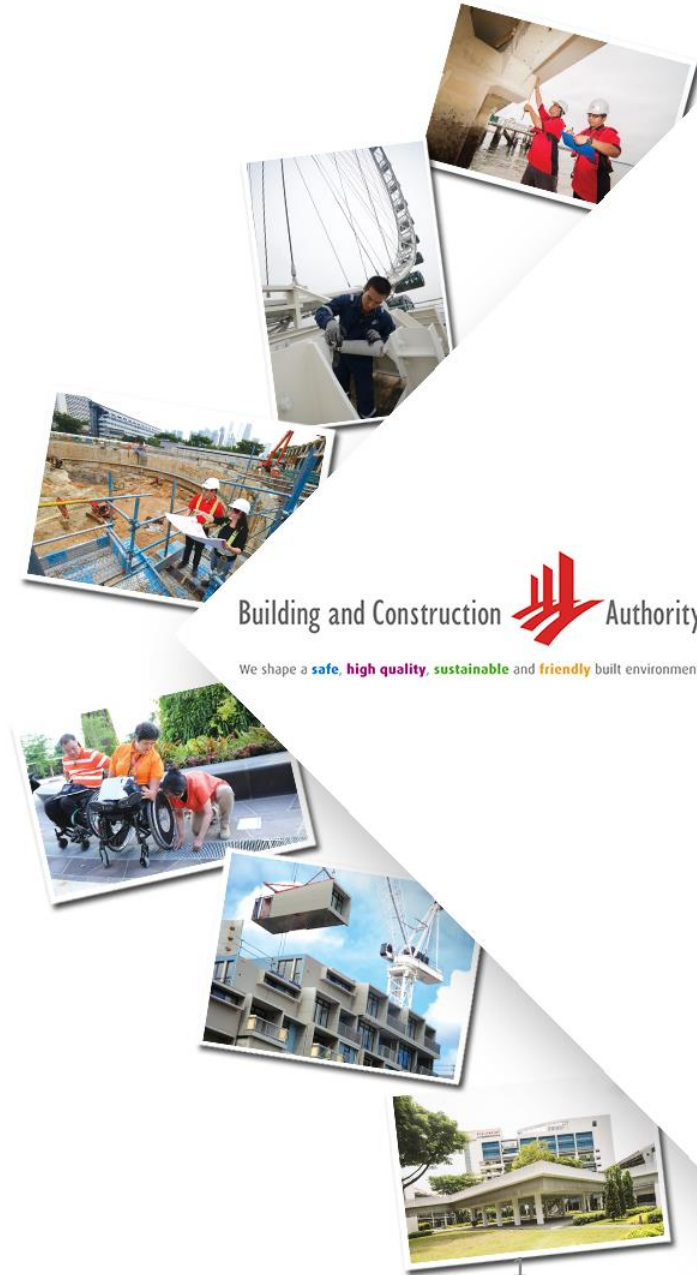


BuildSG-CovidSafe

Supporting Safe Restart of the BE Industry

22 Dec SCAL Webinar



Building and Construction Authority
We shape a **safe, high quality, sustainable** and **friendly** built environment.

Objectives of CSP

Improve efficiency of implementing COVIDSafe control measures for projects



SAFE Workforce

Track the daily health status of the workers

Ensuring contact tracing of infected worker



SAFE Worksite

Worksites must use national digital check-in system Safe Entry (SE) to record all entries and exits

Movement control in/out of the worksite/factory and segregation of work area

Strict safety management measures to be enforced at worksites to prevent outbreaks, such as segregating workers by teams into different work zones, and having staggered breaks



SAFE Accommodation

Control of movement in/out of workers' accommodation

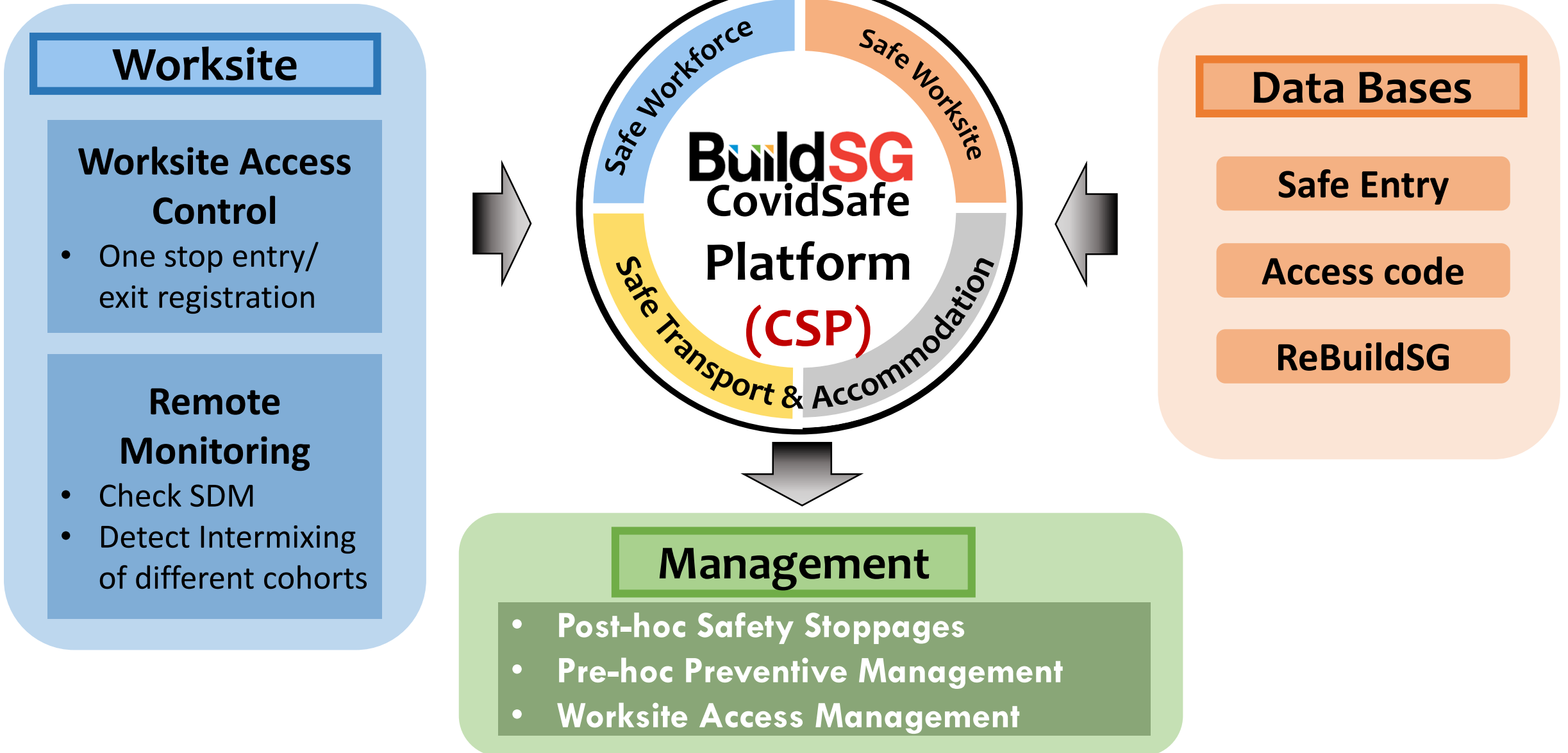
Cohort-ing of workers by projects at their places of accommodation



SAFE Transportation

Provision of dedicated transport between work sites and places of accommodation

BuildSG-COVIDSafe Platform (CSP)



BuildSG-COVIDSafe Platform (CSP)

Desired Outcomes	Key Indicators of conformances	Tech Systems	
		Existing Systems	New CSP Systems
Safe Workforce	<ul style="list-style-type: none"> • Entry/ Exit Records • Whitelist of approved workers on-site • Records of health status (e.g. daily MC, temperature, Access Code and swab history) 	<ul style="list-style-type: none"> • Trace Together • Access Code 	<ul style="list-style-type: none"> • Thermal Scanner • Integration to facial biometric & turnstile • Whitelist check
Safe Worksite	<ul style="list-style-type: none"> • Identifying different cohort of workers thru coloured vests/ armband at demarcated zones • Common facilities clearly demarcated with SDM 	<ul style="list-style-type: none"> • SafeEntry 	<ul style="list-style-type: none"> • Remote Monitoring • Inspection App • Early warning using data analytics

BuildSG-COVIDSafe Platform (CSP)

Backend

- Developed by BCA, supplied thru 1 vendor (Hubble)
- FOC for 1st year

Frontend

- Supplied thru 2 vendors (Hubble & Novade) assigned by IMDA
- Up to \$20K subsidies per project thru ADS

COVIDSafe Management System

- Workers Data Repository
- Data Analysis and Trend Spotting

Access Code

ReBuildSG

Safe Entry

Site Management Platform (SMP)

- Alert Mgmt/SMO/SDO on non-compliances
- Reporting and Documentation

Worksite Access Control (WAC)

- Facial Recognition Check-in/out submitted to SafeEntry
- Thermal Temperature Scanner
- Access Code Check
- Whitelist Check

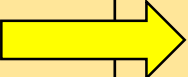
Remote Monitoring (RM)

- **Area Monitoring:** Imaging Devices (e.g. A.I. Camera, CCTV)
- **Personnel Monitoring:** Bluetooth Devices (e.g. BluePass, BLE Wearables)

Efficient and Seamless Processes

Status	Safe Worker	Safe Worksite		
	Worksite Access Control	Remote Monitoring	Audit & Inspection	Data Assisted Decision
Present (Without CSP)	<ul style="list-style-type: none"> • 5 Step admission process 1. Facial bio registration 2. Health Declaration 3. SafeEntry 4. Temp Check 5. Access Code 	<ul style="list-style-type: none"> • Standalone personnel monitoring system (e.g. BluePass, BLE Dongles) • No area level monitoring 	<ul style="list-style-type: none"> • Manual check by SMO/SDO • Manual Reporting 	<ul style="list-style-type: none"> • Nil
With CSP	<ul style="list-style-type: none"> • 1 Step admission thru Facial bio scan • Automated Whitelist check 	<ul style="list-style-type: none"> • Integrated Area & Personnel level monitoring system 	<ul style="list-style-type: none"> • Auto alert SMO/SDO of non-compliances • On-line Reporting 	<ul style="list-style-type: none"> • Identify high risk areas and common non-compliance trends

Post/Pre-hoc with BluePass

	Current	 Near-term Achievable (with BluePass - BP)
Post-Hoc C+ Containment Construction Projects Progress	<ul style="list-style-type: none"> • QO all likely contacts • <i>STO whole site if C+ case is found; surgical STO possible if SE gates data is available</i> 	<ul style="list-style-type: none"> • Detect close contacts to QO • <i>Infer work zones of C+ person based on his contacts; surgical STO</i>
Pre-Hoc Preventive Management	<ul style="list-style-type: none"> • <i>Use of SMM plan for manual checks</i> 	<ul style="list-style-type: none"> • <i>Identify intermingling amongst different cohorts</i> • <i>Infer persons infringing unauthorised work zones based on his contacts; narrow down area of contact</i>

Key Benefits for Firms

1. **Integration** to Government Databases for seamless transfer for information
 2. **Automation** of data collation processes
 3. **Early detection** of anomalies through dashboarding and data visualisation
- *[In development]* Bluepass for Pre-Hoc preventive management and Post-Hoc containment

Site Demo & Pilot Testing

Kim Chuan Depot Extension

- Workforce segregated according to 6 zones
- Installed AI cameras, facial bio & temperature scanners; workers carry Bluetooth Low Energy (BLE) tokens
- Hardware plugged into CSP to facilitate data exchanges with other government databases



“experienced, in a hands-on way, how technology can be deployed to minimise disruption to construction work during this pandemic ... we hope more contractors will adopt digital solutions to help boost the safety of our worksites.”

– Minister of National Development, Desmond Lee

JTC Logistics Hub

- More timely information on their worksites’ and workers’ adherence to COVID-Safe measure through CSP
- Quickly identify anomalies and take timely remedial actions



“This is a very good platform that has integrated everything together ... It actually allows us more data transparency, and with that, it enabled us to manage the workers much better.”

– JTC director, Building Projects Division, Wong Wei Loong

On-boarding CSP

1. Schedule site visit

- To understand site configuration and requirement
- Approx. 3 days

2. Quotation

- Preliminary within 1-3 days
- Commercial and Technical Analysis
- Decision Making

3. Acceptance

- For applicants' review and consideration

6. Deployment

- Procurement and Delivery of Hardware & Software
- H/W Installation
- S/W Installation, including project set-up data base creation, System testing, User Training

5. Approval

- To receive letter of offer from IMDA

4. Documentation and Submission

- Preparation of documents (e.g. application form, ACRA, Financials, proposal etc.) required
- Submission to IMDA

End