Tech Initiatives in DLF Projects

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One of the KRAs of Central Design and Engineering Team at DLF is to evaluate and implement emerging technologies and innovations happening globally. This is to ensure that the company stays at the cutting edge of efficiency and quality, not just today, but years in future.

Here we present a snapshot of some interesting developments being evaluated at DLF

1. BIM & CDE
2. CONCRETE SENSORS
3. DRONE APPLICATIONS
4. COST FORECASTING
5. DESIGN VERIFICATION
6. TECH BITS

1 BIM & CDE


Traditional
Information
Sharing
Client
Manager
Engineer
Supplier
Project
Manager
Facilities
Manager
Sub-
Contractor
Main
Contractor


Common
Data Environment
(CDE)
CDE
Client
Manager
Engineer
Supplier
Project
Manager
Facilities
Manager
Sub-
Contractor
Main
Contractor


Better data quality
Lifecycle building management
Coordinated approach
Faster project delivery
No change orders
Budget reliability
Virtual simulation
Higher building quality
Collaborative design
Higher building functionality
Prefabrication
Fewer accidents on job sites
No data loss
Transparency from idea to rebuild
Virtual model
Earlier conflict and error detection

2 CONCRETE SENSORS

Realtime Concrete Data at Site

A plug & play solution
Instantly measures any concrete mix with no prep or calibration needed

Comprehensive proactive data
Targeted, real-time on-site data that help you to go from reactive to proactive

Building a better tomorrow
Allows you to make more precise concrete for buildings that will stand the test of time

A greener approach
Reduces the vast carbon footprint of concrete making and construction waste

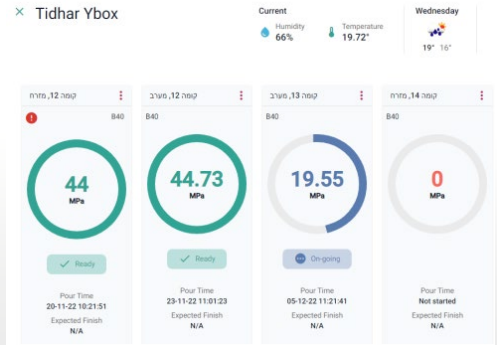
Impeccable accuracy
92% data accuracy that supports better decision making

Seamless workflow on the site
Empowers better management of construction sites and improved workflow

Digitizing a traditional process
Enables significant new time and cost efficiencies for improved results

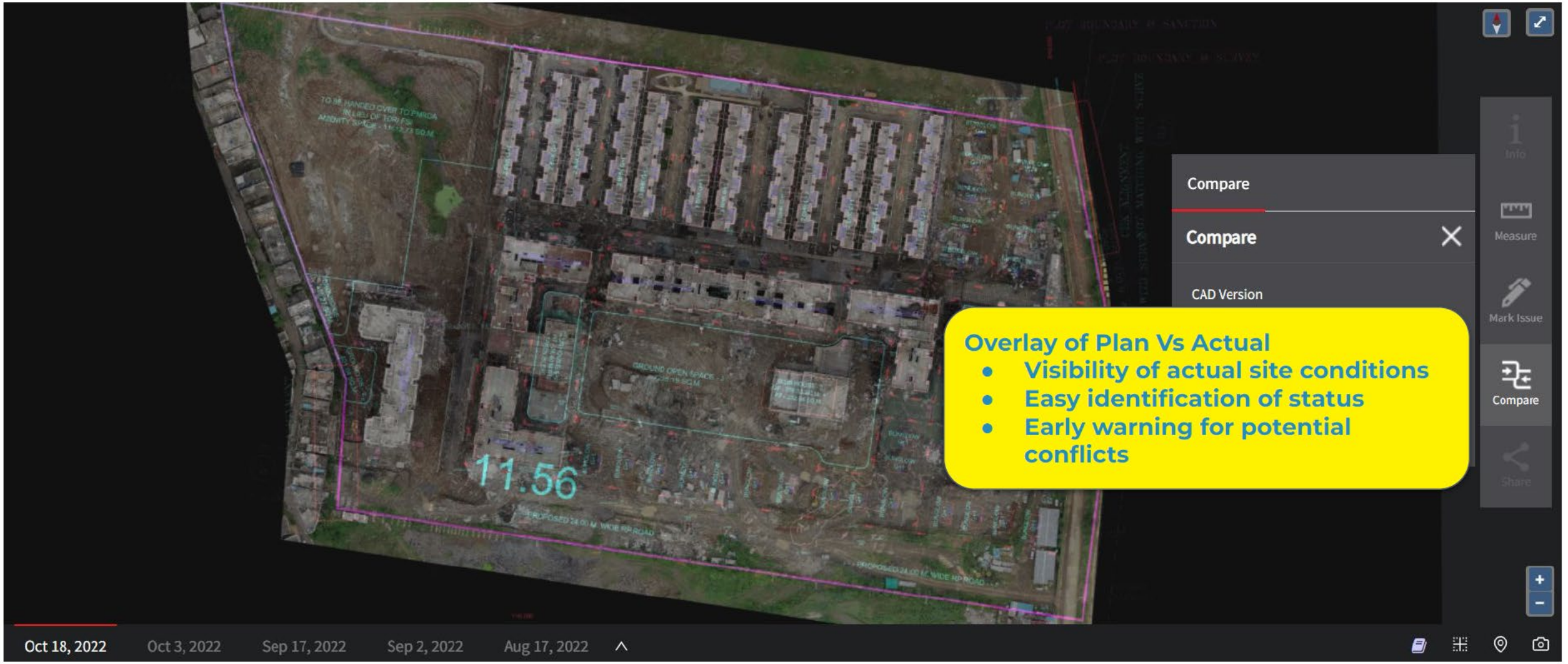
Time and cost optimization
Allows GCs to optimize concrete in terms of properties, costs, and readiness

2 CONCRETE SENSORS



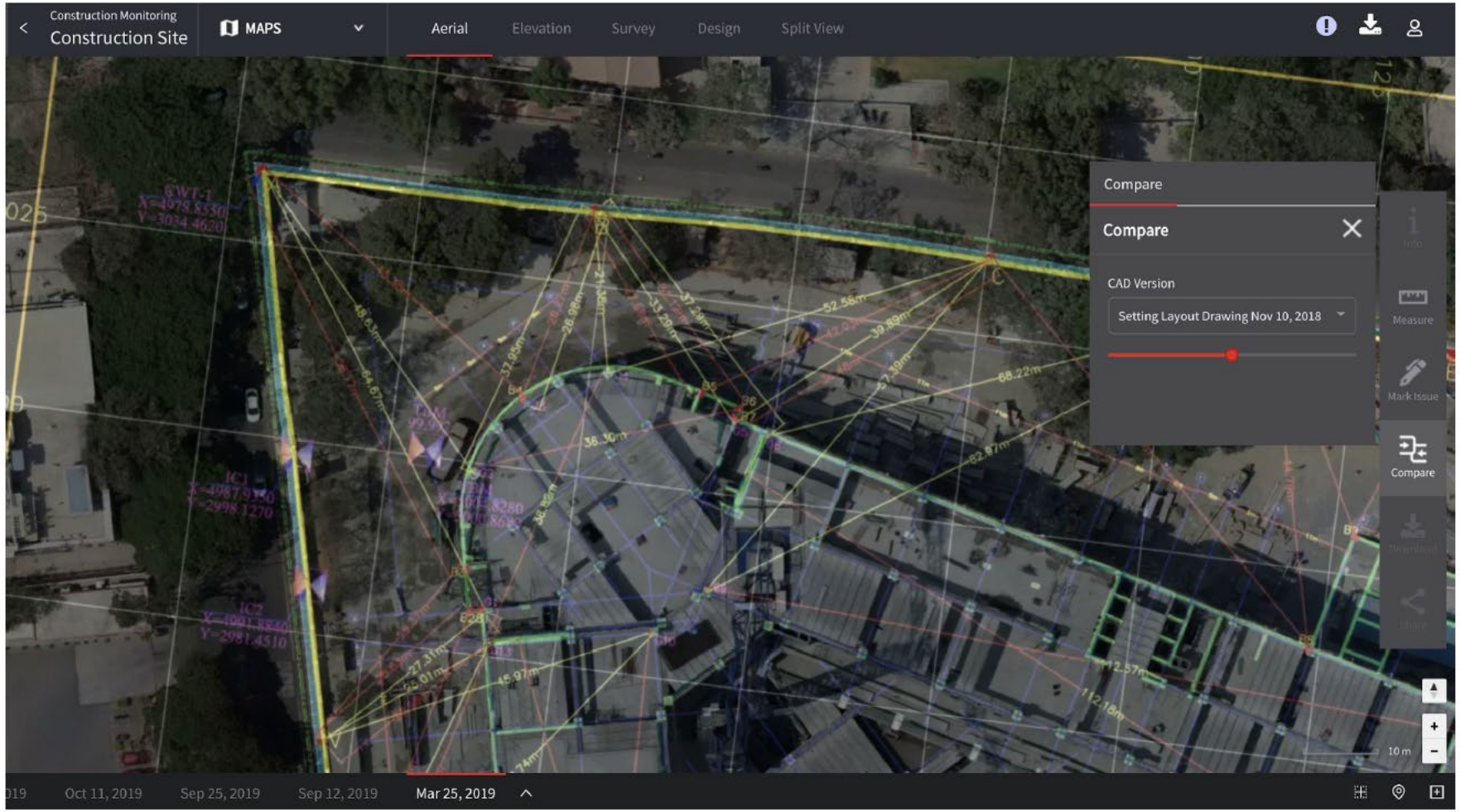
CAD Overlay of Plan over Actual Site

3 DRONE APPLICATIONS



Overlay of Design Drawings

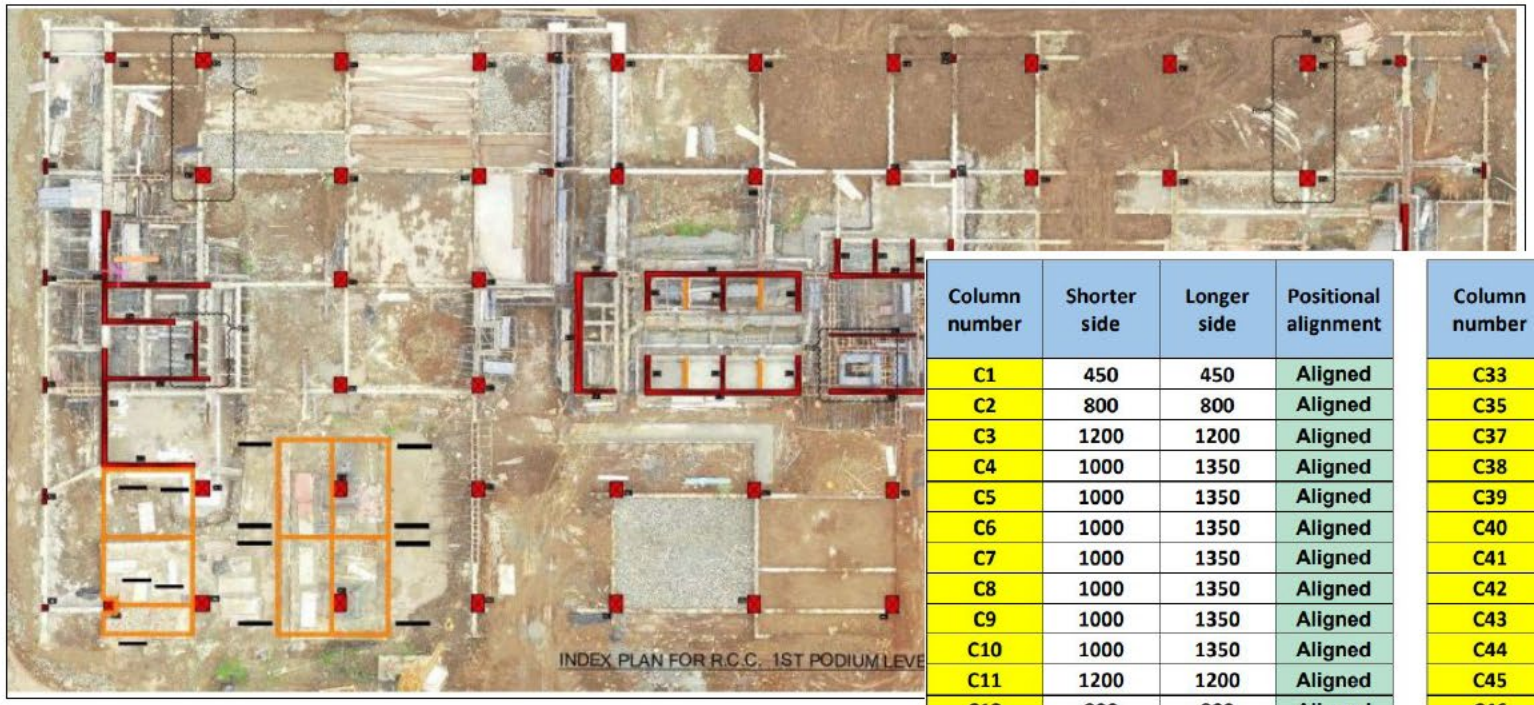
3 DRONE APPLICATIONS



- Overlay of design drawings for immediate visibility of As-Built status
- This allows for detection of defects in superstructure
- Our platform also provides an easy communication tool amongst stakeholders
- For known defects, it provides an ability for rectification planning

Foundation & Column Deviation Report

3 DRONE APPLICATIONS



- Visible verification of deviation with quantifiable dimensions
- Acts as a powerful audit tool, and a record of construction quality

Column number	Shorter side	Longer side	Positional alignment
C1	450	450	Aligned
C2	800	800	Aligned
C3	1200	1200	Aligned
C4	1000	1350	Aligned
C5	1000	1350	Aligned
C6	1000	1350	Aligned
C7	1000	1350	Aligned
C8	1000	1350	Aligned
C9	1000	1350	Aligned
C10	1000	1350	Aligned
C11	1200	1200	Aligned
C12	800	800	Aligned
C13	450	450	Aligned
C14	300	1200	Aligned
C15	300	1200	Aligned
C16	1200	1200	Aligned
C17	1000	1200	Aligned
C18	1000	1200	Aligned

Column number	Shorter side	Longer side	Positional alignment
C33	1000	1200	Aligned
C35	1000	1200	Aligned
C37	1000	1200	Aligned
C38	1000	1200	Aligned
C39	1200	1200	Aligned
C40	1000	1200	Aligned
C41	1000	1200	Aligned
C42	1000	1200	Aligned
C43	1000	1200	Aligned
C44	1000	1200	Aligned
C45	1000	1200	Aligned
C46	1000	1200	Aligned
C47	1200	1200	Aligned
C48	300	1200	Aligned
C49	300	1200	Aligned
C50	450	450	Aligned
C51	800	800	Aligned
C52	1200	1200	Aligned

4 COST FORECASTING

INPUT

AUTODESK REVIT · GRAPHISOFT ARCHICAD · Bentley Advancing Infrastructure · Tekla Online · ALLPLAN · VECTORWORKS

IMPORT/UPDATE

IFC MULTIPLE IFC FILES

BCF COLLABORATION

Viewer

SITE PROGRESS REPORTING

PORTFOLIO MANAGER

Power BI

OUTPUT

MANAGER

KNOWLEDGE BASED MANAGEMENT

RULES OF MEASUREMENT | DOCUMENTS & TEMPLATE

COST DATABSE | CLASSIFICATION | IDM/IDS

TEMPLATES

SELECTION SETS | METHODOLOGIES | ZONES

ENGINES

CLASH DETECTION | QTO | COST | SMART 4D/5D SCHEDULE | PROGRESS

DOCUMENTS | REPORTING SYSTEM | API

SQL DATABASE

CDE ENTERPRISE
MULTI-PROJECT ENVIRONMENT

COMMON DATA ENVIRONMENT

FACILITY MANAGEMENT

DOCUMENT MANAGEMENT SYSTEM

COMMAND-LINE AUTOMATION SYSTEM

EXPORT

IFC

BCF

BIM COLLABORATION PLATFORMS

IMPORT/EXPORT

Project · ORACLE PRIMAVERA

ADD-IN APPLICATION

Microsoft Dynamics 365 · SAP ERP

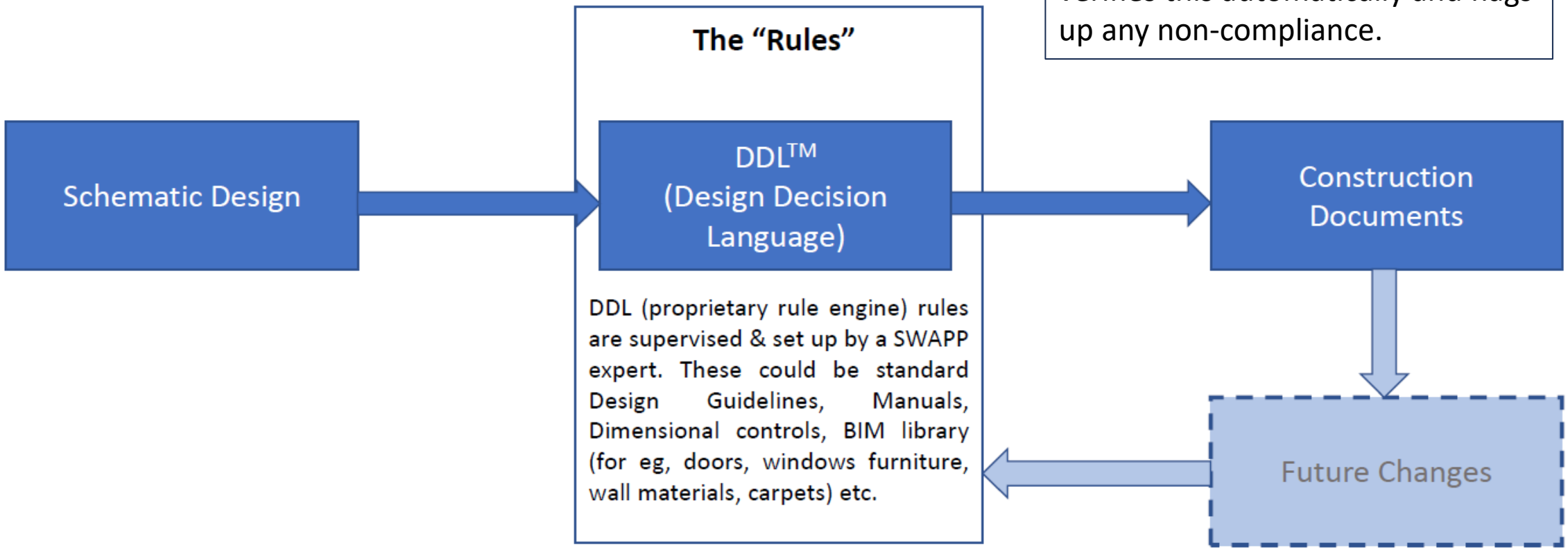
CUSTOM INTEGRATION WITH 3RD PARTY SOLUTIONS

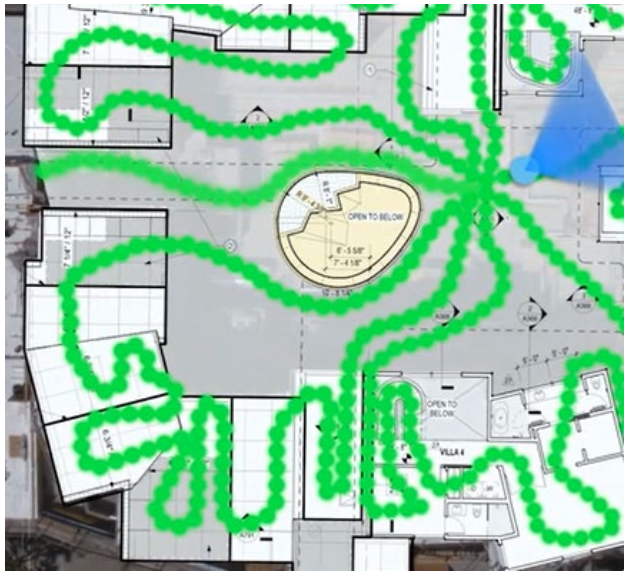
TASK AUTOMATION

CUSTOM REPORTS/EXPORTS

5 DESIGN COMPLIANCE

Organisational (or Codal) Design Standards are difficult to monitor manually for compliance across multiple projects and thousands of drawings. Some AI based software verifies this automatically and flags up any non-compliance.





6 TECH BITS

(Parts of larger technology)

Site Monitoring Via 360 deg Helmet Mounted Camera. Repeated comparative monitoring over lifecycle of project

Energy Monitoring

Indoor Air Quality

Water Monitoring

6

TECH BITS

(Parts of larger technology)

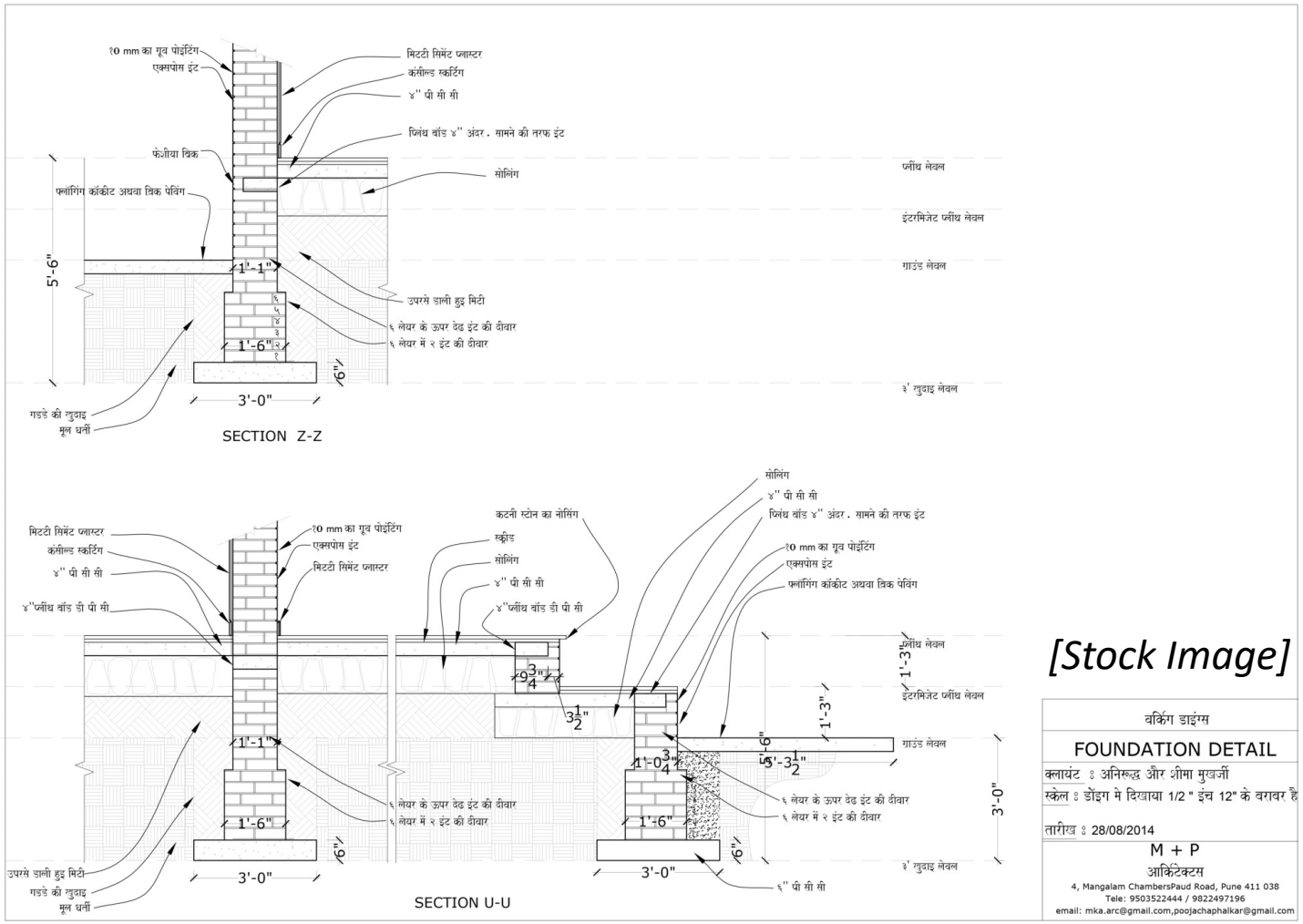
Efficient Property Management Using IoT enabled Sensors

Digital Cafeteria

Smart Washroom

Smart Parking

Smart Access



[Stock Image]

वर्किंग डाइंग्स

FOUNDATION DETAIL

क्लायंट : अनिरूद्ध और शीमा मुखर्जी

स्केल : डॉइग मे दिखाया 1/2 " इंच 12" के बराबर है

तारीख : 28/08/2014

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Immediate translation of drawings done in English, to any local language, using AI.

This benefits the labour who may not always be able to read the drawings, causing construction errors.

Thank You