

CitA
BIM GATHERING



Building Capabilities in Complex Environments

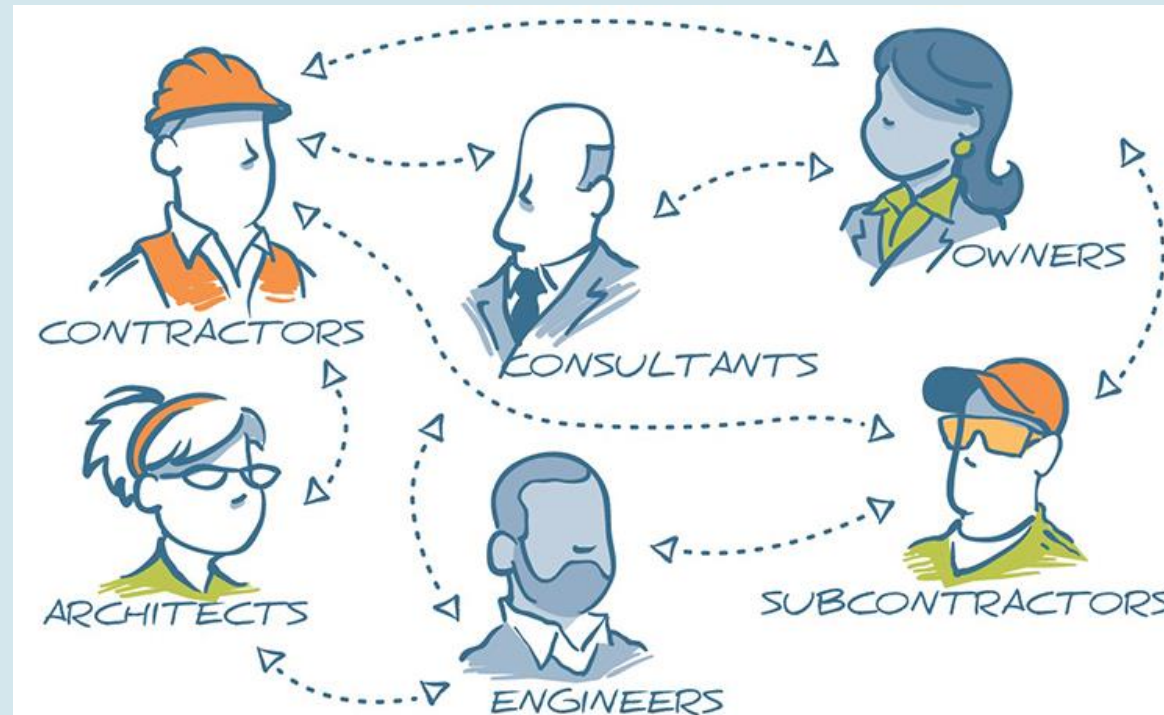
CitA BIM Gathering 2017, Croke Park, November 23rd & 24th, 2017

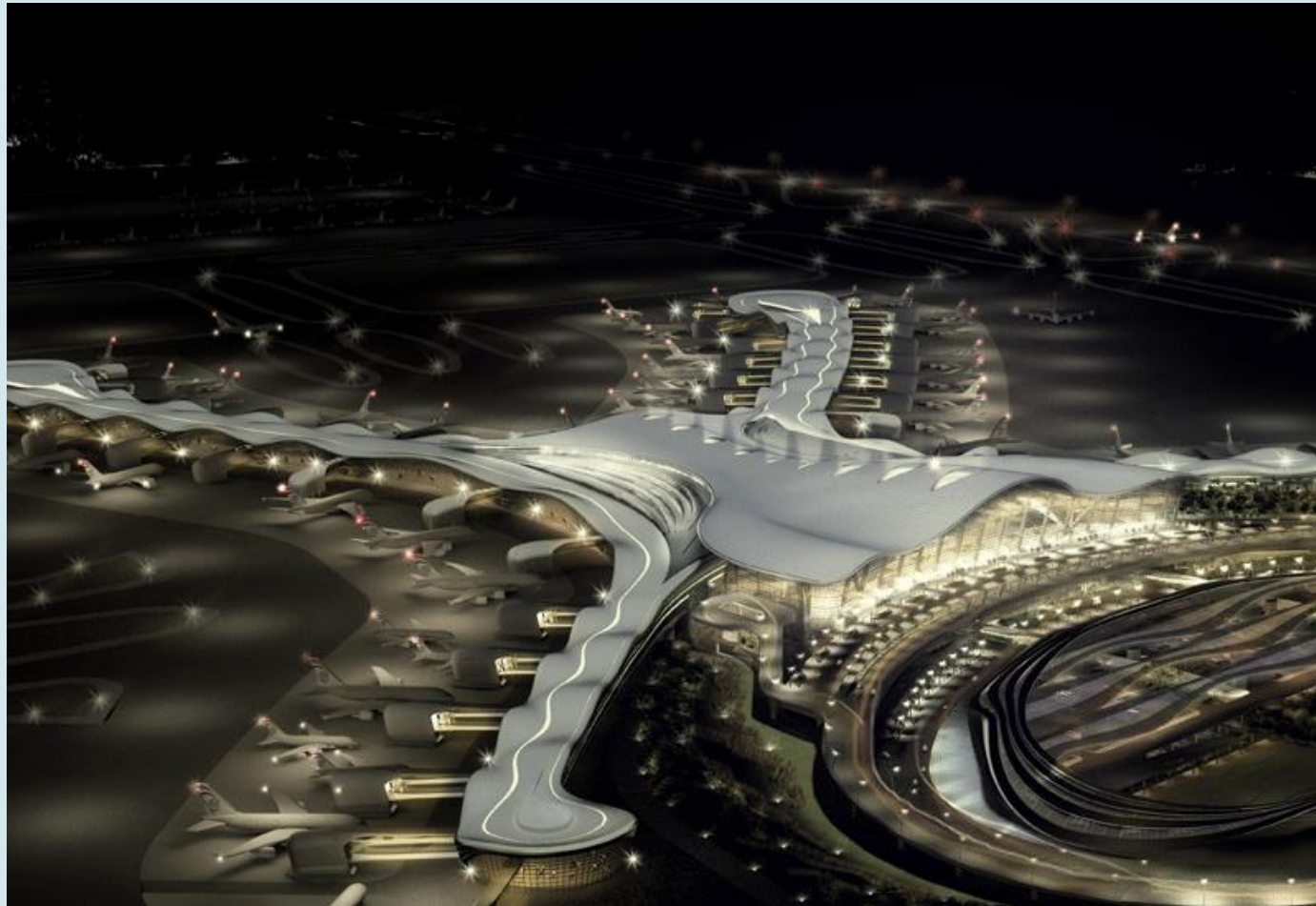


Digital Transformation of Construction QA Processes Abu Dhabi Airport – Midfield Terminal Building



- SOFTWARE DEVELOPMENT HOUSE - ESTABLISHED IN 1997 AND ITS OBJECTIVE IS TO MAKE CONSTRUCTION PROCESSES DIGITAL.
- **ONLINE SHARED WORKSPACE FOR TEAMS TO COLLABORATE ON CONSTRUCTION PROJECTS**





Project Facts

- US \$4 Billion Construction Value
- 740,000 m2 Terminal Building
- Handle 30 Million Passengers Per Year
- New Home to Etihad Airways

Zutec Facts

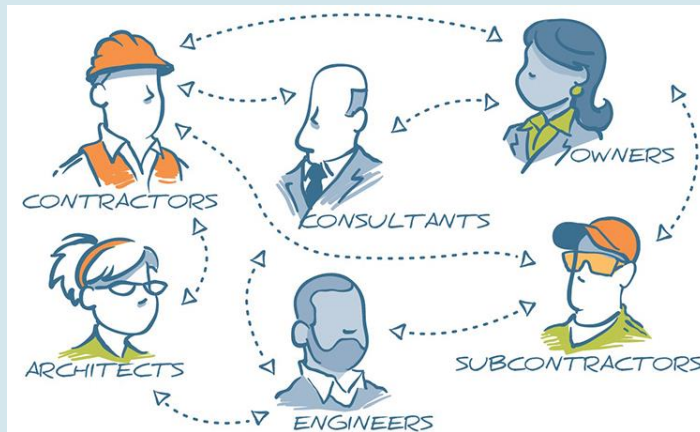
- 1,200+ Users
- 320 Concurrent Users
- 423,521 Individual Inspections Completed
- Over 1 TB Cloud Storage Size



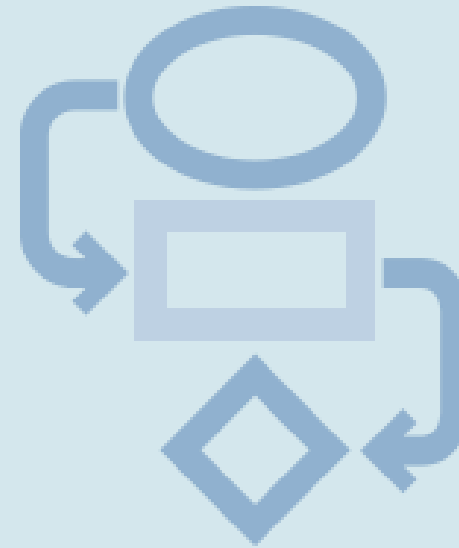
- 01. Work Inspection Request Module
- 02. Commissioning Inspection Request Module
- 03. Site Diary – Module to Capture Information from Site on Daily Activities
- 04. Snagging & Defects
- 05. Ceiling / Wall / Floor Closure Management
- 06. Room Closure Management
- 07. Asset Registration Capture & Compilation
- 08. Operation & Maintenance Manuals / Digital Health & Safety File
- 09. Training Records Management
- 10. Fire & Life Safety Records Management
- 11. Simple Facility Management – PPM Scheduling



USERS

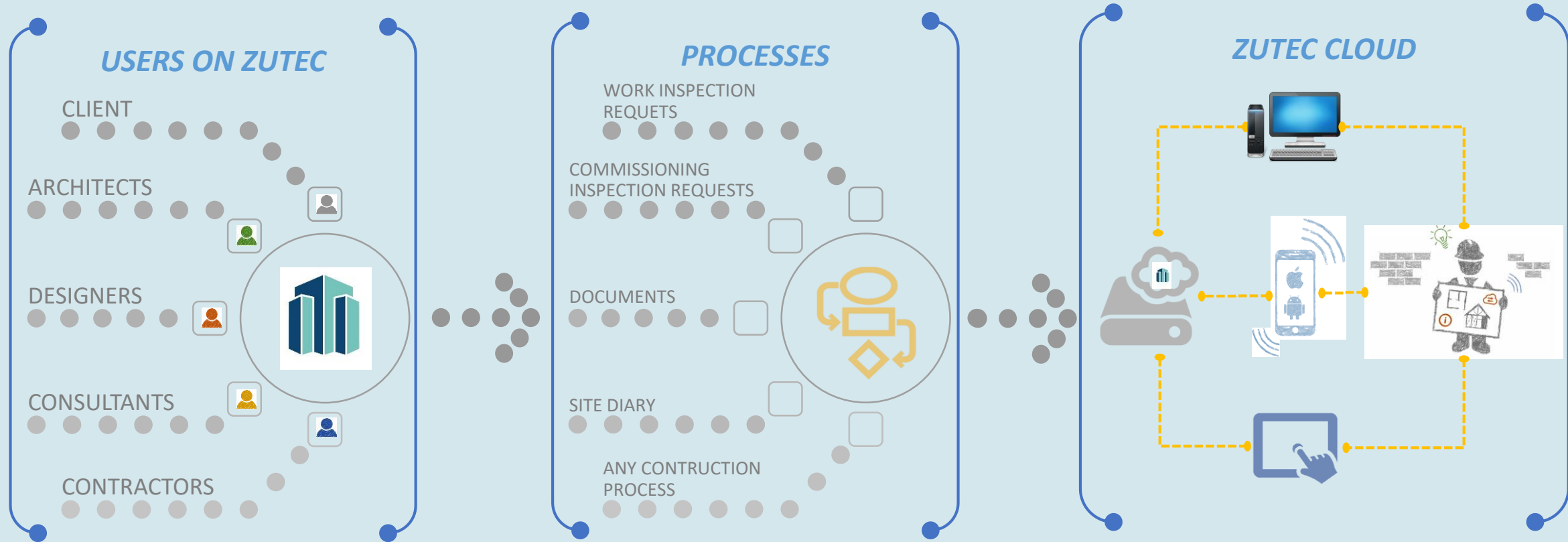


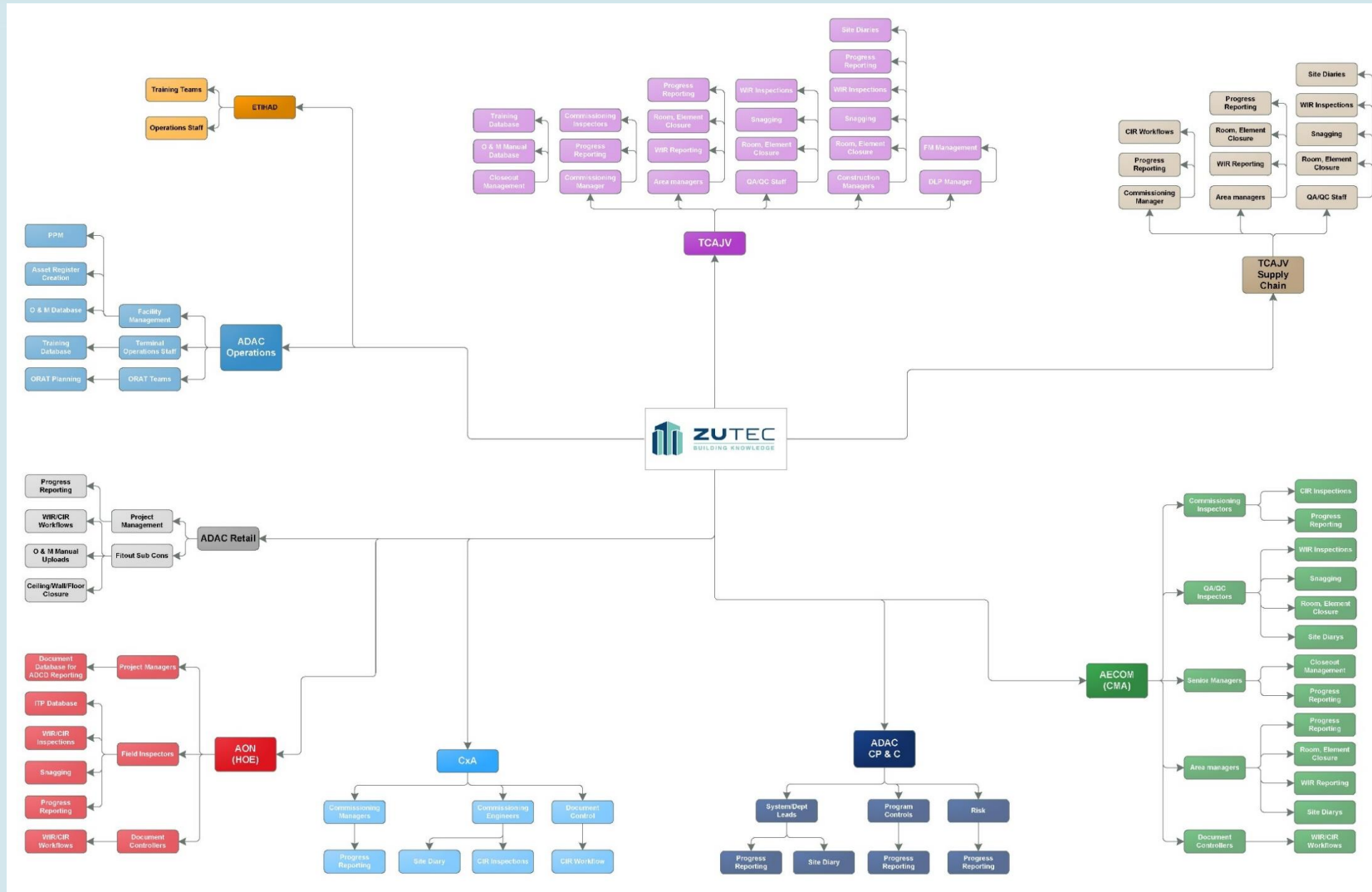
PROCESS





ACCESSIBLE FROM DESKTOP AND
MOBILE PLATFORMS







Inspection Requests – A Closer Look At the Process



OLD WIR PAPER BASED PROCESS



[21 DAYS]



PROCESS OF **COPYING / PRINTING AND DISTRIBUTION** HAPPENS AT **EACH STAGE / STAKEHOLDER**

THE DIGITAL WIR PROCESS ON THE ZUTEC



[04 DAYS]



DIGITAL DATA CAN BE **ACCESSED BY AUTHORISED USERS/REVIEWERS** ON DESKTOP AND MOBILE DEVICES



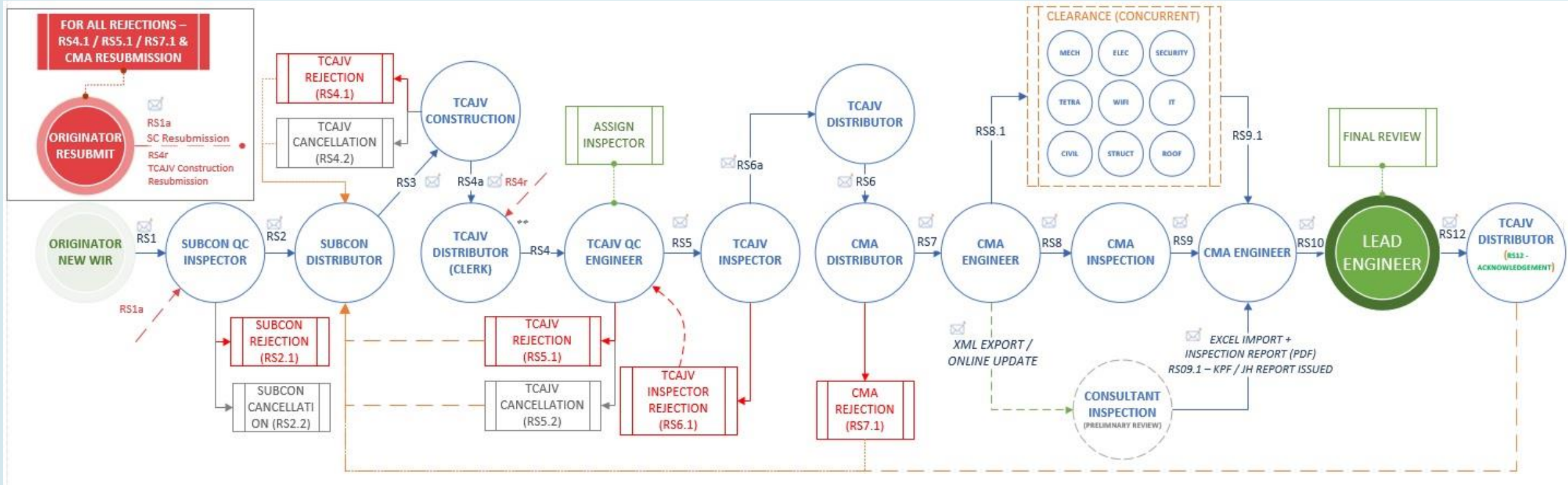


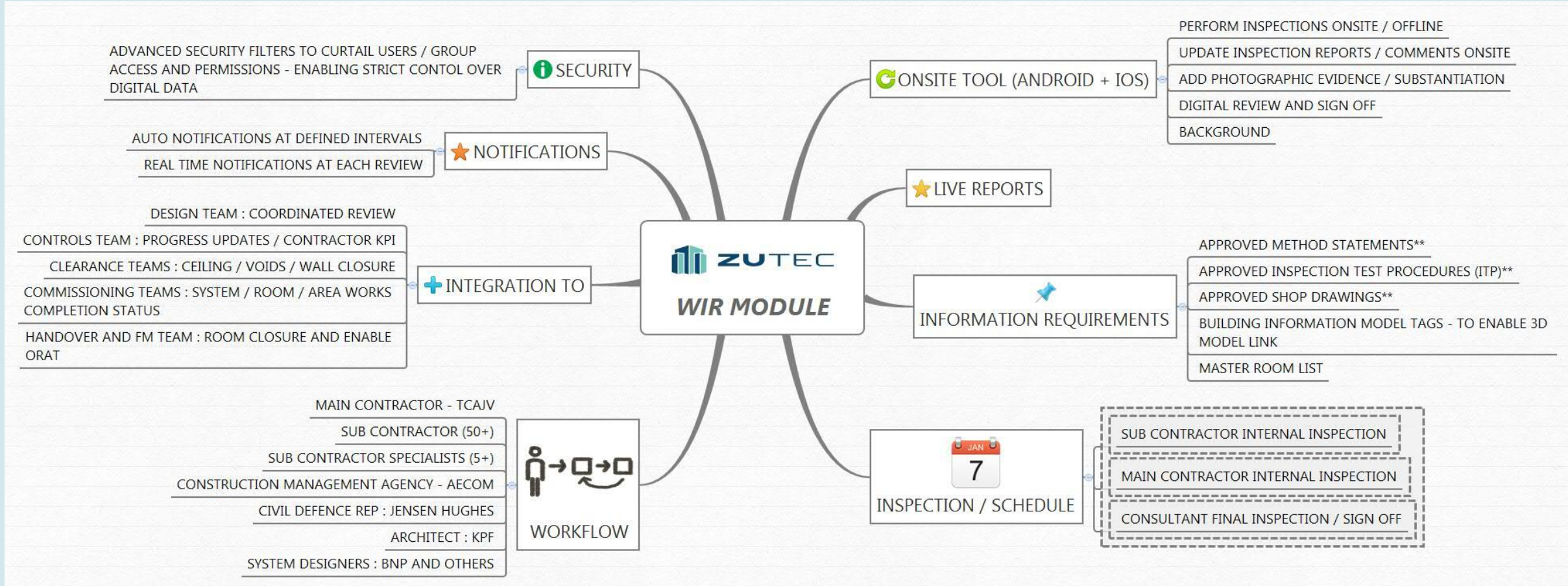
ADAC Form ID: FD-DC-F-005-R1

PAPER WIR FORM

DIGITAL WIR FORM









ITP : INSPECTION TEST PROCEDURES

THIS IS THE HEART OF THE WORK INSPECTION REQUEST – EACH STEP IS DEFINED AS A WITNESS / HOLD POINT AND ASSOCIATED CHECKLISTS ARE PRE LOADED IN TO THE SYSTEM AS TEMPLATES.

USE CASE : When a user creates a New WIR – Using this configuration/principle , Activity Discipline/System/Subsystem/Associated Forms/Specification Reference/ Previous Activities based on the Approved Quality Control Plan / ITP are Preloaded to the WIR Form making this Error Free, QA Compliant and Quick.

All Records Options Search Recycle Bin

03.1 - ITP - Mechanical

01.Work Inspection Requests / By Discipline / 03 - Mechanical / 03.0 - Configuration / 03.1 - ITP - Mechanical

Unique Activity:	[ITP-1093-320]Act:5-3rd Party Verification of Installed Insulation for Storm Drain Pipe
Itp No:	ITP-1093-320
Activity No:	5
Sub:	320
Sub Discipline:	General
Type Of Inspection:	HOLD
System:	Storm Drain Pipe
Sub System:	3rd Party Verification
Activity Name:	3rd Party Verification of Installed Insulation for Storm Drain Pipe
Remarks:	
Form No:	FM-1093-320-01
Prerequisite Activities:	Act 5,6,7
Activity Description:	3rd Party Verification of Installed Insulation for Storm Drain Pipe
Specification Reference:	39000
Status Code:	Code 2



BIM TAG : BUILDING INFORMATION MODEL TAG

EACH OBJECT IN PROJECT BIM MODEL IS TAGGED AND HAS A UNIQUE REFERENCE. WHEN A WIR IS CREATED, USERS INPUT ASSOCIATED BIM TAGS TO THE WIR ENABLING THIS DATA TO BE PLUGGED IN TO BIM MODEL TO MONITOR PROGRESS / FORECAST WIR'S ETC.. **Zutec Cloud Database currently holds around 1 Million BIM tag references.**

Discipline	System	Subsystem	Tagno	Tag Description	Tag Area	Remarks	Attached Files
Civil	Concrete Works	Concrete Works	MTB_TuSO_NA_CIV-PAW_BAR-T1-02-T1-03	Civil and Structural Works- Concrete Barrier	TuSO_NA		
Civil	Concrete Works	Concrete Works	MTB_TuSO_NA_CIV-PAW_BAR-T1-01-T1-02	Civil and Structural Works- Concrete Barrier	TuSO_NA		
Civil	Earthworks	Earthworks	MTB_TuSO_ML_STR-EWK-EWK-T9-T11	Civil and Structural Works - Earthworks Excavation	TuSO_ML		
Civil	Earthworks	Earthworks	MTB_TuSO_ML_STR-EWK-EWK-T7-T9	Civil and Structural Works - Earthworks Excavation	TuSO_ML		
Civil	Earthworks	Earthworks	MTB_TuSO_ML_STR-EWK-EWK-T5-T7	Civil and Structural Works - Earthworks Excavation	TuSO_ML		
Civil	Earthworks	Earthworks	MTB_TuSO_ML_STR-EWK-EWK-T3-T5	Civil and Structural Works - Earthworks Excavation	TuSO_ML		
Civil	Earthworks	Earthworks	MTB_TuSO_ML_STR-EWK-EWK-T1-T3	Civil and Structural Works - Earthworks Excavation	TuSO_ML		

SHOP DRAWINGS :

USERS HAVE PROVISION TO USE PRELOADED SHOPDRAWINGS ON THE ZUTEC SYSTEM OR CAN MARKUP PDF DAWINGS AND UPLOAD FROM THEIR DESKTOP . **Zutec Cloud Database currently holds around 78,000 shop drawings references.**

Source	Submittal No	Sub Rev	Drawing Number	Dwg Rev	Title	Discipline	Approval Status	Unique Drawing Number	Attached Files
0401 - Shop Drawings - Telecom.xdgm	3718	0	401-BD-T-16-01-3-15B-TW-SD-006	0	ODF Rack View EFR 2 GOVT Sheet - 6	Telecommunication		401-BD-T-16-01-3-15B-TW-SD-006-Rev0 [Code]	
0401 - Shop Drawings - Telecom.xdgm	3717	0	401-BD-T-16-01-3-15B-TW-SD-005	0	ODF Rack View EFR 2 ADAC Sheet - 5	Telecommunication		401-BD-T-16-01-3-15B-TW-SD-005-Rev0 [Code]	
0401 - Shop Drawings - Telecom.xdgm	3716	0	401-BD-T-16-01-3-15B-TW-SD-004	0	ODF Rack View EFR 2 ADAC Sheet - 4	Telecommunication		401-BD-T-16-01-3-15B-TW-SD-004-Rev0 [Code]	
0401 - Shop Drawings - Telecom.xdgm	3715	0	401-BD-T-16-01-1-11A-TW-SD-005	0	ODF Rack View EFR 1 GOVT Sheet - 3	Telecommunication		401-BD-T-16-01-1-11A-TW-SD-005-Rev0 [Code]	
0401 - Shop Drawings - Telecom.xdgm	3714	0	401-BD-T-16-01-1-11A-TW-SD-005	0	ODF Rack View EFR 1 ADAC Sheet - 2	Telecommunication		401-BD-T-16-01-1-11A-TW-SD-005-Rev0 [Code]	
0401 - Shop Drawings - Telecom.xdgm	3713	0	401-BD-T-16-01-1-11A-TW-SD-004	0	ODF Rack View EFR 1 ADAC Sheet - 1	Telecommunication		401-BD-T-16-01-1-11A-TW-SD-004-Rev0 [Code]	



MASTER ROOM LIST

A MASTER SCHEDULE CONSISTING OF 5000+ ROOMS ARE PROGRAMMED IN TO ZUTEC ENABLING ALL STAKEHOLDERS TO WORK OFF A COMMON LIST REDUCING INTERPRETATION / TYPING ERRORS..

	Edit	Audit	Links	Barcode	Signage Number	Building	Location	Level	Room Number	Function Number	Landside Airside	Function
<input type="checkbox"/>				T-L30-977	T-L30-977-ACCESS TO ABOVE	88	T	L30	977	14	AS	CIRCULATION
<input type="checkbox"/>				T-L30-976	T-L30-976-ACCESS TO ABOVE	88	T	L30	976	14	AS	CIRCULATION
<input type="checkbox"/>				T-L30-740	T-L30-740-PIER CONCOURSE	88	T	L30	740	14	AS	CIRCULATION
<input type="checkbox"/>				T-L30-723	T-L30-723-ACCESS TO ABOVE	88	T	L30	723	14	LS	CIRCULATION
<input type="checkbox"/>				T-L30-699	T-L30-699-CORRIDOR	88	T	L30	699	14	AS	CIRCULATION
<input type="checkbox"/>				T-L30-692	T-L30-692-ELV-05-105&106 CR	88	T	L30	692	16	AS	LIFT MACHINE ROOM
<input type="checkbox"/>				T-L30-677	T-L30-677-FOOD & BEVERAGE	88	T	L30	677	5	LS	FOOD & BEVERAGE
<input type="checkbox"/>				T-L30-676	T-L30-676-FOOD & BEVERAGE	88	T	L30	676	5	LS	FOOD & BEVERAGE

DROP-DOWNS AND DEFAULT VALUES

ALL REPETITIVE ENTRY ITEMS LIKE LOCATION / FLOOR / ZONE / USER'S NAMES ETC. ARE PROGRAMMED IN A DROP-DOWNS ENABLING EASY FORM INPUTS.

INFORMATION FROM RELATED TABLES LIKE SYSTEM / DISIPLINE / SUB SYSTEM ARE AUTOPOPULATED BASED ON THE APPROVED ITP CONFIGURATION ON THE SYSTEM ELIMINATING USER INPUT IN THOSE FIELDS COMPLETELY.

SIGNATURES

DIGITAL FORM SIGNATURES – ENABLES USERS TO SAVE THEIR SIGNATURES ON ZUTEC AND USE IT AS REQUIRED FOR APPROVAL PROCESS.



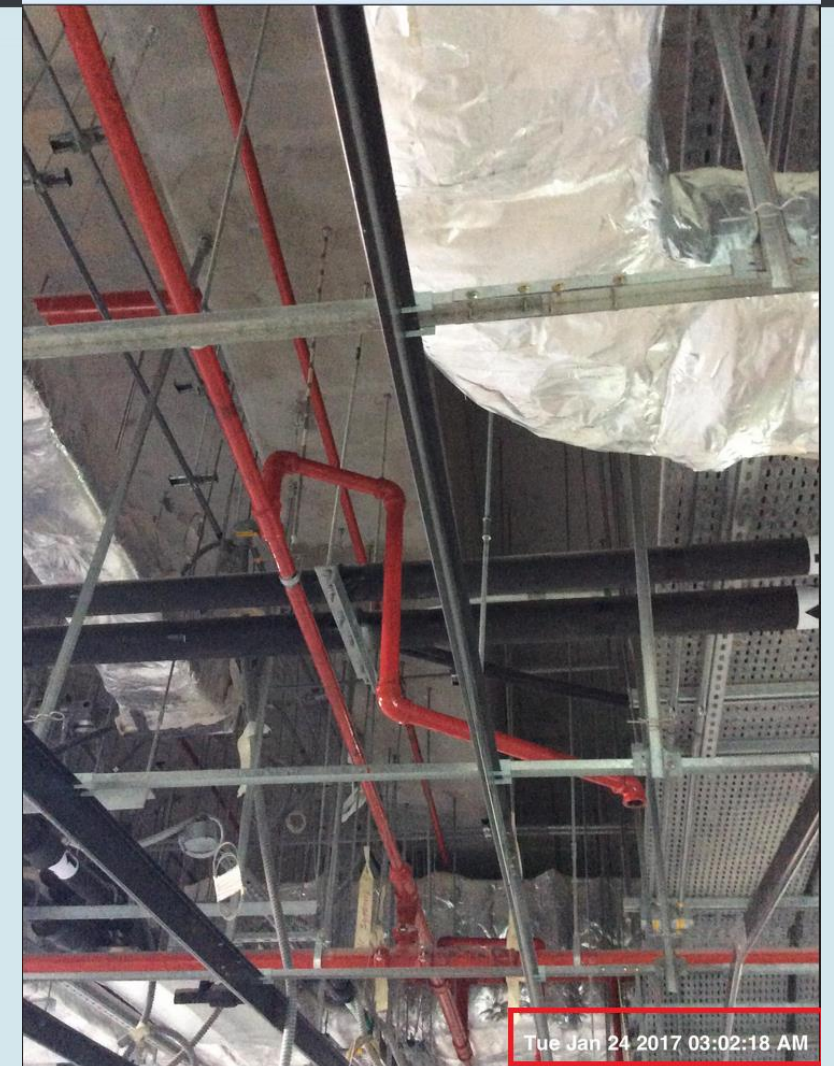
ONSITE TOOL

AS MOST CONSTRUCTION SITES ARE DEPRIVED OF PROPER INTERNET CONNECTIVITY - ZUTEC ONSITE TOOL ENABLES USERS TO EXTEND THEIR INSPECTION CAPABILITY IN AN OFFLINE MODE, ONSITE AND COMPLETELY PAPERLESS.

THE APP IS AVAILABLE ON ANDROID AND IOS DEVICES ENABLES USERS TO DOWNLOAD INSPECTIONS BEFORE THE GO ONSITE, MARKUP CHECKLISTS / DRAWINGS ON THE FLY, OFFLINE AND SYNC DEVICES WHEN THEY RETURN TO SITE OFFICES.

DATE AND TIME STAMPED PHOTOGRAPHS FROM ONSITE TOOL

PHOTOGRAPHS TAKEN USING THE ONSITE TOOL HAS DATE AND TIMESTAMPS THAT AID IN MAKING THE RECORDS LEGITIMATE AND EXUDES PROGRESS / SITE CONDITION AS ON THE INSPECTION DATE.





BIM Solutions

B1_E_L04_047

Group Filters Locations Tools Search Settings Exit

LWP Facade Installation &

B1_E_L04_047

Review Status	First Inspection
Reviewed At	2017-01-16 17:11:45.469051
Barcode	
Building	LWP01
Level	4
Elevation	East - 04
Panel Address	B1_E_L04_047
Intallation Date	2016-07-19 14:13:00
Planned Installation Date	2016-07-26 00:00:00
Panel Description	LWP01 GFRC Panel Level 4 East
Actual Mnfctrd Wk	
Actual Offsite Wk	
1 Unitised Panel Insp1	False
1 Unitised Panel Insp1 2	False
Unitised Panel Insp 1 3	True
1 Unitised Panel Insp2	False
1 Unitised Panel Insp2 2	False
Unitised Panel Insp 2 3	True
2 Stick Panel Insp 1	False

Record 1 of 2

Related Data Link Email Edit

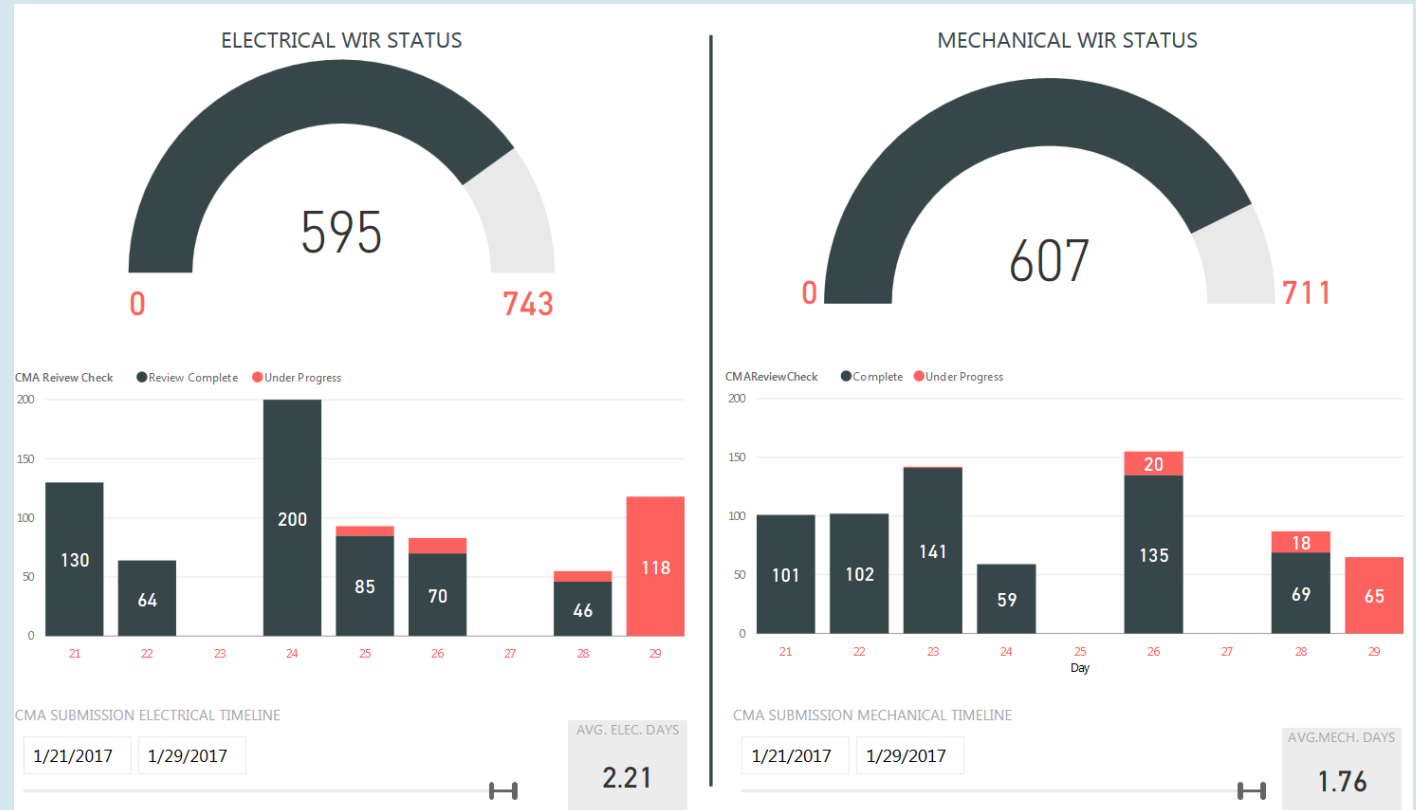
Open In Browser Close

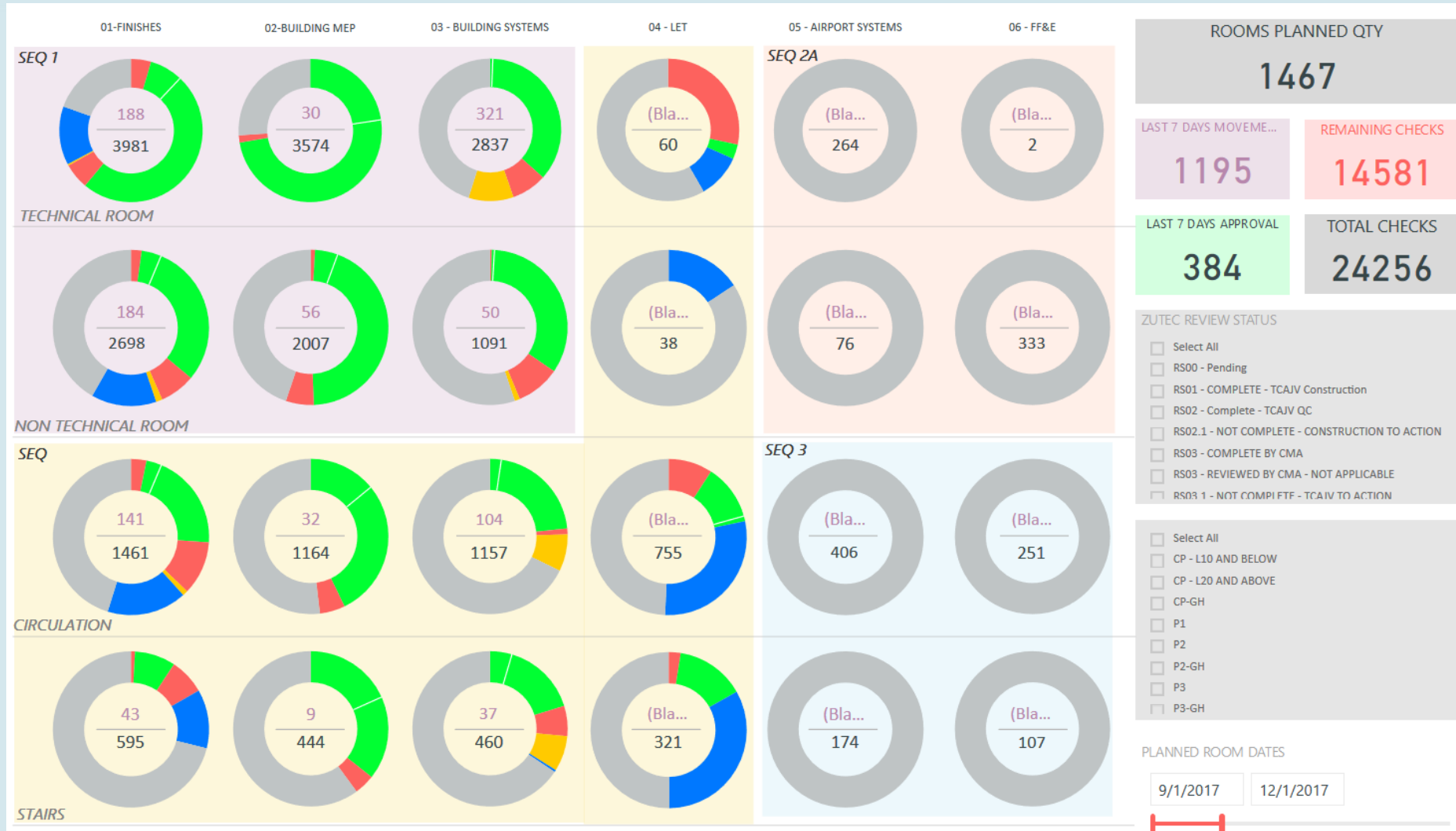


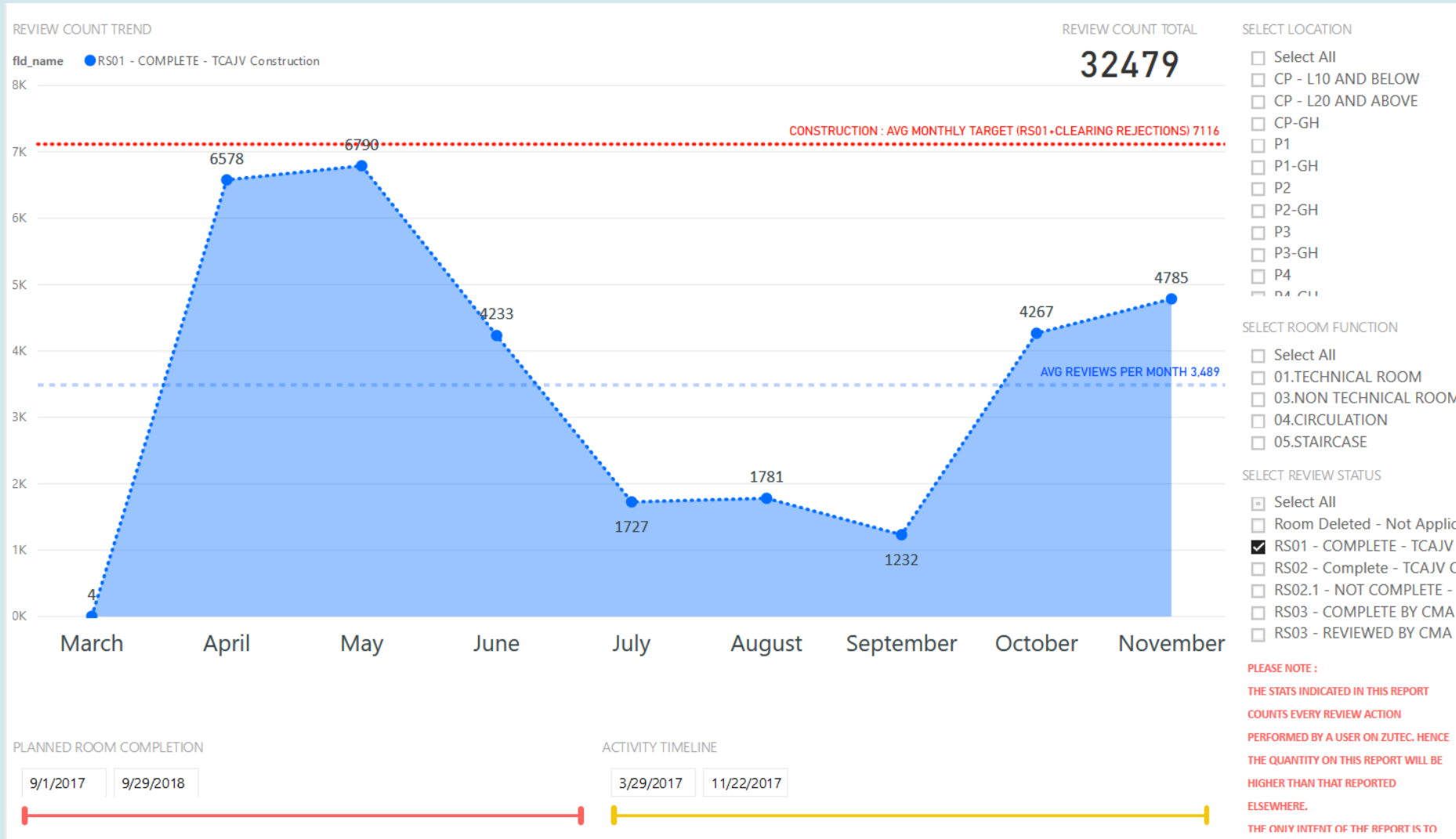
DYNAMIC LIVE REPORTS

SHOWS AVERAGE CMA WIR PROCESSING TIME AT **2.21 DAYS** FOR 595 ELECTRICAL WIR'S SUBMITTED BETWEEN 21JAN AND 29JAN17

SHOWS AVERAGE CMA WIR PROCESSING TIME AT **1.76 DAYS** FOR 607 MECHANICAL WIR'S SUBMITTED BETWEEN 21JAN AND 29JAN17









- SINGLE POINT TRUTH – **REMOVES INTERPRETATION**
- INCREASED EFFICIENCY – **PROCESSING TIME, HOURS NOT DAYS**
- DATA NOT DOCUMENTS – **SOFT DATA THAT CAN BE UTILISED**
- NO PRINTING – **SAVES TIME – MONEY – ENVIRONMENT**
- LIVE REPORTS – **REAL TIME STATUS UPDATES**
- DATA AVAILABLE ONSITE ON MOBILE DEVICES

Cita
BIM GATHERING



Thank you

Daniel Da Silva - Zutec