Optimizing Asset and Facility Management with Maximo Spatial and ArcGIS Indoor Integration

June 2025





## Speakers



Thiago Geraldi

Product Manager & Architect -Maximo Spatial tgeraldi@ibm.com

## Maximo Spatial

GIS add-on for IBM Maximo

- Enables asset and work visualization on a map
- Spatial analysis and geolocation-based decisions
- Optimizes asset and maintenance workflows
- Enhances infrastructure and field operations
- Drives data-based decision-making using location context

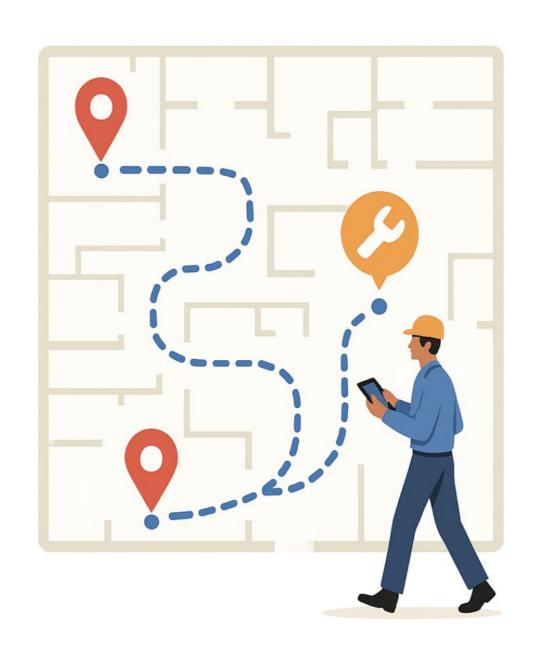


3

# The Challenge

Managing complex facilities comes with several key challenges:

- Locating assets and work areas is time-consuming
- Work execution processes are often inefficient and fragmented
- Frequent layout changes disrupt operations and desynchronize asset data





Without accurate spatial context, teams lose valuable time navigating facilities and maintaining outdated maps.



## The Solution

Seamless Integration: IBM Maximo + Esri ArcGIS Indoors Transform CAD/BIM into Actionable GIS Maps Convert static design data into dynamic, interactive indoor maps. **Real-Time Synchronization** 0 Ensure Maximo stays aligned with facility layouts through continuous data flow. Smarter Navigation & Work Execution Quickly locate assets, WOs, by floor, room, or zone—directly on the map.



## Strategic Benefits

Automated Indoor Hierarchy Setup Easily generate building, floor, and room structures - no manual mapping required. Map-Driven Asset Intelligence Enable intuitive search, selection, and action directly on floor maps. **Boost Field Efficiency** Help technicians locate assets faster and resolve issues on the first visit.



## Use Cases



## Facilities Management

Track and maintain HVAC units, restrooms, and safety assets (e.g., fire extinguishers).

Healthcare Environments

Enable rapid inspection of critical equipment, rooms, and service points.

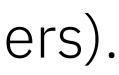
**Educational Campuses** 

Gain real-time visibility of maintenance work across classrooms and buildings.

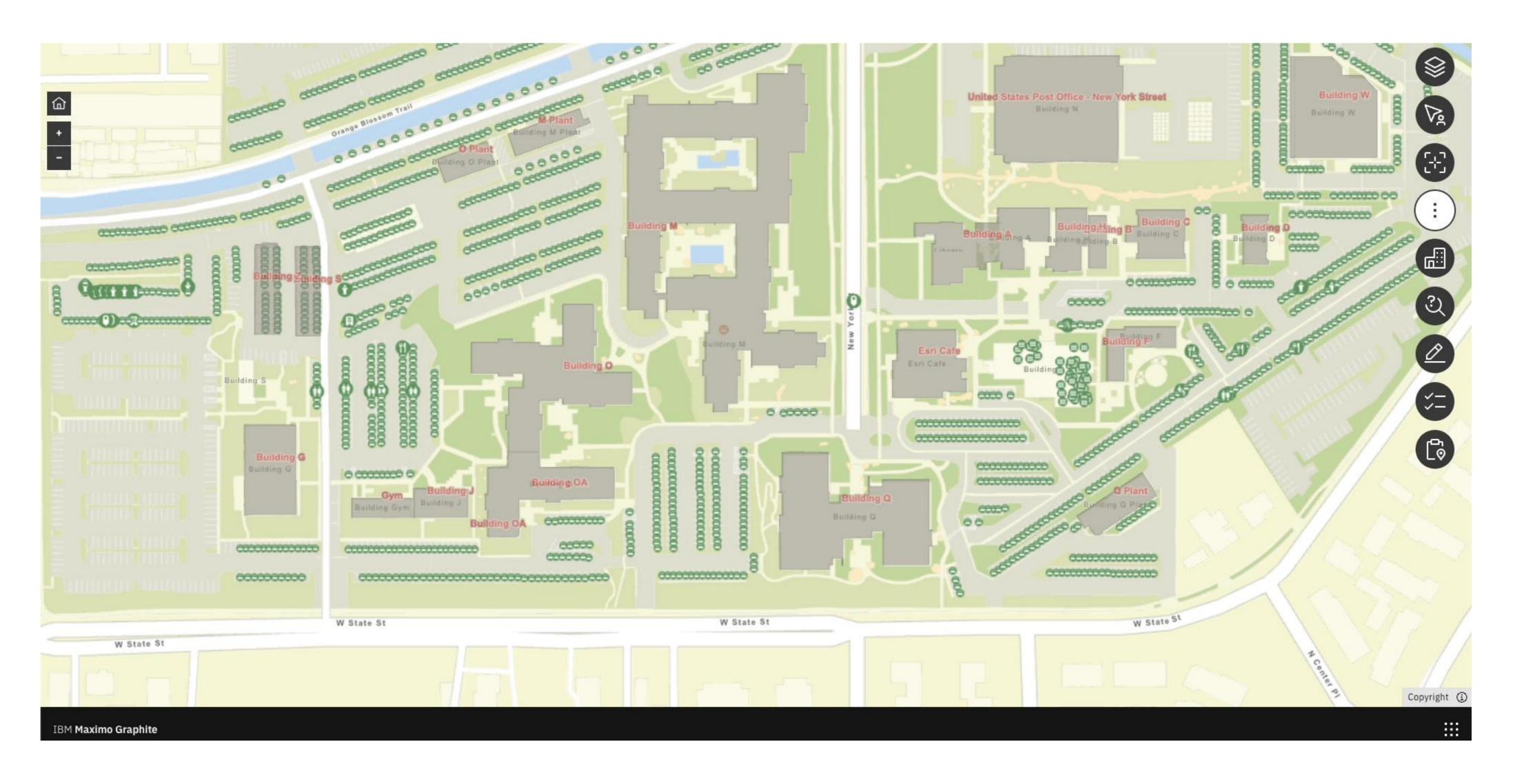
Airports & Transportation Hubs

Quickly locate shutoff valves, inspect mission-critical systems, and respond to

incidents faster.

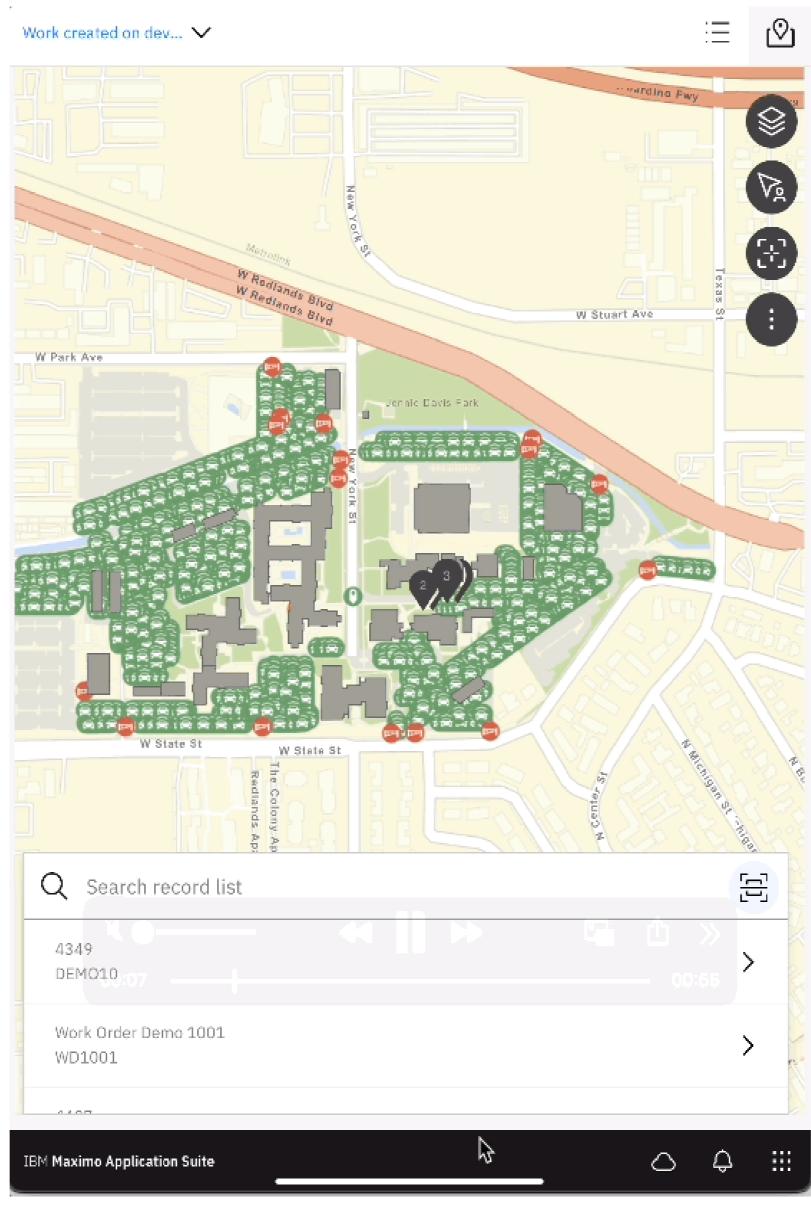


## Demo



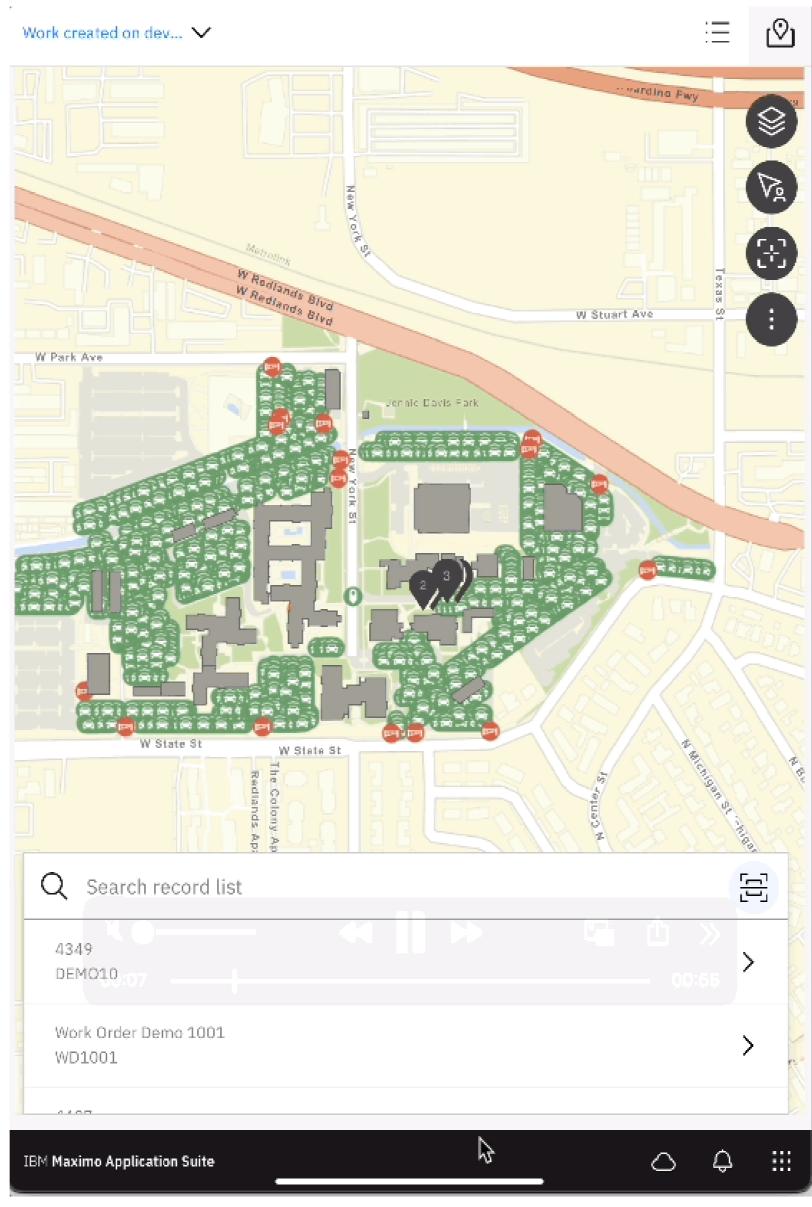
8

## Demo





## Demo





## Maximo ↔ Esri Data Sync

- Seamless data sync between Esri and Maximo
- Auto-creation of Locations and Assets from the map
- Keeps Maximo aligned with physical space changes



## MAXIMO INTEGRATION FRAMEWORK

Acts as the core engine managing data exchange between Maximo and

## Maximo → Esri

## Esri → Maximo

Status AssetNum

Assets

AssetType AssetGroup



Features

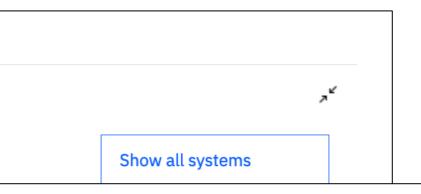


## Drilldown

-	- <del>1</del> 9	REDLANDS - Redlands Campus - OPERATING	
	:	ESRI.RED.MAIN.A - Building, A, 8, Building A, 14,311.0 SQFT, 394.98483, 3	Drilldown
	÷	ESRI.RED.MAIN.B - Building, B, 21, Building B, 2,276.0, 396.53265, 401.03	
		ESRI.RED.MAIN.BENJARONG - Building, Benjarong, 13, Benjarong Restaura	FACILITIES
	+	ESRI.RED.MAIN.C - Building, C, 14, Building C, 6,090.0, 397.23264, 401.73	
	÷	ESRI.RED.MAIN.D - Building, D, 19, Building D, 2,925.0, 397.95969, 402.45	
	÷	🖼 ESRI.RED.MAIN.E - Building, E, 11, Esri Cafe, 10,827.0, 394.74017, 401.74	
	÷	🖼 ESRI.RED.MAIN.F - Building, F, 16, Building F, 4,776.0, 397.04617, 401.546	
	ŧ	🖼 ESRI.RED.MAIN.G - Building, G, 10, Building G, 11,283.0, 389.03174, 393.8	
		🖼 ESRI.RED.MAIN.GYM - Building, Gym, 20, Gym, 2,823.0 SQFT, 390.05096, 🗧	Informatio
	÷	🖼 ESRI.RED.MAIN.H - Building, H, 12, Building H, 9,843.0, 395.99265, 403.99	
		🖼 ESRI.RED.MAIN.J - Building, J, 9, Building J, 11,478.0 SQFT, 390.72433, 39	Location
	÷	😳 ESRI.RED.MAIN.L - Building, L, 6, Building L, 37,445.0 SQFT, 396.12018, 40	
	÷	ESRI.RED.MAIN.M - Building, M, 1, Building M, 225,762.0 SQFT, 392.28061	REDLAN
		😳 ESRI.RED.MAIN.M PLANT - Building, M Plant, 17, M Plant, 4,201.0 SQFT, 39	
	ŧ	ESRI.RED.MAIN.O - Building, O, 3, Building O, 74,644.0 SQFT, 391.32129, 4	Status
		ESRI.RED.MAIN.O PLANT - Building, O Plant, 18, O Plant, 3,261.0 SQFT, 39	
	+	ESRI.RED.MAIN.OA - Building, OA, 5, Building OA, 41,899.0 SQFT, 391.401	OPERATI
		ESRI.RED.MAIN.PARK RR - Building, Park RR, 24, Jennie Davis Park Restroo	
		ESRI.RED.MAIN.POST OFFICE - Building, Post Office, 7, United States Post (	Туре
	ŧ	ESRI.RED.MAIN.Q - Building, Q, 2, Building Q, 89,875.0 SQFT, 394.30728, 4	OPERAT
		ESRI.RED.MAIN.Q PLANT - Building, Q Plant, 15, Q Plant, 5,052.0 SQFT, 396	OFERAL
	±.	ESRI.RED.MAIN.S - Building, S, 23, Building S, 1,733.0, 388.83176, 393.33	Item
	ŧ	ESRI.RED.MAIN.W - Building, W, 4, Building W, 56,960.0 SQFT, 397.69553,	Item
		ESRI.RED.MAIN.Z - Building, Z, 22, Building Z, 1,877.0 SQFT, 388.50607, 3	
	+	ESRI.RED.NEVADA.V - Building - BUILDING	
	+	ESRI.RED.NEVADA.VE - Building - BUILDING	Meter Grou
	•	ESRI.RED.TRAINING.U - Building - BUILDING	notor aroa
	+	ESRI.RED.WAREHOUSE.P - Building - BUILDING	

FACILITIES		
		Drilldown
nformation		ESRI
Location		ESRI
REDLANDS	Re	
Status		🗈 🖽 ESRI
OPERATING	Op	ESRI
Гуре		🖃 🖽 E
OPERATING		
Item		
Meter Group		
		E
Cance	əl	

OK

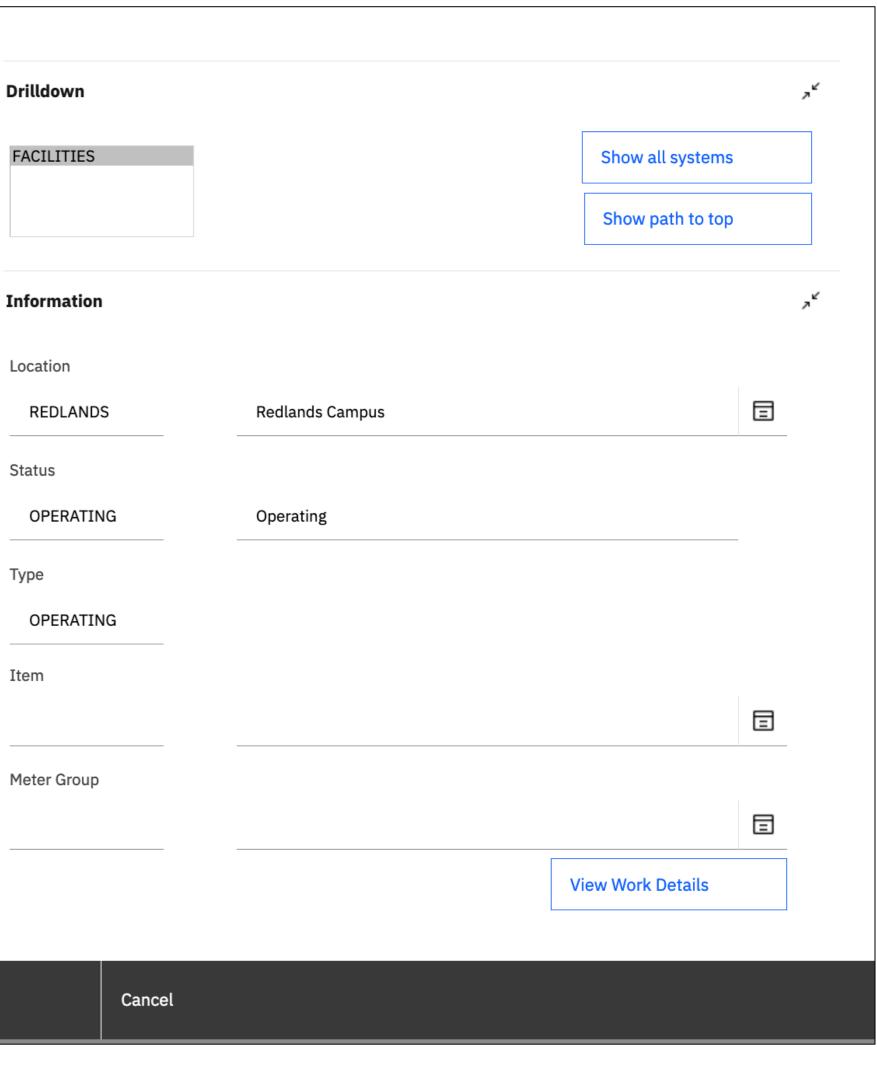


## NDS - Redlands Campus - OPERATING

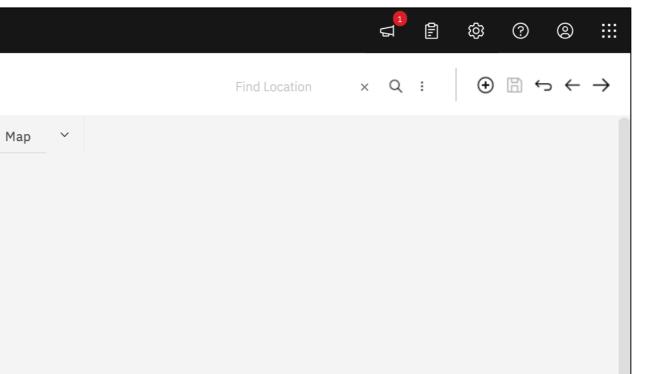
I.RED.MAIN.A - Building, A, 8, Building A, 14,311.0 SQFT, 394.98483, 3 RED.MAIN.B - Building, B, 21, Building B, 2,276.0, 396.53265, 401.03 I.RED.MAIN.BENJARONG - Building, Benjarong, 13, Benjarong Restaura RED.MAIN.C - Building, C, 14, Building C, 6,090.0, 397.23264, 401.73 .RED.MAIN.D - Building, D, 19, Building D, 2,925.0, 397.95969, 402.45 .RED.MAIN.E - Building, E, 11, Esri Cafe, 10,827.0, 394.74017, 401.74 I.RED.MAIN.F - Building, F, 16, Building F, 4,776.0, 397.04617, 401.546 I.RED.MAIN.G - Building, G, 10, Building G, 11,283.0, 389.03174, 393.5 I.RED.MAIN.GYM - Building, Gym, 20, Gym, 2,823.0 SQFT, 390.05096, 3 .RED.MAIN.H - Building, H, 12, Building H, 9,843.0, 395.99265, 403.99 SRI.RED.MAIN.H1 - Level, H1, 1, Floor 1, 4,921.0, 395.99265, 399.992 SRI.RED.MAIN.H2 - Level, H2, 2, Floor 2, 4,921.0, 399.99265, 403.992 ESRI.RED.MAIN.H2-005 - Unit, Office-Executive, H2-005, Manager O ESRI.RED.MAIN.H2-008 - Unit, Storage Room, Storage Room, Other, I ESRI.RED.MAIN.H2-010 - Unit, Office Cubicle, H2-010, Office (Occup 📲 SS2110 - Safety, Safety + Security, Fire Extinguisher, Fire Extinguis ESRI.RED.MAIN.H2-015 - Unit, Office-Executive, H2-015, Manager O ESRI.RED.MAIN.H2-105 - Unit, Office-Executive, H2-105, Manager O ESRI.RED.MAIN.H2-125 - Unit, Restroom, Unisex, Restroom, ESRI.RE Type ■ ESRI.RED.MAIN.H2-127 - Unit, Kitchen, Kitchen, Kitchen, ESRI.RED. ESRI.RED.MAIN.H2-130 - Unit, Restroom, Women's, Restroom, ESRI. ESRI.RED.MAIN.H2-140 - Unit, Office-Manager, H2-140, Manager Off ESRI.RED.MAIN.H2-145 - Unit, AC Duct Shaft, AC Duct Shaft, Other, E ESRI.RED.MAIN.H2-150 - Unit, Office-Single, H2-150, Office (Occupie) ESRI.RED.MAIN.H2-155 - Unit, Office-Manager, H2-155, Manager Off ESRI.RED.MAIN.H2-200 - Unit, Deck, Deck, Other, ESRI.RED.MAIN.H ESRI.RED.MAIN.H2-205 - Unit, Conference Room, H2 Conference Ro ESRI.RED.MAIN.H2-215 - Unit, Atrium, H2 Atrium, Other, ESRI.RED.

FACILITIES	Show all systems
	Show path to top

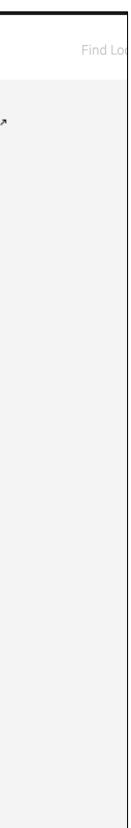
## Information



≣ IE	M Maximo Application Suite	Manage	Take a tour	ur		s <mark>ª</mark> ∄ ∲ ? (	9 <b>!!!</b>				
Q 습	ocations				Find Loc	ration x Q : 🕀 🛱 🕁	$\leftarrow \rightarrow$				
5. >	Location Assets	History Safety Meters Open Work Requirer	nents Specifications Work Zones	3D View Service Address Map	~						
J	Location		Site	Attachments							
с Ш	ESRI.RED.MAIN	L-215, Office (Vacant), ESRI.RED.MAIN.A1-215, 61.6560066444	E FAC	View attachments 🗸 🗸							
୕ୖ	*Type		Priority	<u> </u>							
\$	UNIT Q										
53 •	Rotating Item		Failure Class								
<u>ت</u> ا-م	>			Status							
Đ	Meter Group		GL Account	OPERATING							
$\sim$	>			Service Addr Locations							
<b>归</b>	Calendar		Internal Labor Account	Discretion	Assets History Safety I	Meters Open Work Requirements	Specifications Work Zones 3D	View Service Addres	s Map	~	
⊗ ≞	Q		Q	Bill to Addres							
₽ ₽	Shift		Is a Repair Facility?			calibrated together.You can identify the locatio	on as part of a calibration loop. <u>More information</u>	<u>חנ</u>			
¢	Q			Ship to Addree In Loop Calibration	n: Next Cate attoin Due Date D						
<sub>ራ</sub> ዮ 	Health										
				£3							
	Formatted Geometry			Systems	r of 1)				∑× ∑	' ⊻	۲
යි	Cometry			Eg System	Descrip	tion Netw		s system?			
Δg	Geometry			G FACILITIES	Facilities						
в ъ	Is GIS?			▲ 1-1 of 1						4	->
 ¢				$\bigotimes$							
ዮን	Feature Class			Carent of ES	RI.RED.MAIN.A1-215 in the FACILITIE	<b>S System</b> (1 - 1 of 1)		Ð	∑× √	⊻ ⊻	*
¢ -	GIS_UNITS				Parent	Description			Item		
<u>A</u>				® ~ ~ ~	ESRI.RED.MAIN >	Level, A1, 1, Floor 1, 14,311	0, 394.98483, 399.48483			Ū	
				1 - 1 of 1						4	•
				Children of E	SRI.RED.MAIN.A1-215 in the FACILIT	<b>IES System</b> (0 - 0 of 0)		÷	⊽ ⊽		ب <sup>ر</sup>
					Location	Description		Item			
				8							



ion	Assets	History	Safety	Meters	Open Work	Requirements	Specifications	Work Zones	3D View	Service Address	Мар	~
	ลแจ											

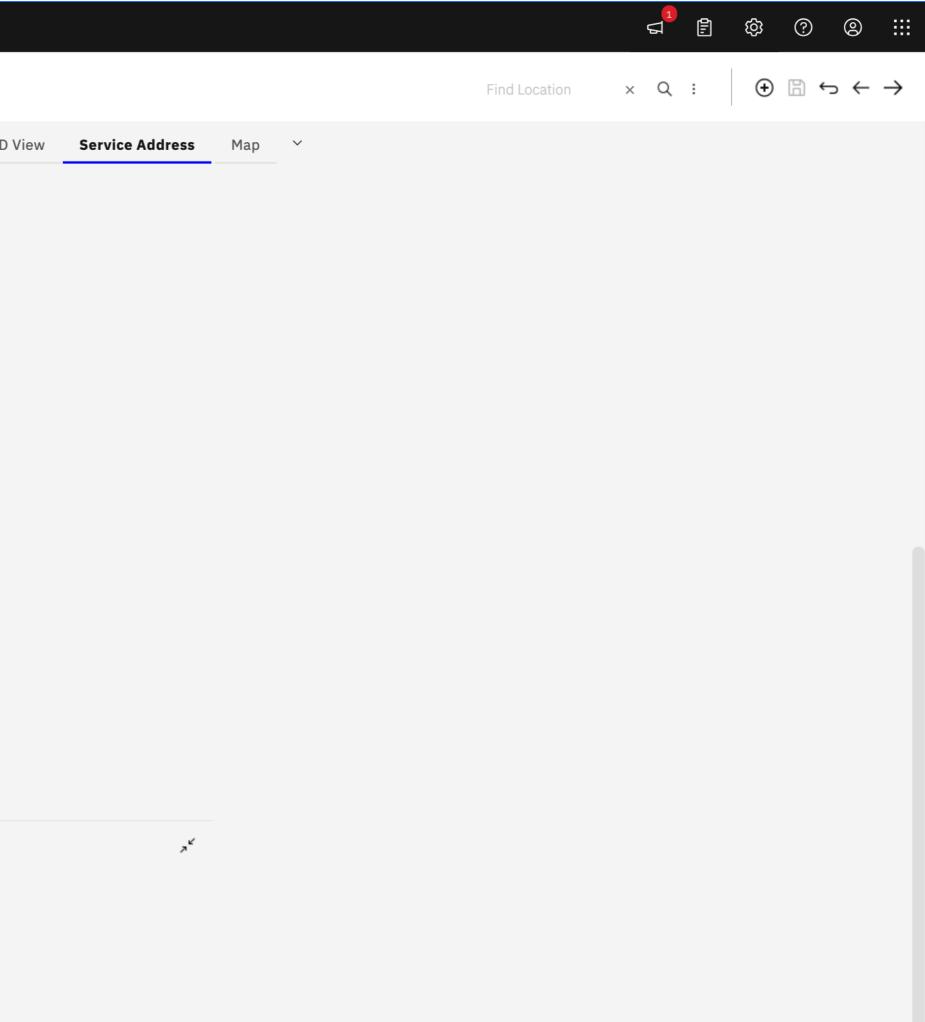


Q       Description       State       History       Safety       Meters       Open Work       Requirements       Specifications       Work         Q       Location       Assets       History       Safety       Meters       Open Work       Requirements       Specifications       Work         Q       ESRLRED.MAIN       L-215, 0ffice (Vacant), ESPLRED.MAIN.A1-215, 61, 6560066444       TAC       FAC         Q       ESRLRED.MAIN       L-215, 0ffice (Vacant), ESPLRED.MAIN.A1-215, 61, 6560066444       FAC       FAC         Q       ESRLRED.MAIN       L-215, 0ffice (Vacant), ESPLRED.MAIN.A1-215, 61, 6560066444       FAC       FAC         Q       Class Brescription       Unit       Q       Q       Class Description       FAC         Unit       Q       Type       ALN       Office-Single       V       V       V         V       TYPE       Q       Type       ALN       Office-Single       V       V         V       NAME       Q       Name       ALN       ESRLRED.MAIN.A1-215       V       DESC       Q       Cross Area       NUMERIC       Unit ID       ALN       ESRLRED.MAIN.A1-215       V       V       V       V       V       V       V       G       G	≡	IBM	Maximo Appl	ication Suite	Manage						Tak
Classification       Site         FACILITIES \ UNIT       >         Classification       Q         Unit       Q         Specifications (1-5 of 5)       Q         Specifications (1-5 of 5)       Office-Single         NAME       Q       Name       ALN         VIPE       Q       Description       Office-Single         NAME       Q       Name       ALN       Office-Single         NAME       Q       Description       ALN       Office-Single         V       DPESC       Q       Description       ALN       ESRLRED.MAIN.A1-215         Sectifications       (1-5 of 5)       Classification       Classification       Classification		Lc	ocations	6							
Location Site   ERI.RED.MAIN -215, Office (Vacant), E5', IKED.MAIN.A1-215, 61, 6560066444 FAC   Classification FACILITIES \ UNIT   FACILITIES \ UNIT >   Classifications (1 - 5 of 5)   Specifications (1 - 5 of 5)   Specifications (1 - 5 of 5)   Specifications Q   Unit Q   NAME Q   NAME Q   DESC Q   Description ALN   Office (Vacant)   V UNIT_ID   Q Unit ID   ALN   GROSSAREA Q   Gross Area NUMERIC		>	Location	Assets	History	Safety	Meters	Open Work	Requirements	Specifications	Work
ESRL.RED.MAIN I-215, Office (Vacant), ESC NED.MAIN.A1-215, 61.6560066444 Image: Classification   FACILITIES \ UNIT >   Class Description   Unit   Q			Location							Site	
Classification   FACILITIES \ UNIT   Class Description   unit   Specifications (1 - 5 of 5)   Mattribute   NAME   NAME   NAME   NAME   NAME   Description   ALN   Office-Single   V   TYPE   Q   Description   ALN   Office-Single   V   NAME   Q   Description   ALN   Office (Vacant)   V   UNIT_ID   Q   Unit ID   ALN   SSRI.RED.MAIN.A1-215   S   GROSSAREA   Q   I - 5 of 5			ESRI.RED.	MAIN	L-215, Of	fice (Vacant), ES	.RED.MAIN.	A1-215, 61.6560	0066444 🗐	FAC	
Class Description   Unit   Specifications (1-5 of 5)   NAME   NAME   NAME   Name   ALN   Atribute   Vinit   Vinit   Vinit   Vinit   Vinit   Specifications (1-5 of 5)   Vinit			Classification								
Class Description   Unit   Specifications   (1-5 of 5)   Attribute   Description   Data Type   Date Value   Attribute   Description   Data Type   Date Value   Attribute   Description   Description   Description   AllN   Attribute   Q   NAME   Q   Description   ALN   Description   Description   ALN   Description   Description   ALN   Description   Description   Description   Description   Description   Description   Description   Description   Description <tr< td=""><td>\$</td><td></td><td>FACILITIE</td><td>S \ UNIT</td><td></td><td></td><td>&gt;</td><td></td><td></td><td></td><td></td></tr<>	\$		FACILITIE	S \ UNIT			>				
Unit Q   Specifications (1-5 of 5)     Attribute     Description   Data Type   ALN     Office-Single     V   NAME   Q   DESC   Q   Description   ALN   Image: Construction of the state of the	[ <u>[</u> ]		Class Descrip	tion							
Specifications (1-5 of 5)     Specifications (1-5 of 5)     Attribute Description Data Type Date Value     NAME Q Type ALN     NAME Q Name     ALN Image: Comparison of the compariso			Unit				Q				
Specifications       (1-5 of 5)         Attribute       Description       Data Type       Date Value       Alphanumeric Value         Image: Construction of the structure       TYPE       Q       Type       ALN       Image: Constructure       Office-Single         Image: Constructure       NAME       Q       Name       ALN       Image: Constructure       Office (Vacant)         Image: Constructure       UNIT_ID       Q       Unit ID       ALN       Image: Constructure       Office (Vacant)         Image: Constructure       GROSSAREA       Q       Gross Area       NUMERIC       Image: Constructure       Image: Constructure       Image: Constructure         Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure         Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Constructure       Image: Construe											
Image: symbol			Specifica	tions (1 - 5 of 5	5)						
Image: Name ALN   Image: Name Image: Name   Image: Name ALN   Image: Name Image: Name   Image: Name Image: Name   Image: Name ALN   Image: Name Image: Name   Image: Name Ima				Attribute		Description	Data Type	Date Value		Alphanumeric Value	
NAME Q Name ALN A1-215   DESC Q Description ALN Description Office (Vacant)   UNIT_ID Q Unit ID ALN ESRI.RED.MAIN.A1-215   GROSSAREA Q Gross Area NUMERIC Image: Comparison of the second seco	$\bigotimes$		~	TYPE	Q	Туре	ALN		Ë	Office-Single	
Image: Section of the sec			~	NAME	Q	Name	ALN		Ë	A1-215	
Image: Series of the series of th			~	DESC	Q	Description	ALN		Ë	Office (Vacant)	
Image: Construction     Image: Construction       Imag			~	UNIT_ID	Q	Unit ID	ALN		Ë	ESRI.RED.MAIN.A1-21	.5
1-5 of 5 C	<b>**</b>		~	GROSSAREA	Q	Gross Area	NUMERIC		Ē		
			1 - 5 of 5								
$\Delta_{ m p}$											
	∠g										

ake a tour								<b>1</b>	Ē	හි	?
						Find Location	×	Q	:	$\oplus$	₿ ←
k Zones	3D View	Service Addre	ess Ma	ap 🗸							
							÷		7	$\overline{\mathbf{A}}$	× ۲
		Numeric Value	I	Unit of Measure		Table Value					
	Q		Q		0						
			$\sim$		Q					>	Ū
	Q		Q		Q					>	Ū Ū
	Q Q										
			Q		Q					>	Ū
	Q	61.6560066444	Q Q Q		Q Q					>	Ū Ū

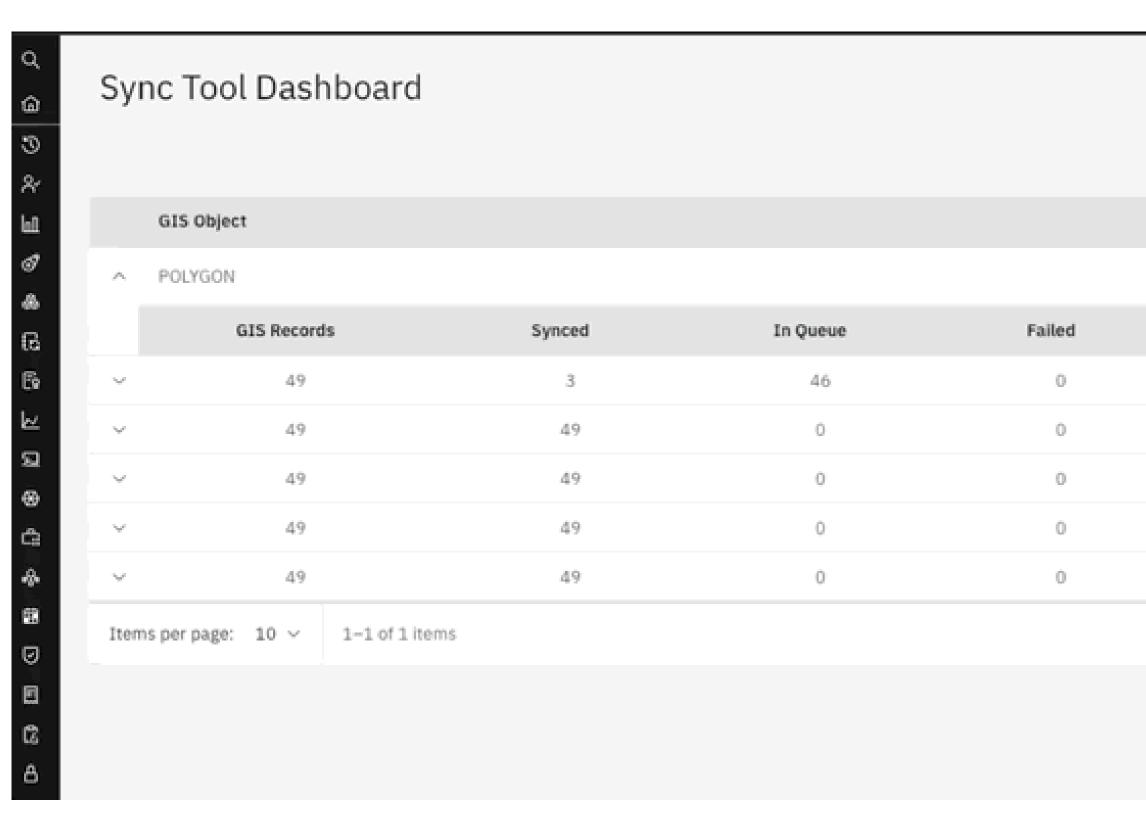


≡	IBM <b>M</b>	1aximo Applicat	tion Suite	Manage						Та	ake a tour	
Q G	Lo	cations										
5	>	Location	Assets	History	Safety	Meters	Open Work	Requiremer	nts Specificat	tions Work	Zones	30
Q		Country										
°Ć́		County										
Ы												
ୖ		State/Province										
&} ₽			Q									
[ <u>[</u> ]		Zip/Postal Code										
<u> </u>												
Ē		Country										
~		country	Q									
۶			Q									
$\bigotimes$		GEO Code										
¢.												
ę,		Time Zone										
තු			Q									
ጵ												
		Facility ID		Floor	ID							
$\bigtriangledown$		ESRI.RED.MAI	N.A	ES	RI.RED.MAIN.	A1						
د ۲۵		Location Hierar	chy									
∠g		Address From L	ocation									
ط ب												
₽ ₽												
יب ئى		Ancestor's Addr	ess									
יי לא												
с С												

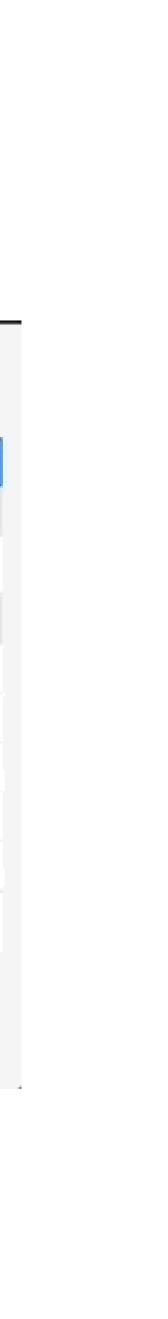




# Synchronization - Operation Report



		Refresh table
Status		Refresh table
Disabled		
Average processing time (s)	Cron started	Cron ended
0.8934	8/1/23 3:23:30 PM	8/1/23 3:23:32 PM
1.007	8/1/23 3:20:00 PM	8/1/23 3:20:01 PM
0.9948	8/1/23 3:19:32 PM	8/1/23 3:19:34 PM
0.9953	8/1/23 11:32:21 am	8/1/23 11:32:23 am
0.9939	8/1/23 11:31:52 am	8/1/23 11:31:53 am
		1 ∨ 1 of 1 pages ∢ →
0.9953	8/1/23 11:32:21 am	8/1/23 11:32:23 am 8/1/23 11:31:53 am



## Conclusion

Transform Spatial Data into Strategic Action Convert indoor mapping into real-time, data-driven decisions. Accelerate Service with Confidence Build the Future of Connected Facilities

- Deliver faster execution, greater visibility, and smarter maintenance planning.
- Create a dynamic, intelligent indoor asset ecosystem—one map at a time.

18

# Thank you

