

# Digital OneWater Powered by AI

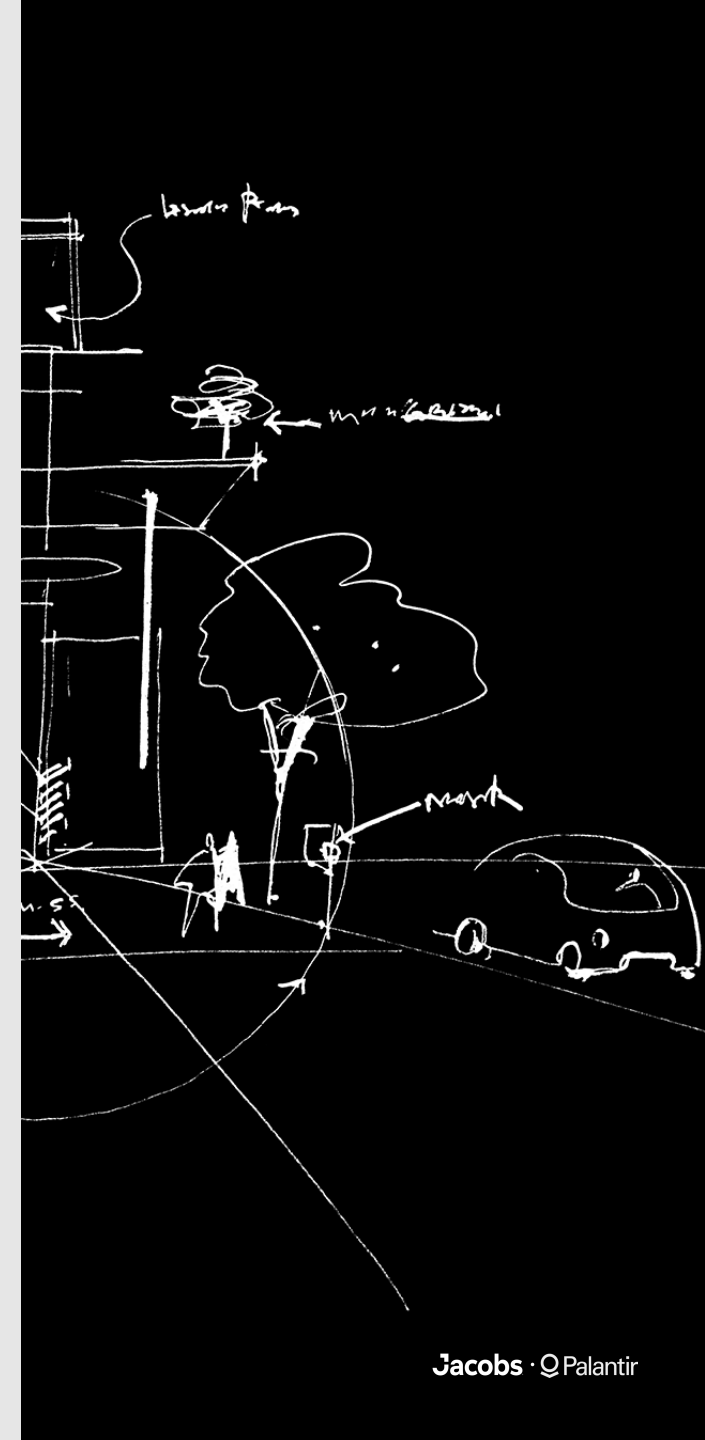
September 21, 2023

**Jacobs** ·  **Palantir**

# Agenda

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- Introductions
- Overview of Digital OneWater
- AI Primer
- Demo #1: Smart sewer networks with AquaDNA
- Demo #2: Assisted maintenance with Intelligent O&M
- Panel Discussion / Q&A



# Our speakers



**Susan Moisio**  
Global Water Market  
Director



**Gregg Kennedy**  
Vice President -  
Water Solutions



**Nana Abankwa**  
Deployment  
Strategist – UK  
Commercial Clients



**Jack Dobson**  
Deployment  
Strategist – AI/ML  
Solutions



**John Rickermann**  
Managing Director,  
Technical Services  
Group



**Gabby Rojas**  
Deployment  
Strategist – Palantir  
Jacobs Partnership

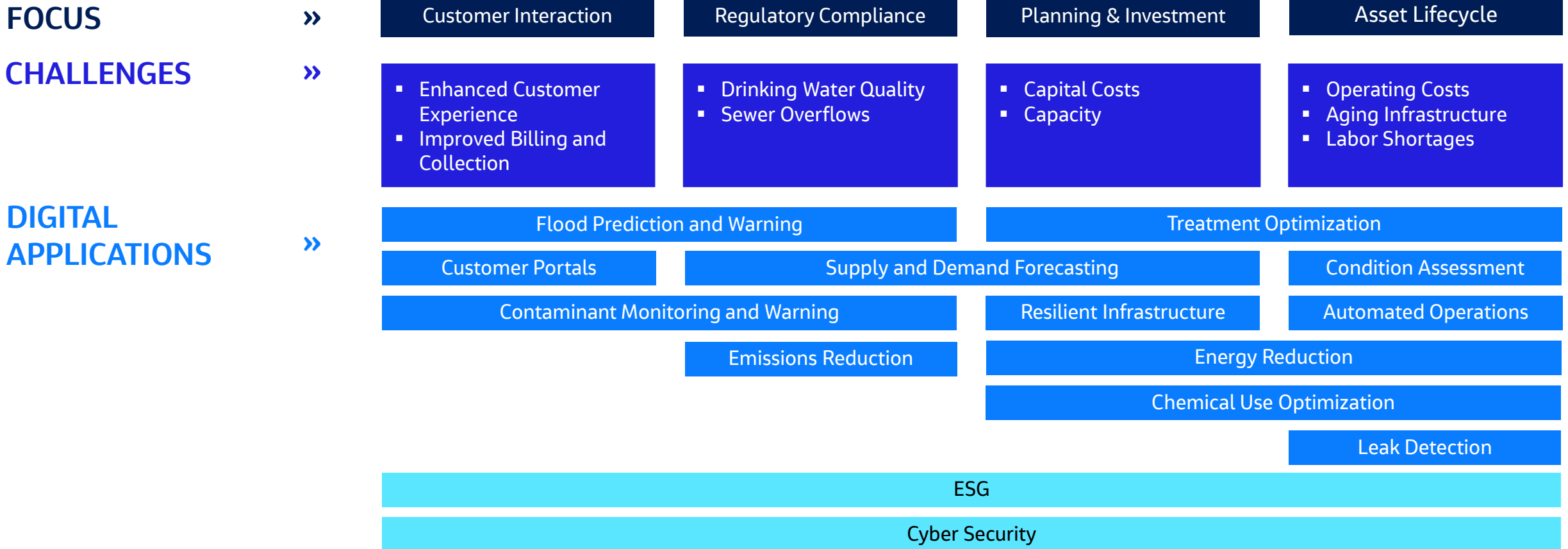


**Jennifer Baldwin**  
Digital OneWater  
Strategic Growth  
Lead

**Digital OneWater**

# Digital OneWater Approach

» Digital OneWater is an integrated ecosystem of data-enabled water solutions. We take a holistic view of our clients' challenges and apply innovative domain driven digital tools to transform and optimize assets and operations.



# Digital One Water Ecosystem



Aqua DNA



Replica



Dragonfly



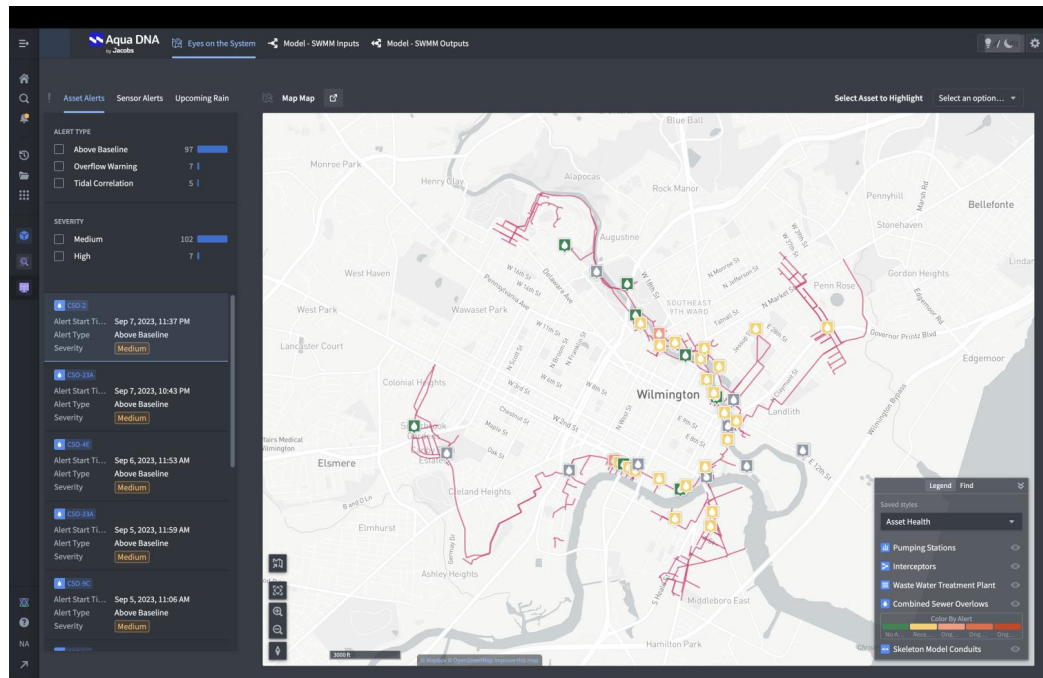
Flood Modeller



Argon



Intelligent O&M



**Jacobs Technician Portal**

**Issued Work Orders**

Title	Asset	Type	Status	Priority	Staff Assignment	Target Hours	Target Date
Corrective Maintenance Non Emergency on Sludge Processing Third Floor Belt	Sludge Processing Third Floor Belt	Corrective Maintenance Non Emergency	Issued	Low	Duhaime, Matt ***	500	Tue, Oct 24, 2023, 8:00:00 PM
Service Request on Primary Clarifier #2	Primary Clarifier #2	Service Request	Issued	High	Turchetta, Anthony ***	300	Tue, Jul 30, 2024, 8:00:00 PM
Chlorine Delivery or Tank Change (ONE WO FOR THE YEAR) on Chlorine Bank 1	Chlorine Bank 1	Preventive Maintenance	Issued	Normal	Sampson, Eric ***	312	Thu, Dec 28, 2023, 7:00:00 PM
Chlorine Delivery or Tank Change (ONE WO FOR THE YEAR) on Chlorine Bank 2	Chlorine Bank 2	Preventive Maintenance	Issued	Normal	Sampson, Eric ***	312	Thu, Dec 28, 2023, 7:00:00 PM
Corrective Maintenance Non Emergency on Laboratory	Laboratory	Corrective Maintenance Non Emergency	Issued	Low	Crosbie, Corey ***	300	Thu, Dec 28, 2023, 7:00:00 PM
Corrective Maintenance Non Emergency on NO Aeration Basin - West	NO Aeration Basin - West	Corrective Maintenance Non Emergency	Issued	Normal	Tcpm Operator ***	220	Fri, Oct 27, 2023, 8:00:00 PM
Project on NO Effluent Pump Station MCC Building 2-4-6	NO Effluent Pump Station MCC Building 2-4-6	Project	Issued	Normal	Miller, Mayo	200	Fri, Mar 3, 2023, 7:00:00 PM
Corrective Maintenance Non Emergency on Site	Site	Corrective Maintenance Non Emergency	Issued	Low	Idzior, Mike	200	Tue, Apr 4, 2023, 8:00:00 PM
Corrective Maintenance Non Emergency on Aeration Tank 4	Aeration Tank 4	Corrective Maintenance Non Emergency	Issued	High	Thomas, Warren ***	200	Thu, Nov 2, 2023, 8:00:00 PM
Corrective Maintenance Non Emergency on Traveling Water Screen	Traveling Water Screen	Corrective Maintenance Non Emergency	Issued	Normal	Piccirillo, Nathan	200	Tue, Apr 11, 2023, 8:00:00 PM
Project on NO Filter Building	NO Filter Building	Project	Issued	Normal	Miller, Mayo	200	Fri, Mar 3, 2023, 7:00:00 PM
Project on Aeration	Aeration	Project	Issued	Normal	Miller, Mayo	200	Fri, Mar 3, 2023, 7:00:00 PM
Project on NO Influent Pump Station Building 01	NO Influent Pump Station Building 01	Project	Issued	Normal	Miller, Mayo	200	Fri, Mar 3, 2023, 7:00:00 PM
Corrective Maintenance Emergency on NO Plant Main Generator 02 Engine	NO Plant Main Generator 02 Engine	Corrective Maintenance Emergency	Issued	Normal	Alleman, Joshua ***	180	Thu, Apr 24, 2023, 8:00:00 PM
Administrative on Raw Water	Raw Water	Administrative	Issued	Low	Bourgeois, Tom ***	180	Thu, Sep 28, 2023, 8:00:00 PM
Annual Lagoon No. 1 Cleaning on Lagoon	Lagoon	Preventive Maintenance	Issued	4	Wirkkala, Matt ***	160	Thu, Oct 5, 2023, 8:00:00 PM
Project on NO Effluent Pumps and Ponds Area	NO Effluent Pumps and Ponds Area	Project	Issued	Normal	Maglothin, Ezra ***	157	Thu, Sep 28, 2023, 8:00:00 PM
Corrective Maintenance Non Emergency on First Aid Kit	First Aid Kit	Corrective Maintenance Non Emergency	Issued	Normal	No value	123	Wed, Mar 29, 2023, 8:00:00 PM
Project on BMS New Dryer Building	BMS New Dryer Building	Project	Issued	Normal	Miller, Mayo ***	120	Thu, Apr 27, 2023, 8:00:00 PM
Corrective Maintenance Non Emergency on Blgd #100, Administration Building	Blgd #100, Administration Building	Corrective Maintenance Non Emergency	Issued	Normal	Soper, Duane ***	120	Fri, Oct 27, 2023, 8:00:00 PM
Project on BMS EcoSorb West Building	BMS EcoSorb West Building	Project	Issued	Normal	Donnell, Robert	120	Thu, Sep 28, 2023, 8:00:00 PM

# Palantir [+] Jacobs → Joint Value

## Jacobs

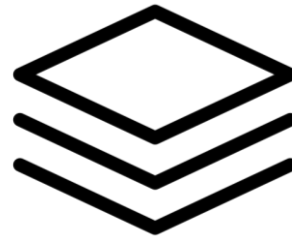
The experts in **water** operations

- 9000+ subject matter experts dedicated to the water industry globally – across water cycle and project cycle ranging from expertise in water/ wastewater – treatment, distribution to desalination and recycle
- Global footprint – across Asia, North America, Middle East and UK
- One of the few consultants running operations at 300+ sites

## The Palantir – Jacobs Partnership



### AI Powered Digital OneWater Solutions



## Palantir

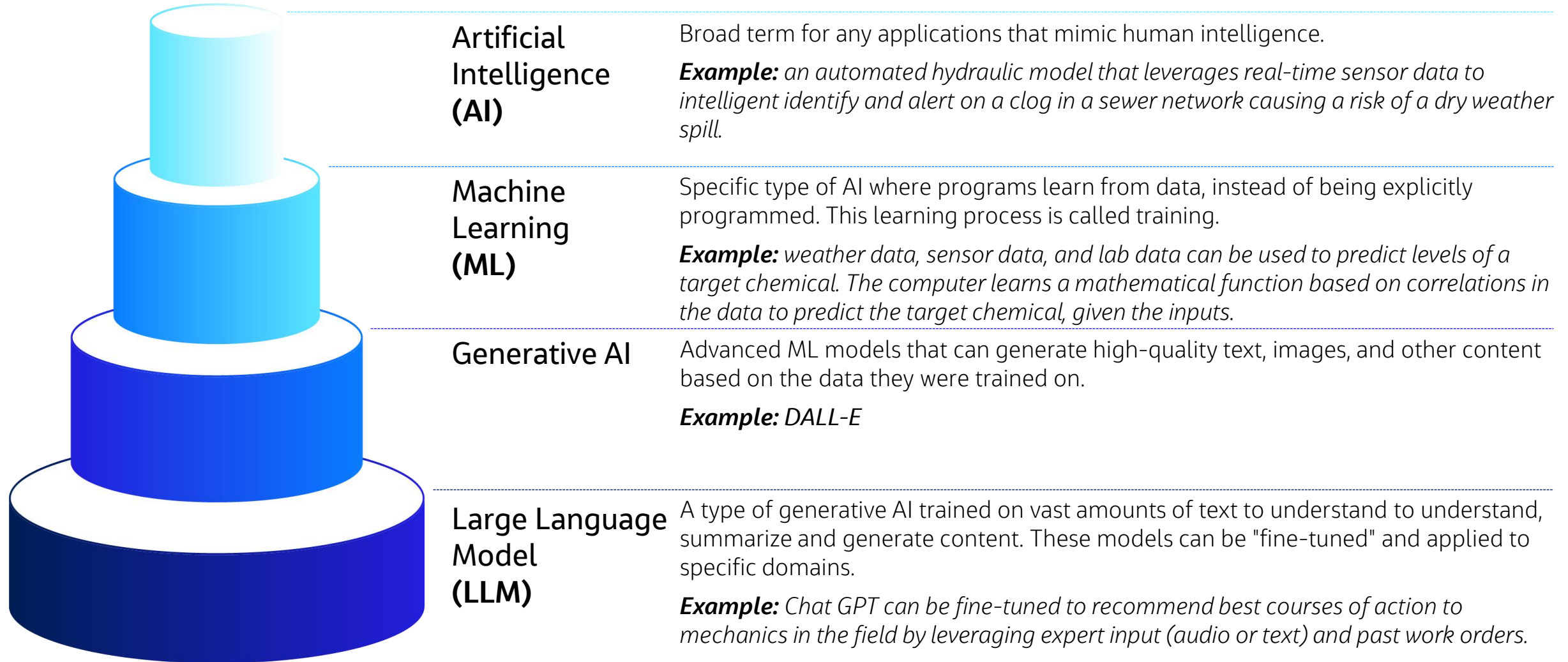
The experts in **operational AI**

- 4 software platforms, including AIP (Artificial Intelligence Platform) that allows enterprises to activate AI securely on their private network
- Multi-layered security and data privacy, IL6 accredited
- Designed to handle billions of datapoints per second and make sense of it in real time

# AI Primer



# AI Primer



# AI Applied: Practical Tips for Finding Valuable Use Cases

**Look for highly repetitive, mundane tasks.**

**If you gave a process engineer access to data and 3 weeks to analyze your operations, what could they optimize?**

**Identify dynamic conditions (seasonality, fluctuations in flow) but static operating strategies.**

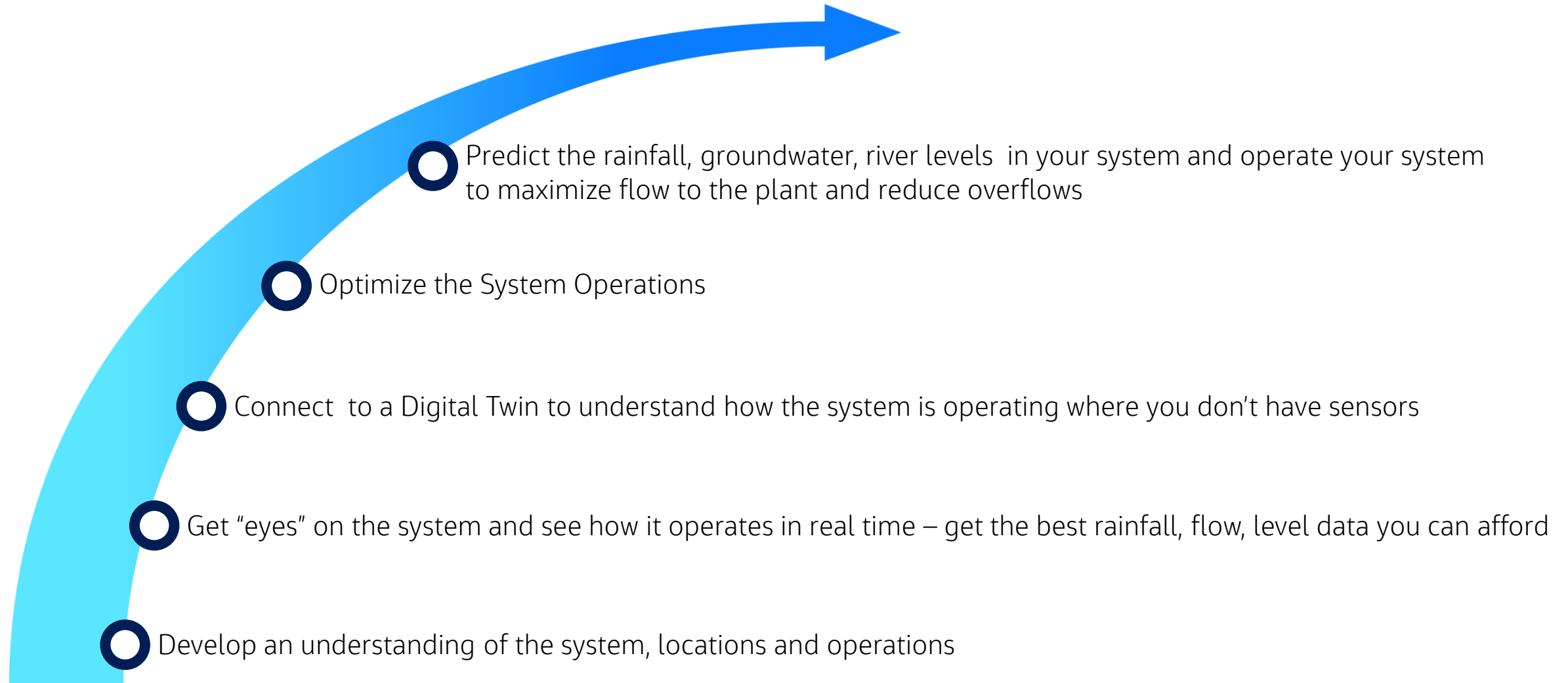
**What if you had 100 veteran experts per site?  
Where would they give advice to junior staff?**

# AI Applied: Common Mistakes

- 1 AI is not just chat.
- 2 Meet the user where they're at.
- 3 Don't wait to test with operations staff.
- 4 Implement clear guardrails where the AI should seek human intervention.
- 5 Strong monitoring and alerting for live data, especially sensors.
- 6 Think about security from the get-go.

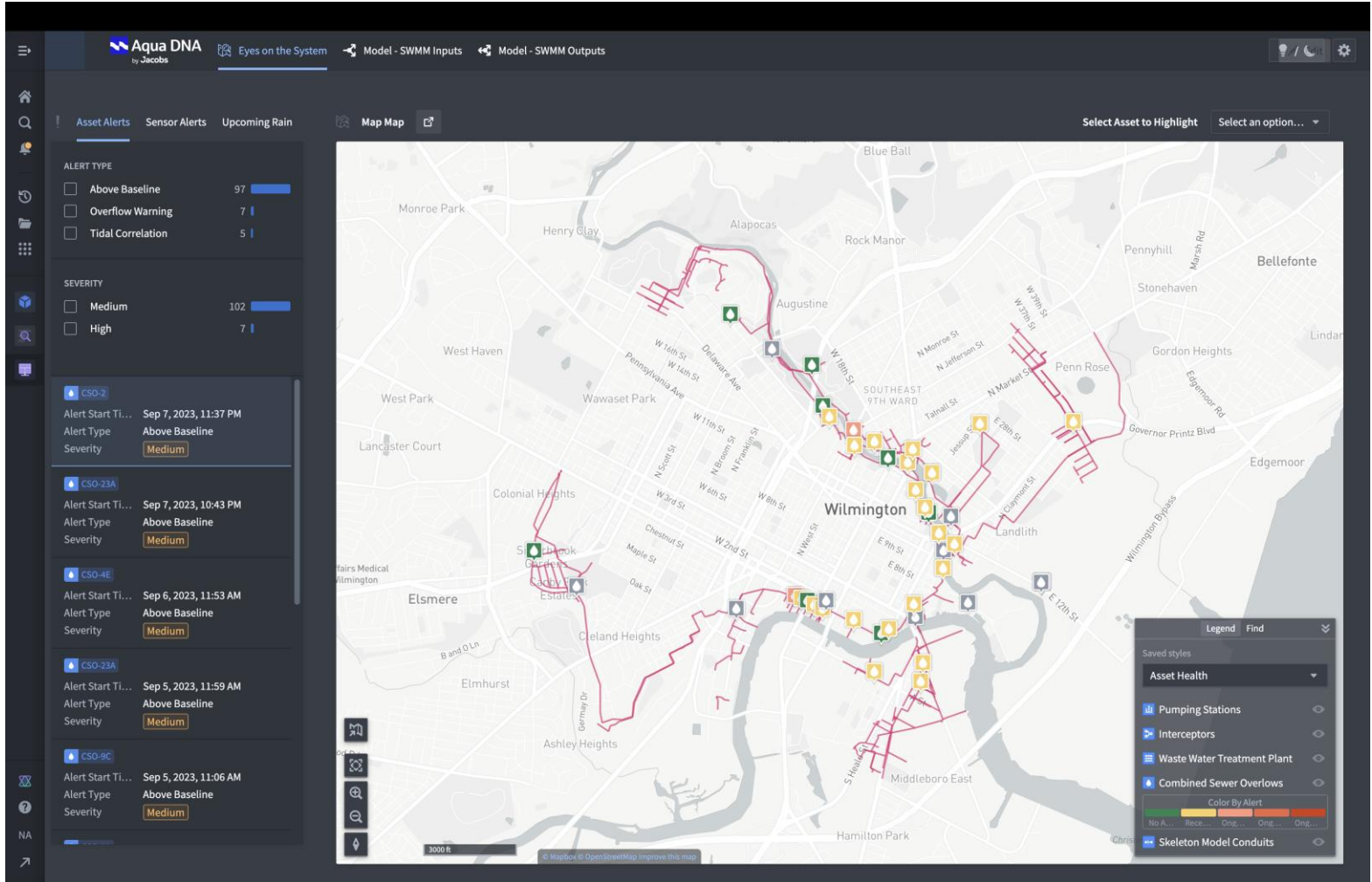
**Start the Journey at any  
Level of Digital Maturity**

# Example pathway to an integrated ecosystem of data-enabled solutions



# Demo: Smart Sewer Networks with AquaDNA

▶ Watch the Demo



# Demo: Assisted maintenance with Intelligent O&M

▶ Watch the Demo

**Jacobs Technician Portal** | Wed, Sep 20, 2023

**Issued Work Orders** | Search and Filter | Create Work Order Request

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Corrective Maintenance Non Emergency on Bldg #050, Membrane Filtration	Bldg #050, Membrane Filtration ...	Corrective Maintenance Non Emergency	Issued	Normal	Tcpm Operator ***	220	Fri, Oct 27, 2023, 8:00:00 PM
Corrective Maintenance Non Emergency on NO Aeration Basin - West	NO Aeration Basin - West	Corrective Maintenance Non Emergency	Issued	Normal	Dollarhide, Rick ***	202	Fri, Mar 3, 2023, 7:00:00 PM
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Project on BMS Griffin Dryer Building	BMS Griffin Dryer Building	Project	Issued	Normal	Robinson, Anthony	100	Thu, Sep 28, 2023, 8:00:00 PM

**Search and Filter**

SEARCH: [ ]

SHOP NAME: Select...

ASSET: Search...

STATUS: Select...

TARGET DATE: Time range | Relative to today

After: Start time GMT+1

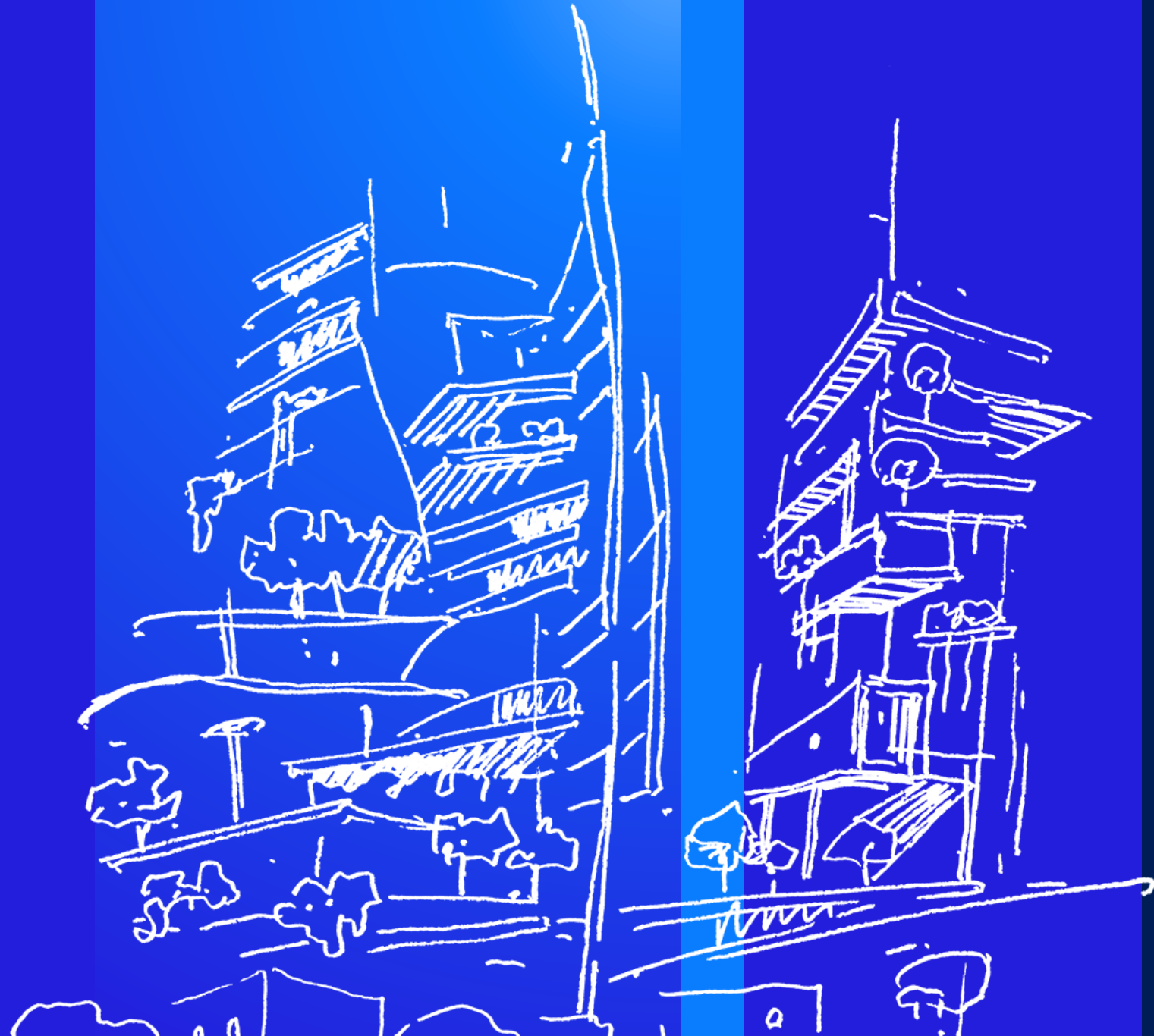
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# Q&A

**Jacobs**

Challenging today.  
Reinventing tomorrow.





Thank you