



# HACK-AI-THON

**PACKET WEAVE | GIGAPULSE**  
**11.19.2025**

FRONTIER 



*Feel the pulse of Gigabit America*



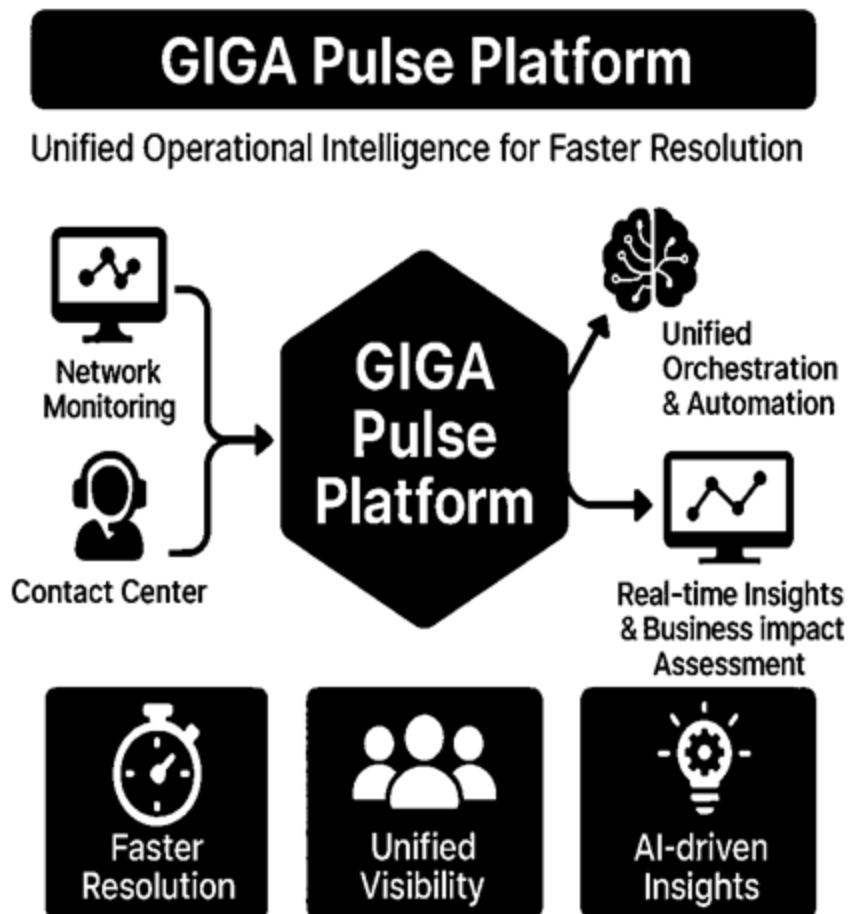
## **Team Packet Weave:**

- Shannon Nowell – Director, Strategy
- Shazaly Musa – Tech, IT Support I
- Robert Sigmundik – Engineer, Network IV
- Stacey Jones – Product Sr. Manager

# The GigaPulse Solution



## Coordinated AI Agent Orchestration + Interactive Knowledge Graph

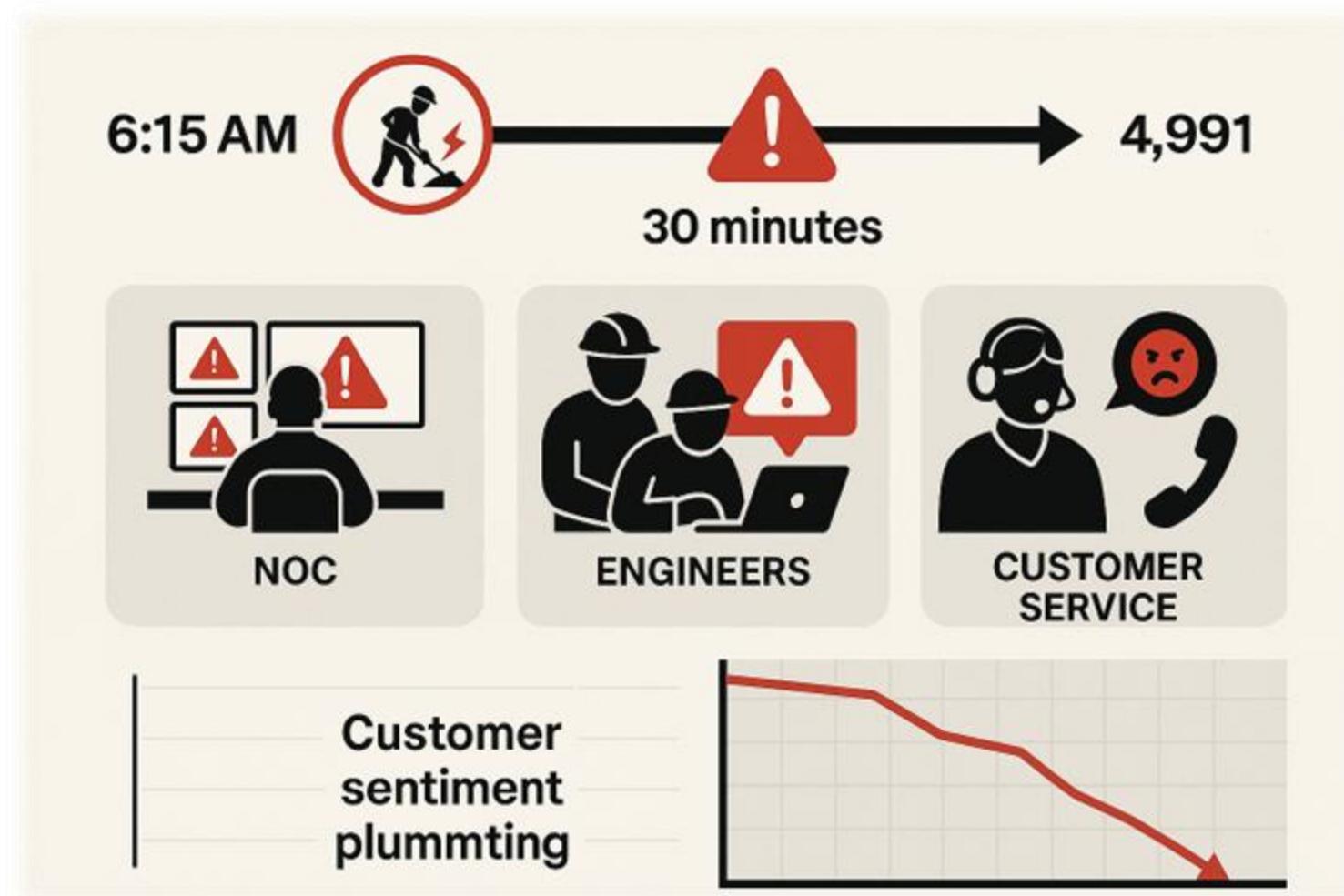


**GigaPulse** unifies network operations, AI orchestration, and customer journey into one interactive, actionable visualization.

# The Pain - When Networks Break



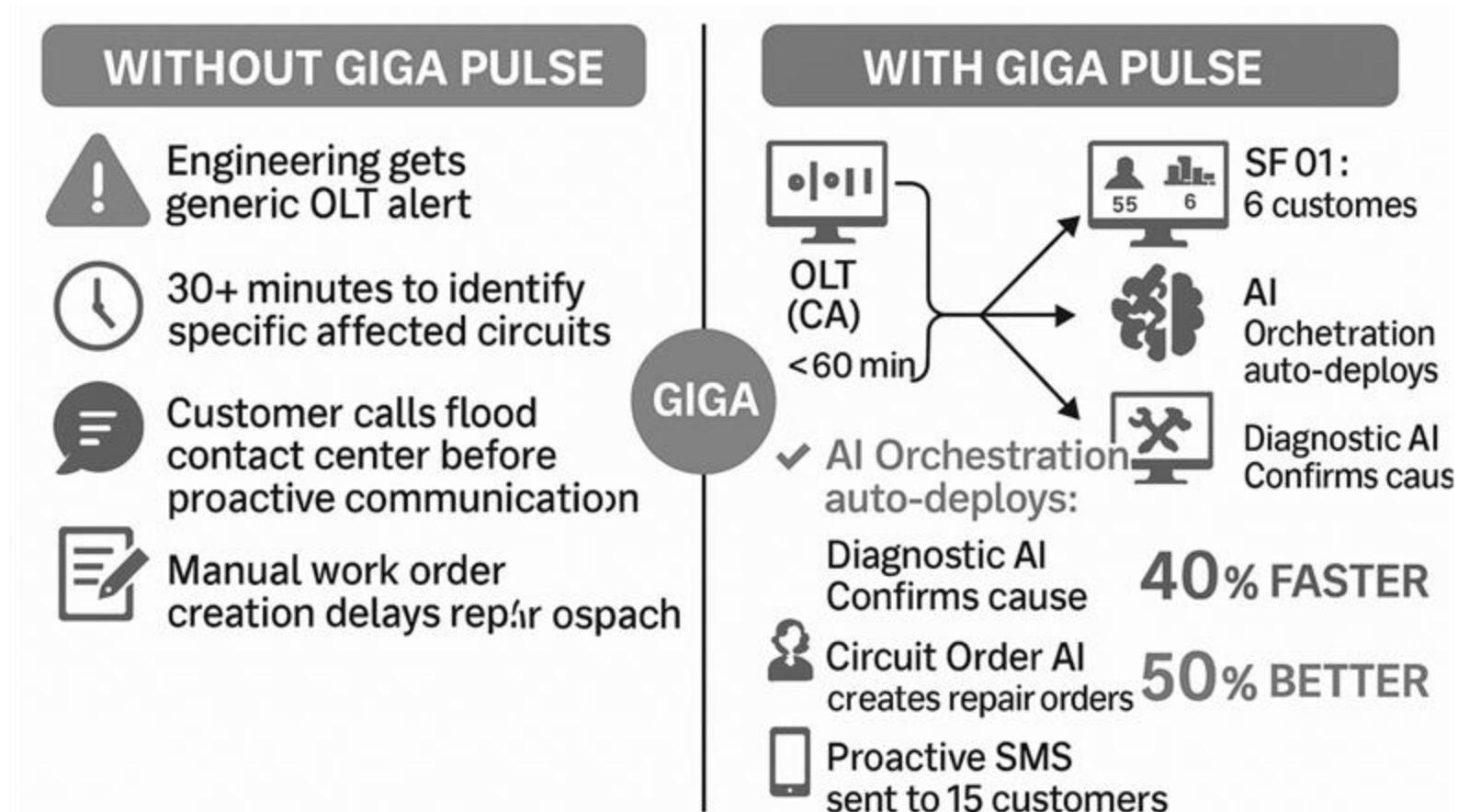
**Scenario:** November 17th, 2024. 6:15 AM. A CalTrans construction crew cuts our main fiber trunk in San Francisco



# The GigaPulse Solution



**Problem Statement:** Frontier's Network Designs and Operational Network Systems (alarm data) exist siloed across multiple systems and needs to be more centrally accessible and streamlined (AI analyzed/prioritized).



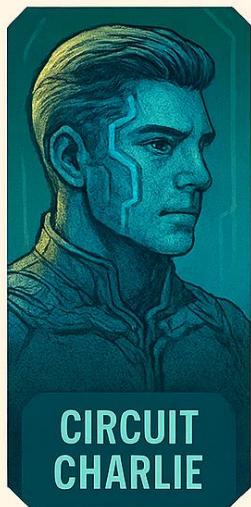
# Meet the AI Agent Chain of Heroes



## The five AI agents that transform crisis response

### Meet the AI Agent Chain of Heroes

The five AI agents that transform crisis response



**CIRCUIT  
CHARLIE**



Trages incidents and consolidates tickets automatic



**PRIORITY  
PARKER**



**SENTIMENT  
SOPHIE**



**DEEP END  
LOUIE**

Analyzes infrastructure 88% accuracy in root cause detection

Coordinates field crews and creates work orders via M3 integration

Manages customer communications and churn prevention

Mentors agents and up coming network engineers

- **Circuit Charlie** analyzes infrastructure – 89% accuracy in root cause detection"
- **Priority Parker** triages incidents and consolidates tickets automatically"
- **Dispatch Dana** coordinates field crews and creates work orders via M3 integration"
- **Sentiment Sophie** manages customer communications and churn prevention"
- **Deep End Louie** mentors agents and up and coming network engineers

# Introducing GigaPulse (Live Demo)



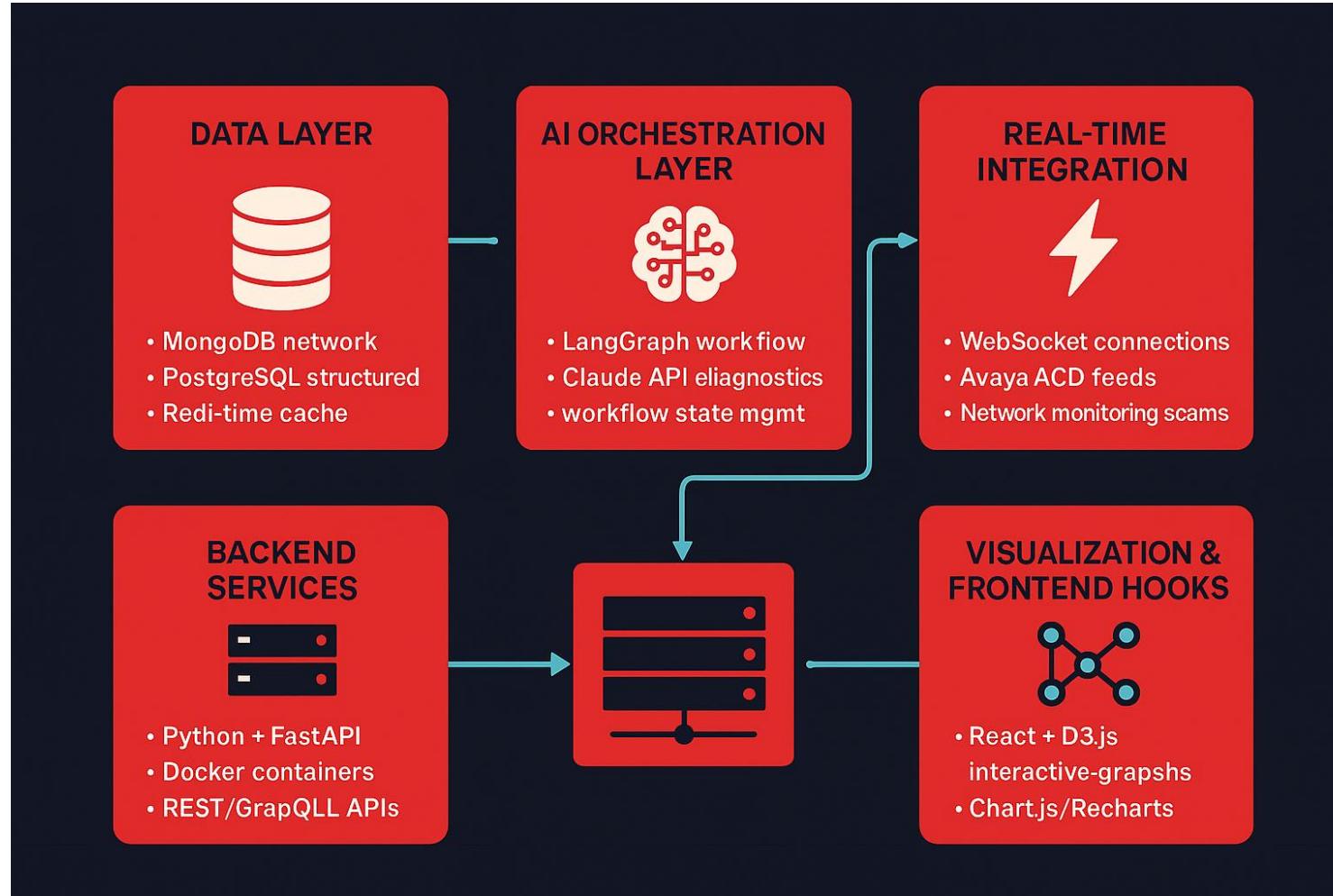
**Our living knowledge graph – infrastructure, customers, AI agents, all connected in real-time!"**

A screenshot of the GigaPulse Network Operations Intelligence interface. The interface features a dark background with a central circular logo. The logo contains a blue circle with a white dot in the center, surrounded by concentric rings. Above the logo, the text "AI-ORCHESTRATED" is written in small, light-colored capital letters. Below the logo, the word "GigaPulse" is displayed in a large, bold, pink font. Underneath "GigaPulse", the text "Network Operations Intelligence" is written in a smaller, light-colored font. In the bottom left corner of the slide, there is a small video thumbnail showing a woman speaking. She has long dark hair and is wearing a blue shirt. The thumbnail has a black border and is positioned in the bottom-left corner of the slide area.

# Future Implementation Vision & Roadmap



## Core Programming Architecture



- **Phase 1 (Complete):** Interactive proof-of-concept with synthetic data
- Phase 2: Real-time data feeds, natural language queries, AI training
- Phase 3: Predictive alerts, mobile interface for field techs
- Phase 4: Multi-region deployment across all Frontier territories
- Executive Dashboard: Real-time business impact visibility for leadership

## Connection to Frontier's mission and strategic objectives

- GigaPulse ensures the gigabit infrastructure we build delivers exceptional customer experiences
- AI orchestration reduces operational complexity as we scale nationwide
- Transparent AI builds trust – NOC teams are the Human in the Loop
- Cross-functional collaboration breaks down silos between engineering and customer experience



ARE YOU READY?