# Control Your Hoist! A New System for Safer Lifts

Moderator:

Jeff Rubenstone, Deputy Editor, News, ENR

**Derek Sikora**, *CTO*, *EVP* of Engineering, Vita Inclinata Technologies Inc.

Henning Roedel, Robotics Lead, DPR Construction Frank Sokin, Senior Superintendent, DPR Construction





# What, Why, How, and Results of a high-risk, high-reward pilot









#### The Vita Load Navigator



#### Safety

Remote operation keeps workers out of the drop zone. Continuous Stabilization stops spinning loads and prevents accidents

#### **Efficiency**

in productivity with precision controls and memory functionality that guides loads to preset coordinates.

**Autonomous Precision Control of** Suspended Loads

#ENRTech

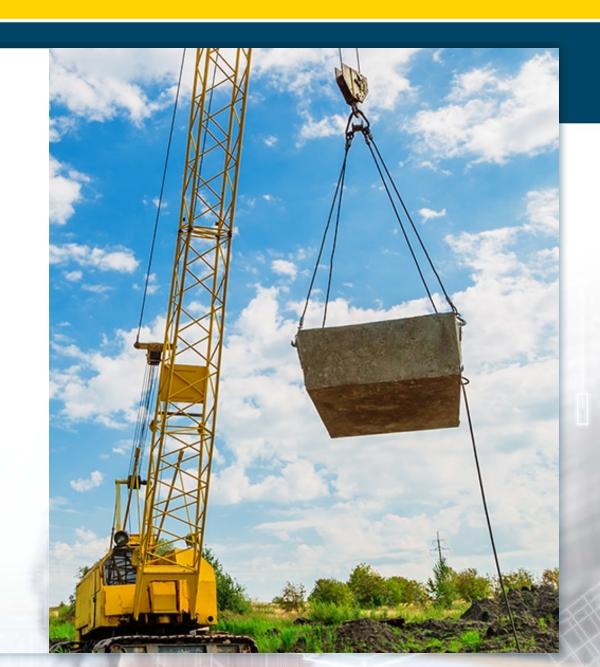
**Instantly Upskill Workers** 

## **Taglines**

Have been used for thousands of years to spin and control loads hoisted into the air

Taglines are required on all hoisted loads per OSHA rules, however...

Taglines place workers near or under loads increasing struck by risk and can catch on materials and people



# Taglines aren't always safe

Using a tag line raises the likelihood of injury by 7% when compared to lifting a load without control at all

-MAC Safety

Taglines aren't always safe









# 21st Century Lifts



It's time to move beyond a solution that comes from Ancient Greece

# Finding a Project

8 story medical office building at an active hospital campus in a major metro area

Active tower crane for 18 months



#### Limiting Risks and Defining Success



Phase	Description	Timeline	Success Criteria
Phase 0	Offsite Technology Demonstration	April '22	<ul><li>Demonstrate load stability during low-risk pick</li><li>Reliable on board with pilot?</li></ul>
Phase 1	Onsite Limited Use	Jan '23	<ul> <li>Limited to staging picks to showcase technology</li> <li>O noise complaints, outstanding operational issues, and incidents</li> <li>On board trade partners to utilize the new system</li> </ul>
Phase 2	Onsite Normal Operations	May '23	<ul> <li>Full use with selected trade partners</li> <li>O noise complaints, outstanding operational issues, and incidents</li> <li>No negative impact to crane operations</li> </ul>

## **Overcoming Adversity**



- Project team buy-in
- Reliable Crane Services buy-in
- National Safety Team sign-off
- Risk team sign-off
- Insurance team sign-off
- Innovation funding
- Trade Partner buy-in



#### #ENRTech



#### Pilot Results

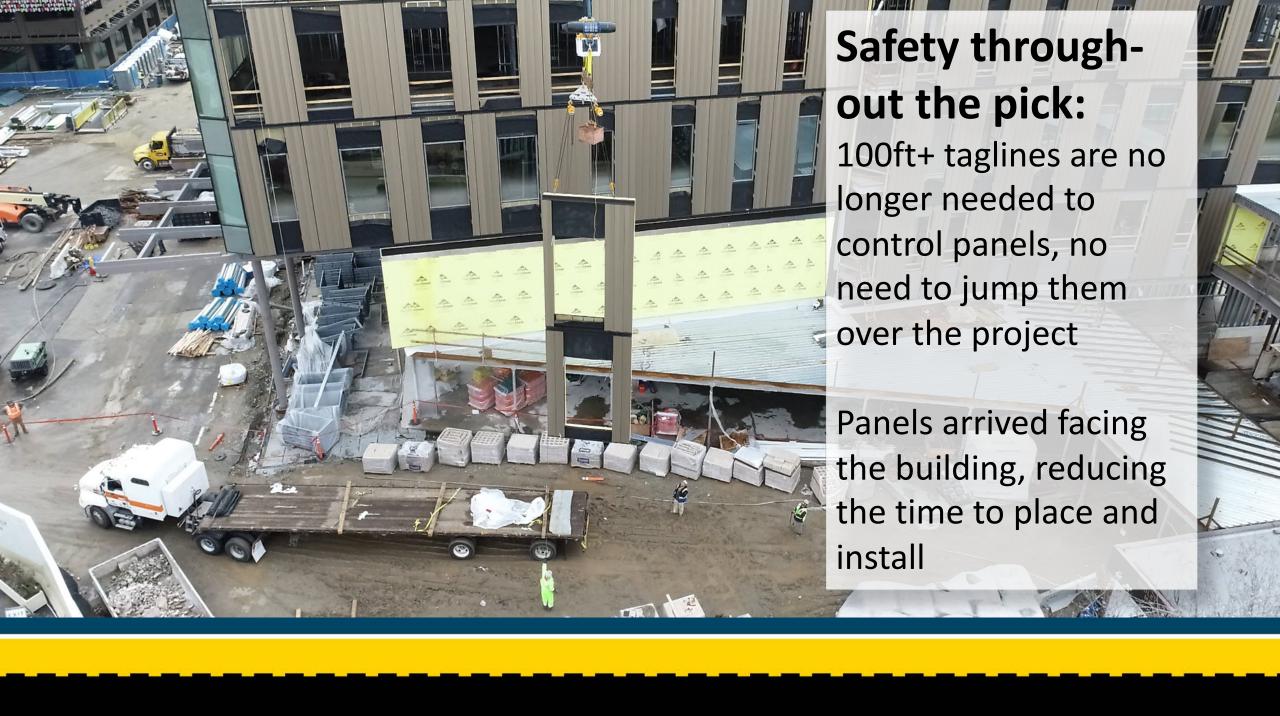


# Pilot achieved its success criteria

0 noise complaints,0 incidents,no negative impacts to crane operations

Highlight: the metal panel trade partner went from 3 overtime shifts per week to zero using the Vita system and significantly decreased their tagline risk exposure









### **Lessons Learned and Future Steps**

- Right job, right team matters
- No one is on board at first
- Not every pick needs Vita
- Safety is productivity with crane operations

CalOSHA Experimental Variance for tagline-free picks

#### APPLICATION FOR EXPERIMENTAL VARIANCE (EV) SUBMITTED BY DPR CONSTRUCTION IN PARTNERSHIP WITH VITA INCLINATA TECHNOLOGIES DPR Construction, A General Partnership 1450 Veterans Blvd, Redwood City, CA 94063 Variance Location: No appeal has been filed regarding this application before the Occupational Safety and Health Appeals Board. Applicant Contact: Henning Roedel, Ph.D Robotics Lead 650-241-5370 henningr@dpr.com Partnering Company Representatives: Everett Mansfield Director of Customer Success 720-369-5827 emansfield@vitatech.co Havden Hunter Director of Industrial Sales 971-274-6041 hayden@vitatech.co Contents Listed Safety Order/s Compliance Statement Statement of Employee Protection Schedule of Compliance Upon EV Application Approval Employee Notice of EV Application and Cal/OSHA Observation



## **JUNE 5 - 7, 2023**

HILTON UNION SQUARE SAN FRANCISCO

