



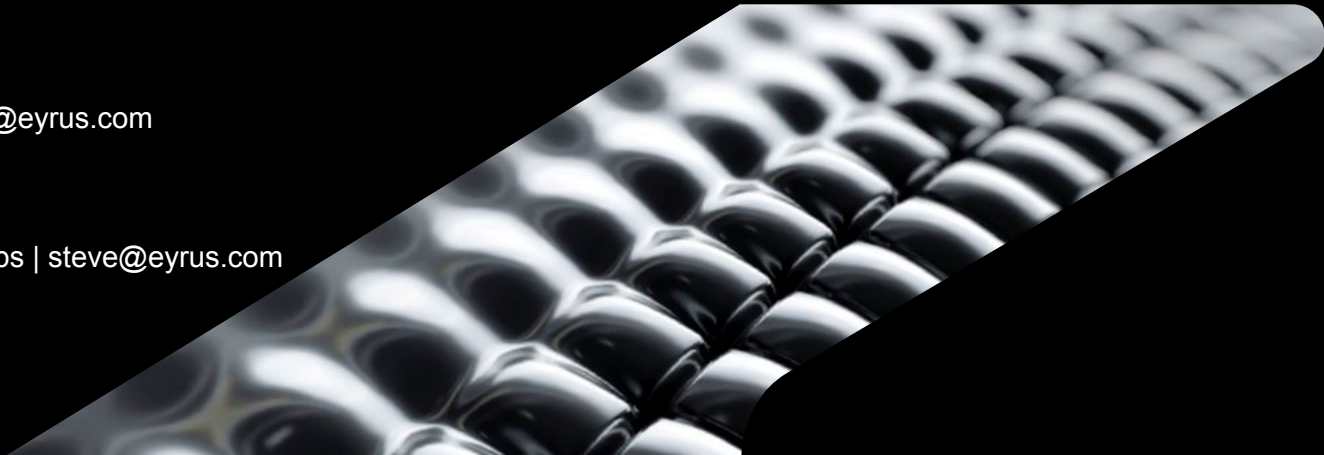
How Workforce Data Enhances a Data Center Project's Construction Efficiency

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Agenda

How Workforce Data Enhances a Data Center Project's Construction Efficiency

- › The Data Center Market
- › Trends in Construction Tech Investments
- › Why Focus on the Workforce?
- › A “Single Source of Truth”
- › How Does it Work
- › Centralized Workforce Data in Action

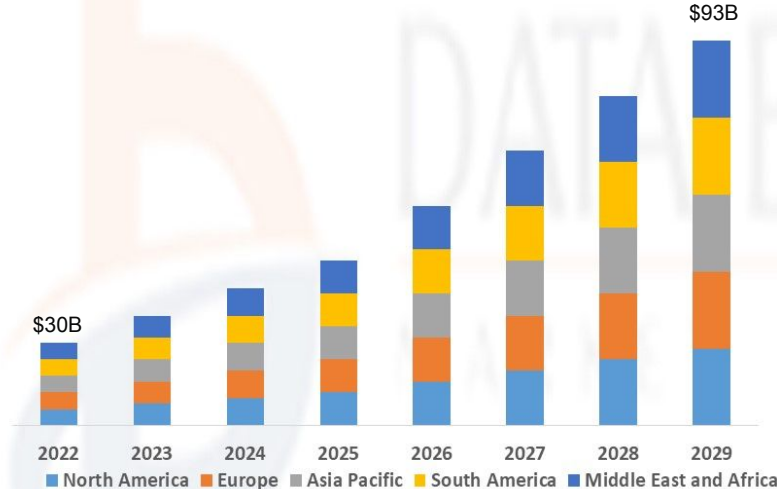


The Data Center Market

The Data Center Market

- Continuous Global Growth in Data Center Demand
- 25% Global Data Usage Spike since Pandemic
- 300+ Hyperscale Data Center in the Pipeline Globally
- \$1+ Billion per Hyper Data Center
- Schedules are Getting Shorter!

Global Data Center Construction Market is Expected to Account for USD 93,131.26 Million by 2029



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Source: Data Bridge Market Research Market Analysis Study 2022

Global Data Center Construction Market, By Regions, 2022 to 2029



DATA BRIDGE MARKET RESEARCH

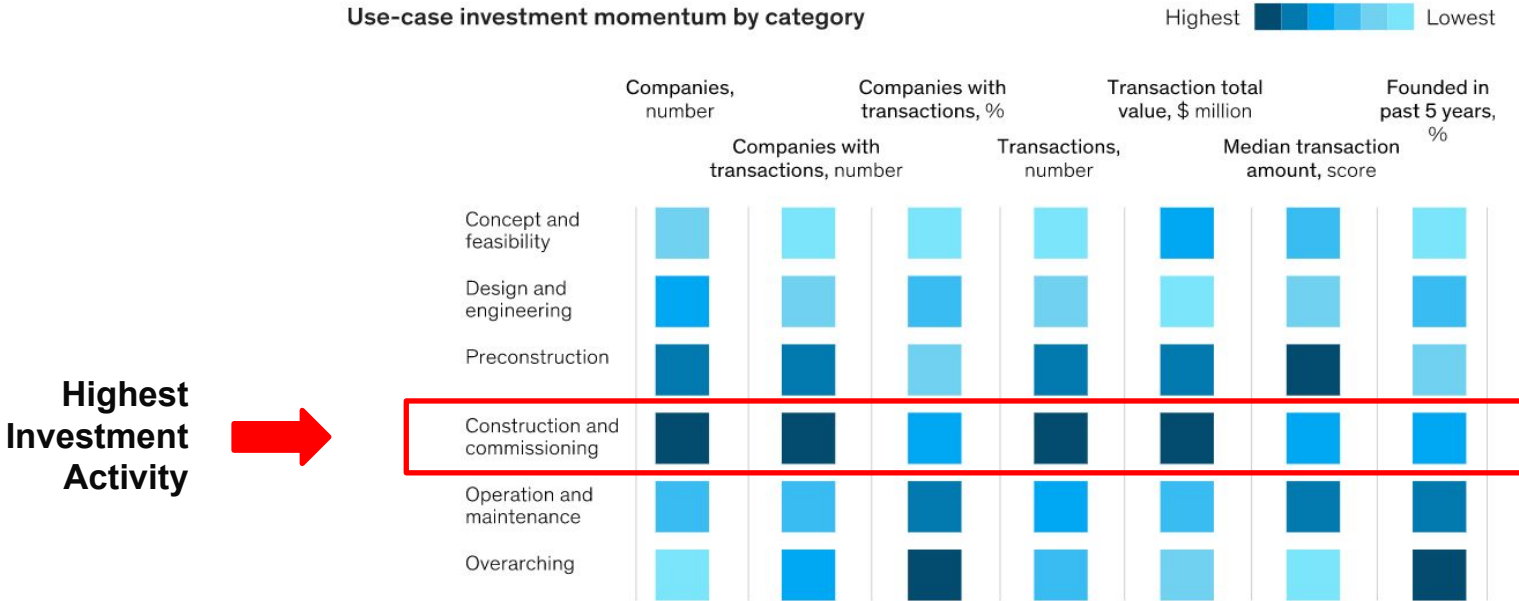




Trends in Construction Technology Investment

Trends in Construction Tech Investments

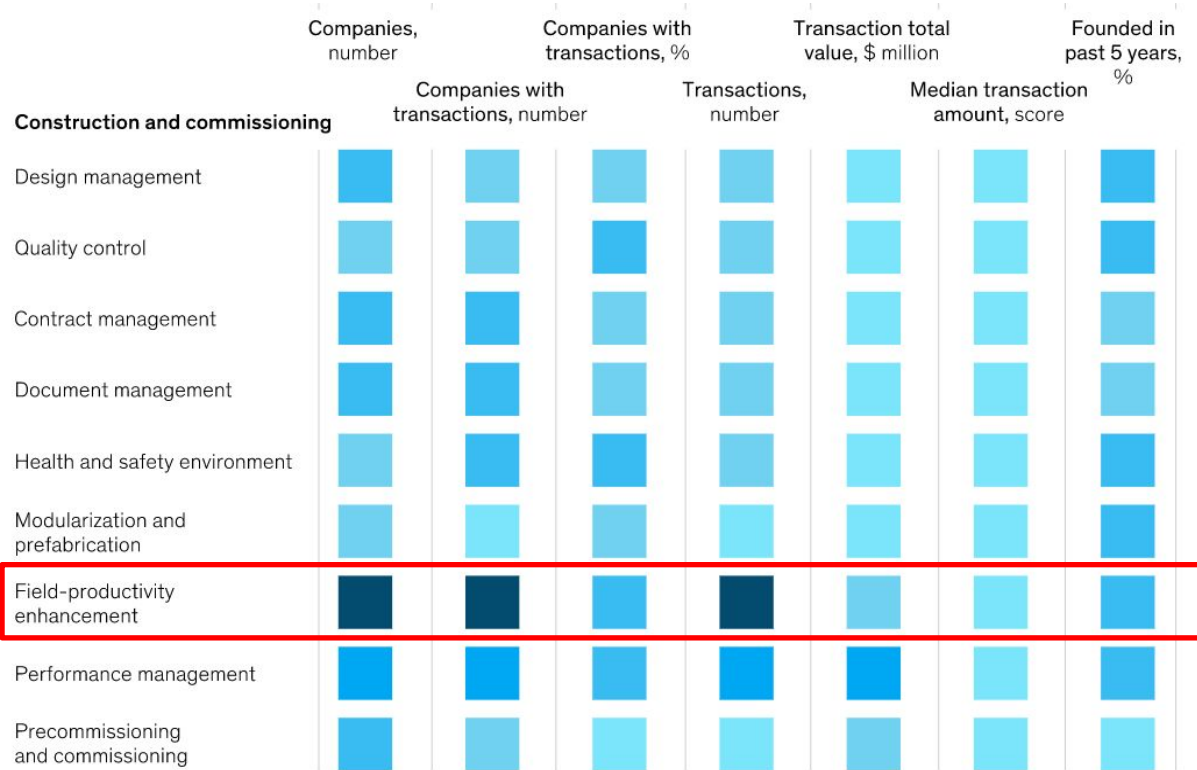
The construction and commissioning phase has twice the investment activity and more active players.

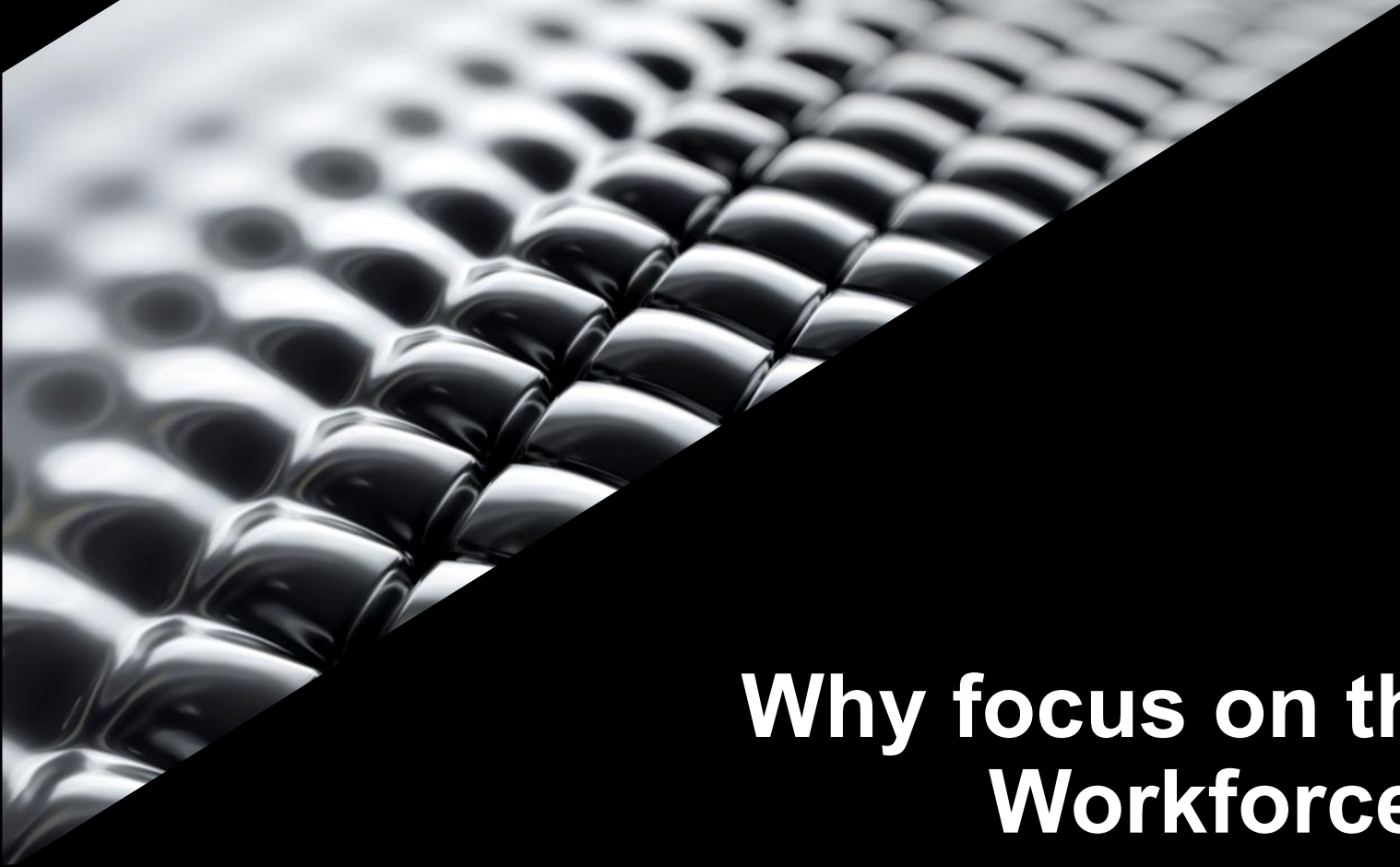


Source: McKinsey analysis

Where are the investments Trends?

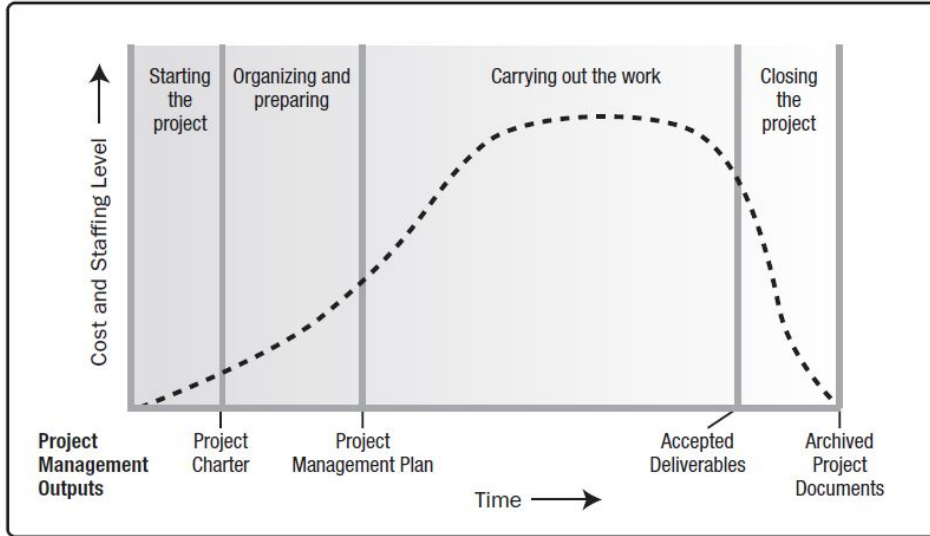
Highest
Investment
Activity



A close-up, black and white photograph of a metallic mesh or woven fabric texture. The mesh is composed of many small, rounded, interconnected loops, creating a complex, three-dimensional pattern. The lighting highlights the metallic sheen and the depth of the mesh. A diagonal black line cuts across the image from the top-right towards the bottom-left, separating the textured background from the text area.

**Why focus on the
Workforce?**

Construction Phase Highest Risk



Source – Karmeliuk.com

Workforce Cost =

60-70%

of Total Project Cost

Source – American Society of Professional Estimators

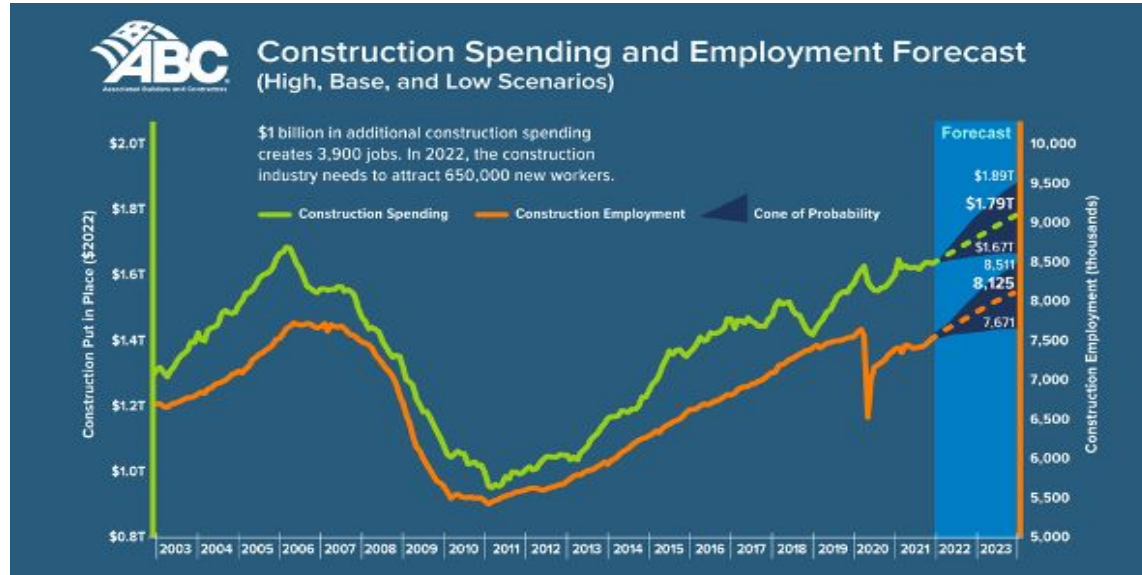
Workforce Pay Increase Year
on Year



6.3%

Source – Bureau of Labor and Statistics

Labor Shortage: The Struggle to Fill Construction Positions



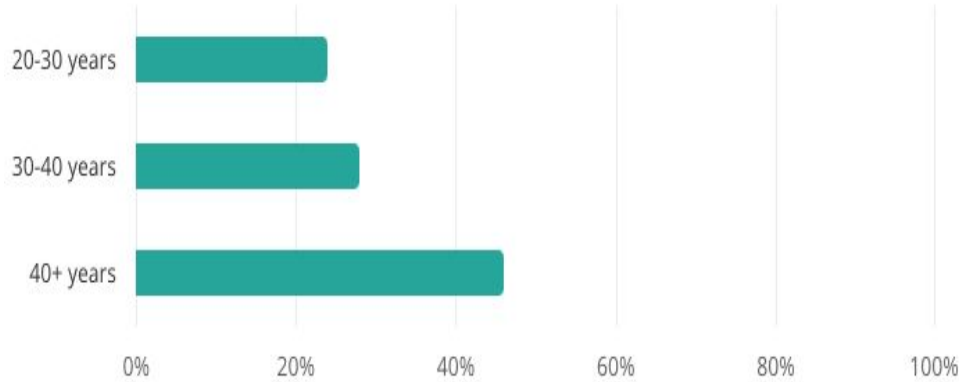
Source – Associated Builders and Contractors of America

➤ According to AGC:

- 375,000 Unfilled Positions
- Jump of 11.3% in 12 Mos.
- 93% of Companies have Vacancies
- 91% are having Trouble Filling them
- Construction Unemployment is at 3.5%

Aging Workforce

Percent of total construction workforce by age



Source – <https://www.zippia.com/construction-worker-jobs/demographics>

- Construction = Industry with Greatest average age increase in Workforce
- The Average age of
 - Plumbers - 42
 - Electricians - 40.9
 - Construction Workers Overall - 42.5
- For Every Five Retirees, there is only One Younger Worker to Fill the Gap.
(Source LHSFNA)
- Compare to Average age of Coding Industry is 28



**A “Single Source
of Truth”**

Data Center Projects



IMAGE CREDIT – Albuquerque Business Journal

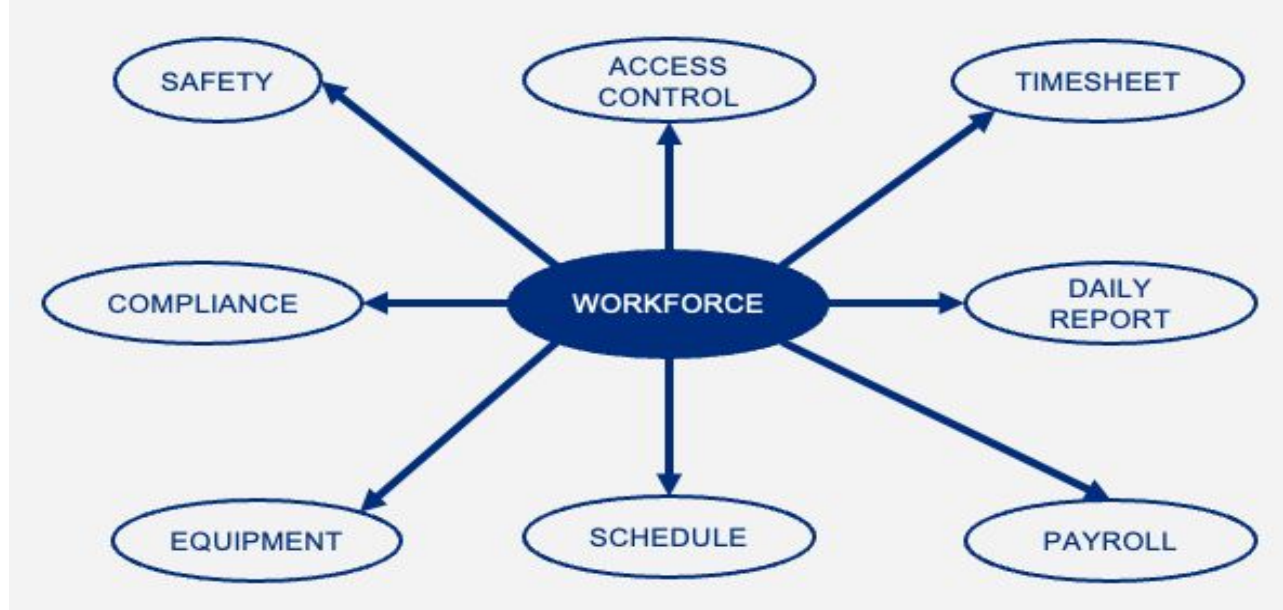
- › Sites are 100's of Acres Large
- › Schedule is a Major Driving Force
- › Workforce on Site:
 - 100+ People in the Site Office
 - 1500 +/- Workers per Day
 - 7,000 +/- Unique Workers per Project
 - 4M Workforce Hours Recorded per Year
 - 45 Different Companies

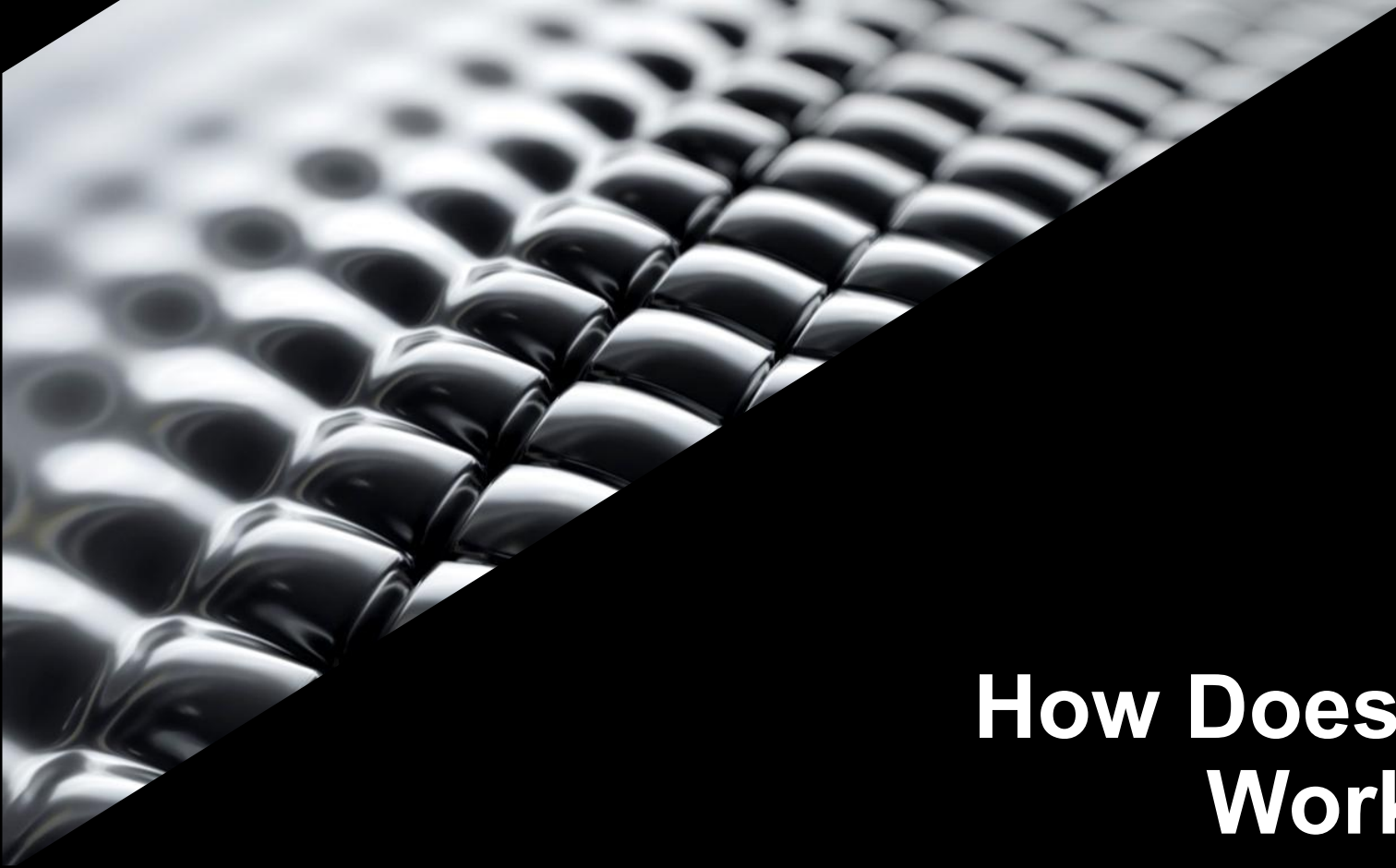
How Can You Manage Projects Without Data?



- › Schedule is Driving Factor
- › So Many Moving Parts
- › You need Reliable Data in Real-Time
- › For each Day of Delay = \$1,000,000 is Lost!

A “Single Source of Truth” for the Workforce

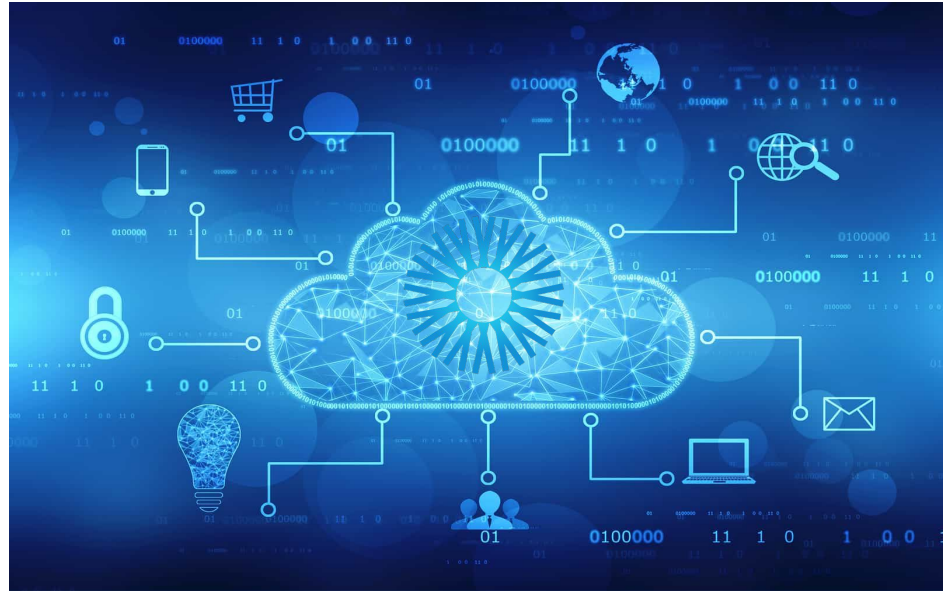




**How Does it
Work?**

Autonomous Data Collection

- › Fits within Site Workflow
- › Easy to use and Minimize Data Entry
- › Improves Administrative efficiency
- › Reliable and Consistent Data Collection
- › Configurable with Automated Reporting
- › Automation and Alerts



Analyze Objective vs Subjective Data



Objective information refers to Factual, Data-Based Information that is not Informed by Bias



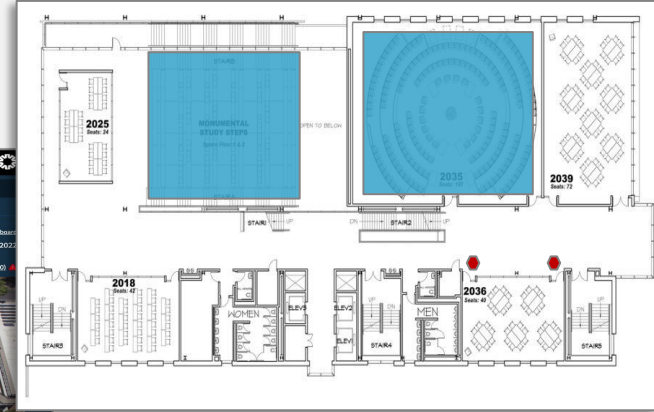
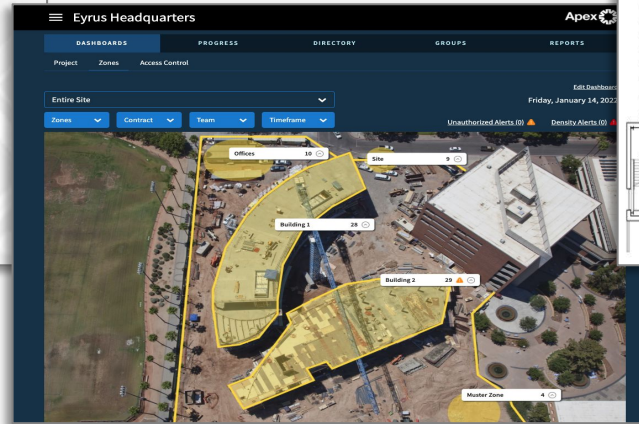
Subjective information is based on Opinion, Perspective, or Open to Interpretation

1. Configure Data Collection by Site



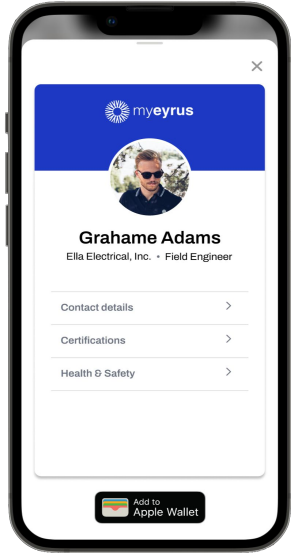
Determine the Site Setup

Choose Data Granularity



Define your Access level

2. Choose the Right Data Collection Solution



Digital Badge



BLE Beacon

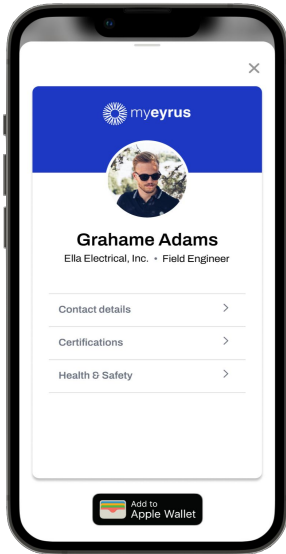


ID Badge



BLE or NFC Card

3. Workforce Registration and Onboarding



Download App



Scan Code

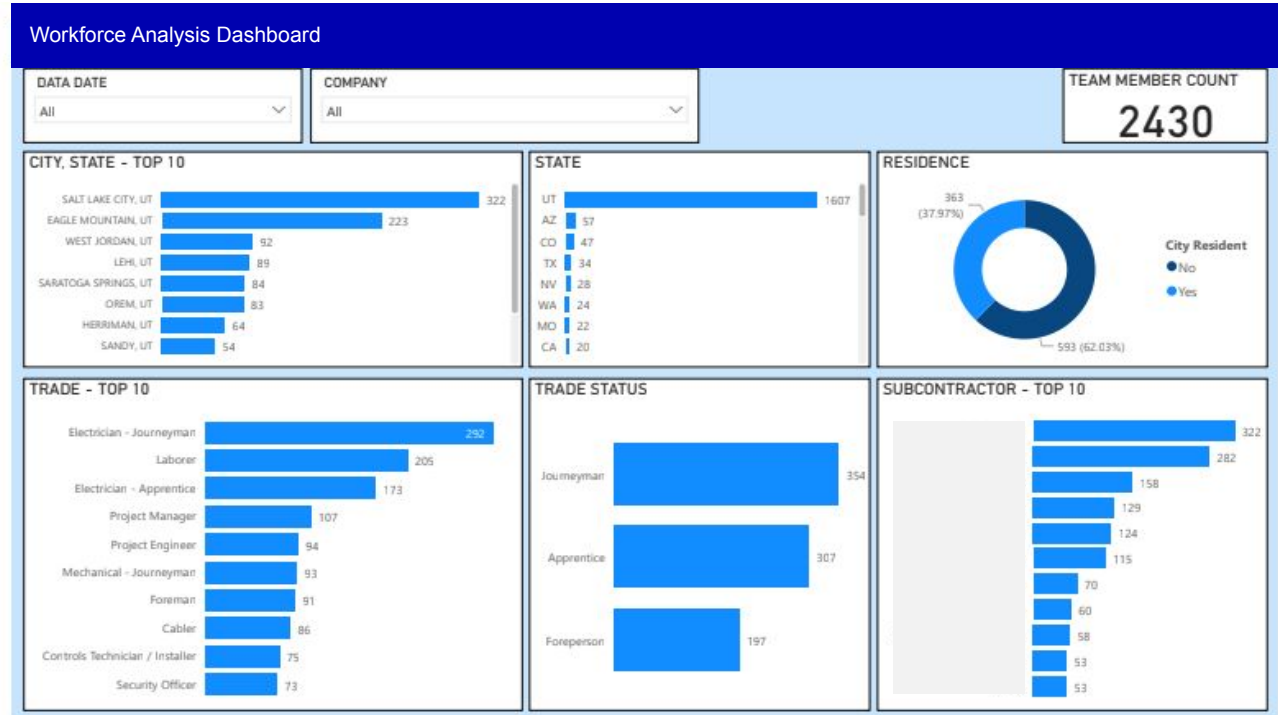
- › Efficient Site Workflow
- › Data Transparency for the Workforce:
 - Manage their Own Profile
 - Upload Certifications
 - Recorded Timesheets
 - Multiple Projects

A close-up, high-contrast photograph of a black, glossy, woven mesh texture, possibly a car seat or a technical fabric, with a diagonal line running across the frame.

Centralized Workforce Data In Action

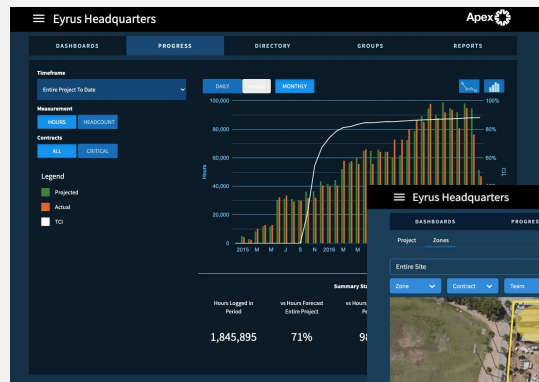
Visualize Your Data to Make Informed Decisions

- › Reliable Single Source of Truth
- › Better Informed Decisions Making
- › Communicate Visually
- › Deliver the Right Information to Each stakeholder
- › Automate Accurate Reporting

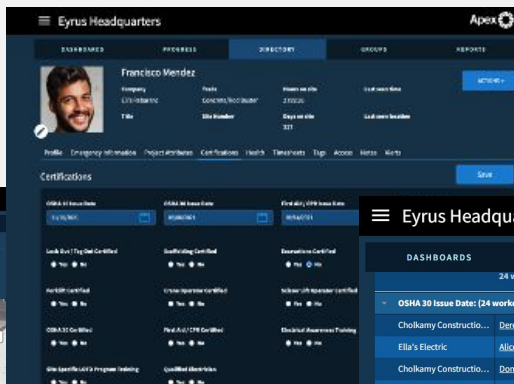


Benefits of a Centralized Workforce Database

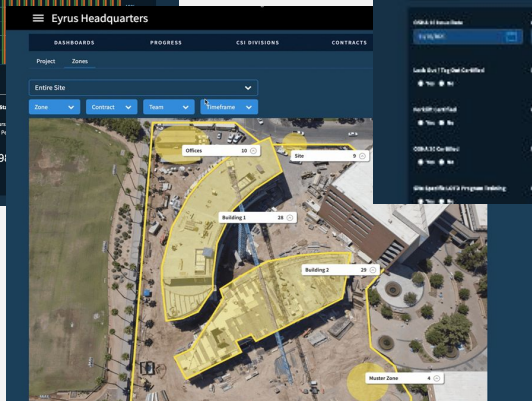
Forecast workforce vs actuals



Manage safety and access



Communicate in real time



Manage compliance reporting

Eyrus Headquarters

Apex

DASHBOARDS

PROGRESS

DIRECTORY

GROUPS

REPORTS

24 workers

4,848.66 hours

OSHA 30 Issue Date: (24 workers, 100% of total)

360 work days

4948.66 hours

Chokamy Constructio...	Derek Curtis	2/5/2016	5/11/2017	33	434.7
Ella's Electric	Alice Padilla	4/27/2016	10/12/2017	8	69.86
Chokamy Constructio...	Dominick Reeves	5/31/2016	10/12/2017	6	48.15
Connor Concrete	Clyde Townsend	3/15/2016	4/18/2016	15	131.55
Connor Concrete	Dave Beck	4/5/2016	6/17/2016	47	
Connor Concrete	Stephanie Sims	2/25/2016	2/29/2016	2	
Ell's Rebar	Delbert Bradley	2/25/2016	2/29/2016	2	
Ell's Rebar	Gustavo Gordon	9/14/2015	4/21/2017	4	
Ella's Electric	Lena Hopkins	1/29/2016	2/26/2016	4	
Ella's Electric	Christie Spencer	1/29/2016	2/17/2016	8	
Ella's Electric	Leland Hale	1/29/2016	4/19/2016	27	
Ella's Electric	Erik Roberson	8/28/2015	8/30/2017	24	938.79
Chokamy Constructio...	Elmer Richards	2/5/2016	5/11/2017	33	434.7

Column Chooser

Q Search

Training

OSHA 10 Issue Date

OSHA 30 Issue Date

First Aid / CPR Issue Date

Wage Rate

Achieve More Efficient, Effective Worksite Management

- › Integration = Seamless Data Flow
- › Reduce Browser Fatigue
- › Enhance Collaboration
- › Increase Accuracy
- › Improve Communication
- › Streamline Decision-Making

› Eyrus ROI:

- **10 to 15 Hours** a Week Saved in Administrative Work
- **1 to 2 Hours** a Day Saved in the Management of Trade Partners and Operations
- **5% Reduction** in Schedule delay Risks



Scheduling
Software



BIM/Visuals



Payroll



Project Management
Software

ROI: Risk Mitigation, Safety & Compliance Reporting



Scope

- › Confidential Data Center
- › Location: Tornado Alley
- › Over 1k Member Workforce
- › 600K+ Project Hours

Challenges

- › Accurate, Real-Time Attendance needed due to Natural Disaster Threats
- › Key Workforce Management Data was Needed for Insight into the Project's Cost and Efficiency
- › Owner Required Workforce Compliance Reporting

Wins

- › 3 full Tornado Safe Evacuation
- › Automated Data for Reporting on Safety and Compliance
- › Workforce Deployment Forecast vs Actual Analysis

ROI

- › **15 Hours a Week Saved in Time Spent on Daily Administration**
- › **20% Productivity increase on Superintendent Time**
- › **3% Reduction on Workforce Bench Time**

ROI: Enhanced Safety, Security, Performance & Risk Mgmt.

“*The Normalization of Data Across the Entire Program allows us to Accurately and in Real-Time Enhance Safety, Security On-Site and Workforce Visibility. The Integrated Platform Across the Program allows us to Compare Performance and Manage our Risks On-Site.*”

Ian Mincey

Project Exec Director of Preconstruction
Turner Construction

“*The Features and Capabilities of Eyrus have allowed us to Capture Real-Time Data Analytics to Understand what is Happening on our Project in the Moment. The User Interface is very Intuitive and Easy for us to Navigate...I would Recommend it for any Project with Labor Hour Analytic Needs.*”

Bryan Higgins

Project Manager
Whiting-Turner Construction

Thank you!



Hussein Cholkamy

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Steve Baret

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 AUTODESK UNIVERSITY

ROI: Real-Time Visibility into Workforce Productivity



PROPERTY GROUP PARTNERS



Eyrus has a window to workforce productivity on our projects unlike any real time technology available in the marketplace.”

Sean Cahill

Senior Vice President
PGP DEVELOPMENT

ROI: Insights into Progress, Efficiency, Time Savings



I use Eyrus on my projects for the efficiency and insights on construction progress. Time is saved on documentation, and reporting is easier & concise with data being continuously collected onsite.”

Billy Frye

Senior Project Manager
VERITY COMMERCIAL

Get Some Quick Wins with your Data Immediately



- ✓ **Quick project deployments**
 - Start with the low-hanging fruit
 - Start acting on your data immediately
- ✓ **Reduced steps & clicks**
 - Simple to use
 - Automates admin processes
 - Reduces steps/clicks
- ✓ **Increased project momentum**