

THE
FUTURE
IS
NOW

SHEET METAL | AIR | RAIL | TRANSPORTATION
SMART



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Transforming the construction Industry: Future Technology and Talent Attraction Strategies



Agenda



- The Evolving Construction Landscape
- Emerging Construction Technologies
- Attracting the Tech-Saavy Generation
- Tech Infused Skill Development
- Sustainability and Green Construction
- Digital Collaboration & Communication
- Improving Safety
- Recruitment & Outreach Strategies
- Diversity & Inclusion



The Evolving Construction Landscape



The Evolving Construction Landscape

Challenges our Industry faces:

- Cost overruns
- Delays
- Inadequate communication
- Labor shortage
- Poor planning
- Inadequate Productivity levels
- Slow adaptation to emerging tech



The Evolving Construction Landscape

The Labor Impact of Current Construction Demand:

- Federal spending on infrastructure flooding construction with cash
- 1 Billion of spending creates 3,620 jobs
- 1 in 4 workers are over 55 years of age
- 20-30+ years of experience lost with each retirement
- Predicted hiring required in 2024 is 324,000 in addition to normal hiring needs

Emerging Construction Technologies

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Emerging Construction Technologies



iOT

Prefabrication

Collaboration

Sustainable Materials

Virtual/Augmented Reality

Drones

Machine Learning & AI



Wearables

Autonomous Vehicles

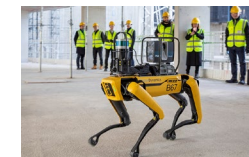
Modular Building

ConTech Ecosystems

Connectivity



Digital Twins



Robotics



Attracting the Tech Savvy Generation



Attracting the Tech Savvy Generation

Emphasize Technology and Innovation

- Power Tools with IoT Connectivity
- Drones
- 3D Printing
- Green Technologies
- Prefabrication
- Layout & BIM
- Software

Engage Early Internships/Partnerships

- Relationships with K-12
- Supporting STEM & STEAM
- High School internships
- Robotics (ex: FIRST)
- Career Path definition
- Hands on learning
- Curriculum involvement

Tech Infused Skill Development

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Tech Infused Skill Development

- **Use Hands-On Training**

- Designing curriculum that is hands on drives engagement & excitement.
- Start technology training as soon as possible

- **Offer Real-World Applications**

- Demonstrating new technology with real world applications does just that, makes it REAL, the benefits will create the champions

- **AR & VR for Safe Simulated Training**

- Bridge the gap between learning and doing
- Creates a safe environment (think of the flight simulator)

- **Make Tech Training Inclusive & Varied**

- Training both new workers, veterans, and even office staff drive inclusion, making everyone feel critical to new tech

Sustainability & Green Construction



Sustainability & Green Construction



Bank of America, New York, NY

- Completed May 1st, 2009
- Greenest skyscraper in America
- LEED Platinum Design
- 945' Tall, 55 stories
- Low VOC materials
- Recycled Steel & Drywall
- 5.1-Megawatt electrical generation facility
- Air filtration eliminating 95% particulate pollution
- High transparency low-e glass

Sustainability & Green Construction

- **Harness Renewable Energy Resources**
 - Solar Panels, Wind Turbines, Geothermal
- **Energy Efficient Building Materials**
 - Low-e Concrete, Recycled Steel, Eco Insulation
- **Smart Building Management**
 - Monitoring & Controls
- **Water Conservation**
 - Rainwater harvesting, greywater recycling
- **Green Roofs/Living Walls**
 - Insulation & Urban Heat Management
- **Indoor Air Quality**
 - Ventilation systems

Construction Contributes:

23% of all Air Pollution

50% of Climate Change

40% Drinking Water
Pollution

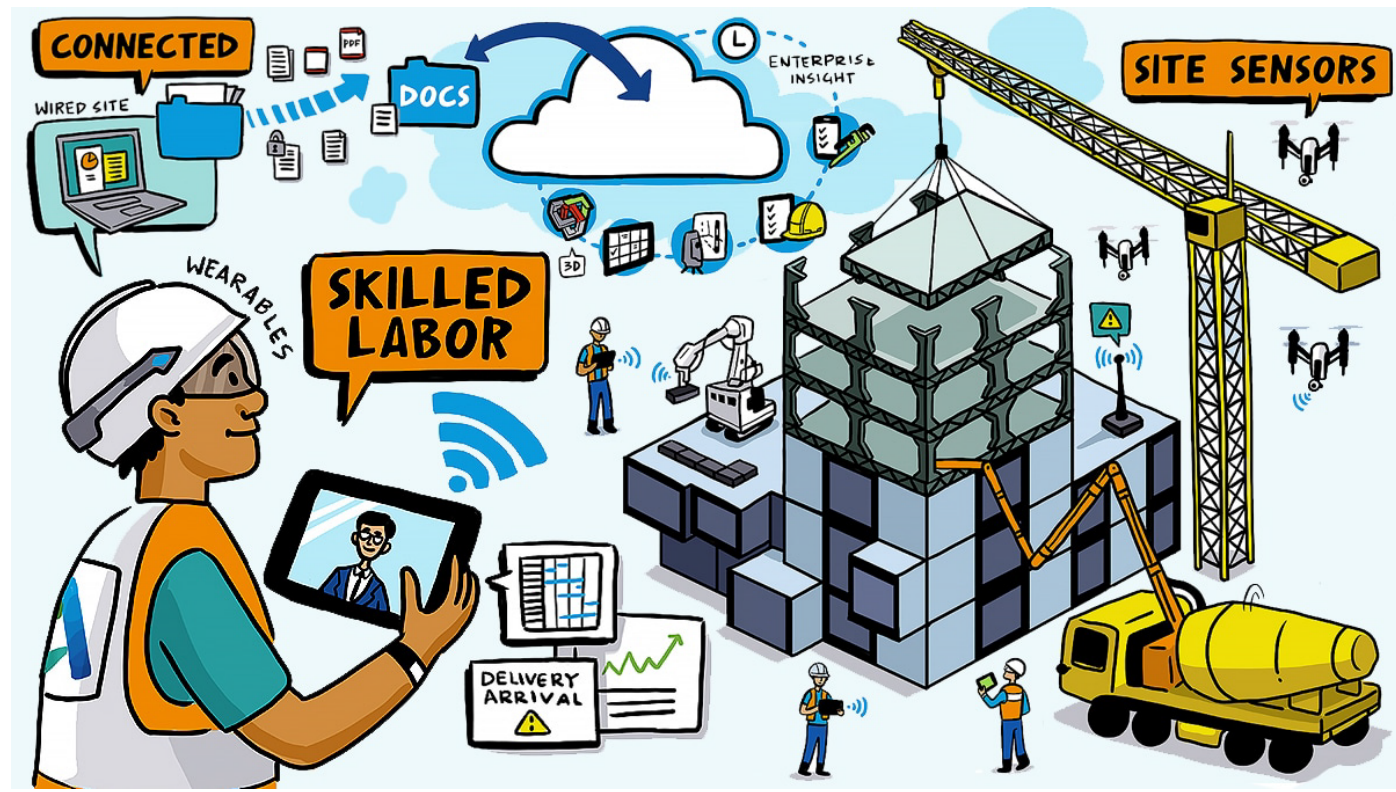
50% Landfill Waste

Digital Collaboration & Communication



Digital Collaboration & Communication

- Digital Project Planning
- Design Integration & Automation
- Digital Construction
- Documentation & Handover



Improving Safety

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Improving Safety

- Head Protection → Hat to Helmet
- Fall Protection
- Biometric Monitoring
- Site Monitoring
- Evacuation Alerts
- Ergonomics
- Training



Recruitment & Outreach Strategies



Recruitment & Outreach Strategies

Case Study: Recruitment in Milwaukee



WRTP | BIG STEP



Recruitment & Outreach Strategies

Case Study: Creating Career Paths to Construction

High School STEM



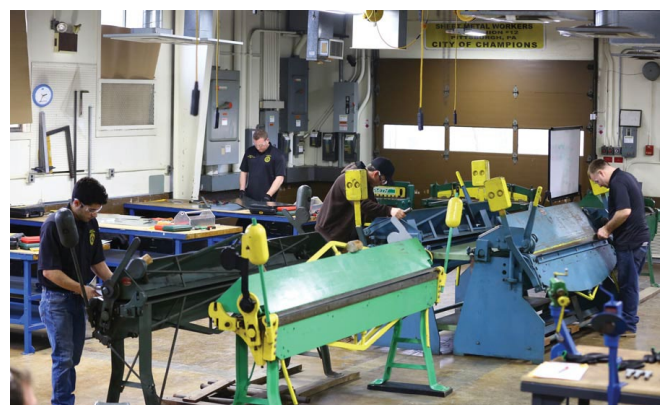
PreFab Internships



Signing Day



Apprentice



Diversity & Inclusion



Diversity & Inclusion

In 2021 the Construction Workforce was: 87.9% White, 89% Male



Jim Fowler
CRP
Novo Construction

Tips for a successful DEI Initiative

- Articulate your purpose, your “Why”
- Prioritize diverse collaborations: Relationships & Community
- Champion education and responsibility
- Leverage employee resource groups and mentorship
- Promote diversity beyond your immediate team



Diversity & Inclusion needs to be an integral part of your culture



Questions?





**Please Remember
to Fill Out Your
Breakout Survey
on the App**

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