USF Patel College of Global Sustainability
Spring 2023 Sustainability Speaker Series

February 15, 2023

Vice President, Sustainability

Amy Pastor, PE, CxA, LEED AP, ENV SP

- Licensed Mechanical Engineer (multi-state/territory)
- Certified Commissioning Authority (CxA)
- LEED AP BD+C
- ENV SP

18

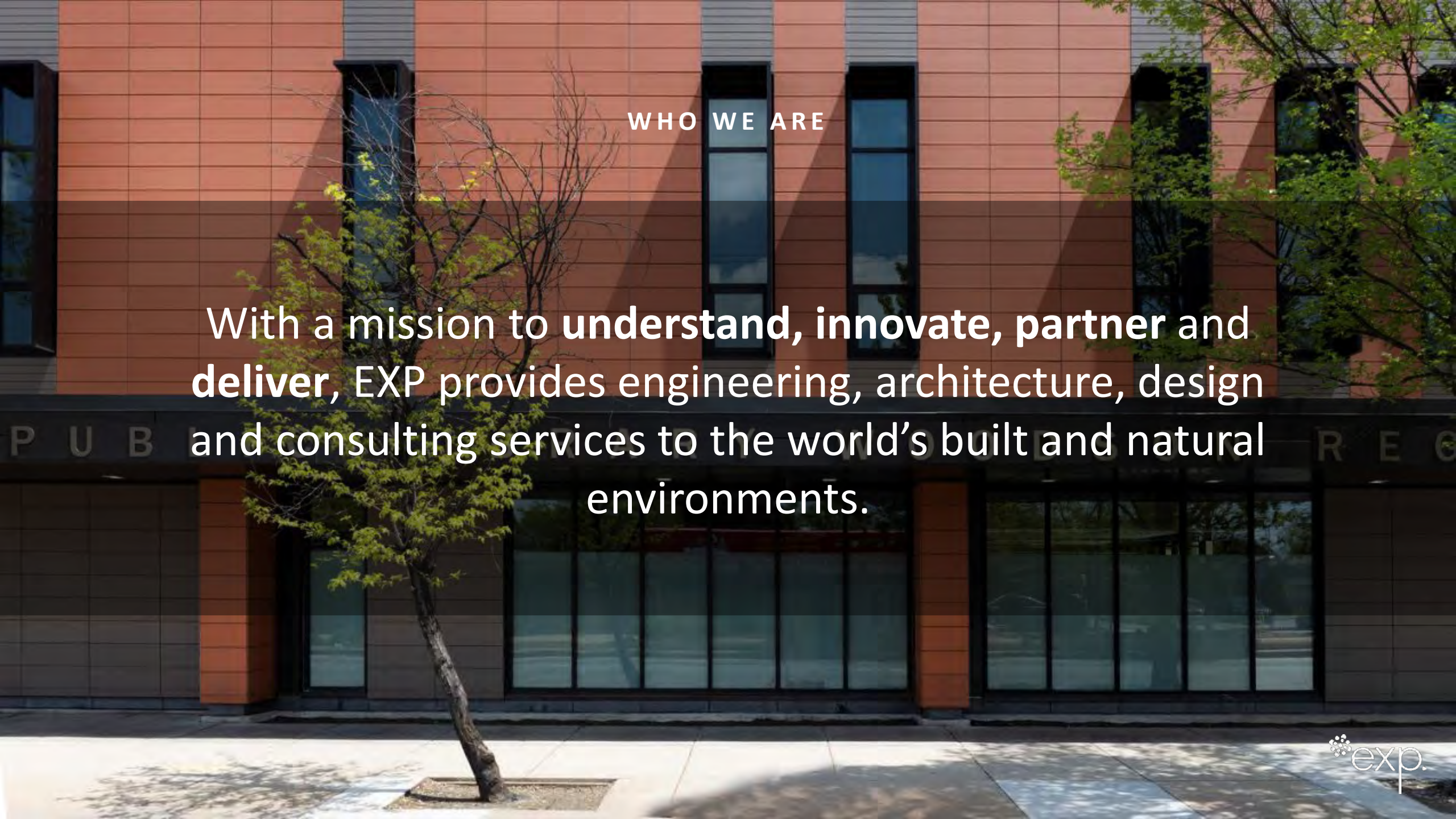
Years of experience

210

LEED Certified Projects

40M+

SF LEED Certified Spaces



WHO WE ARE

With a mission to **understand, innovate, partner** and **deliver**, EXP provides engineering, architecture, design and consulting services to the world's built and natural environments.

Exceptional service for world class clients

117

years of service

#26

Top 500 Design Firms
ENR, 2022

#15

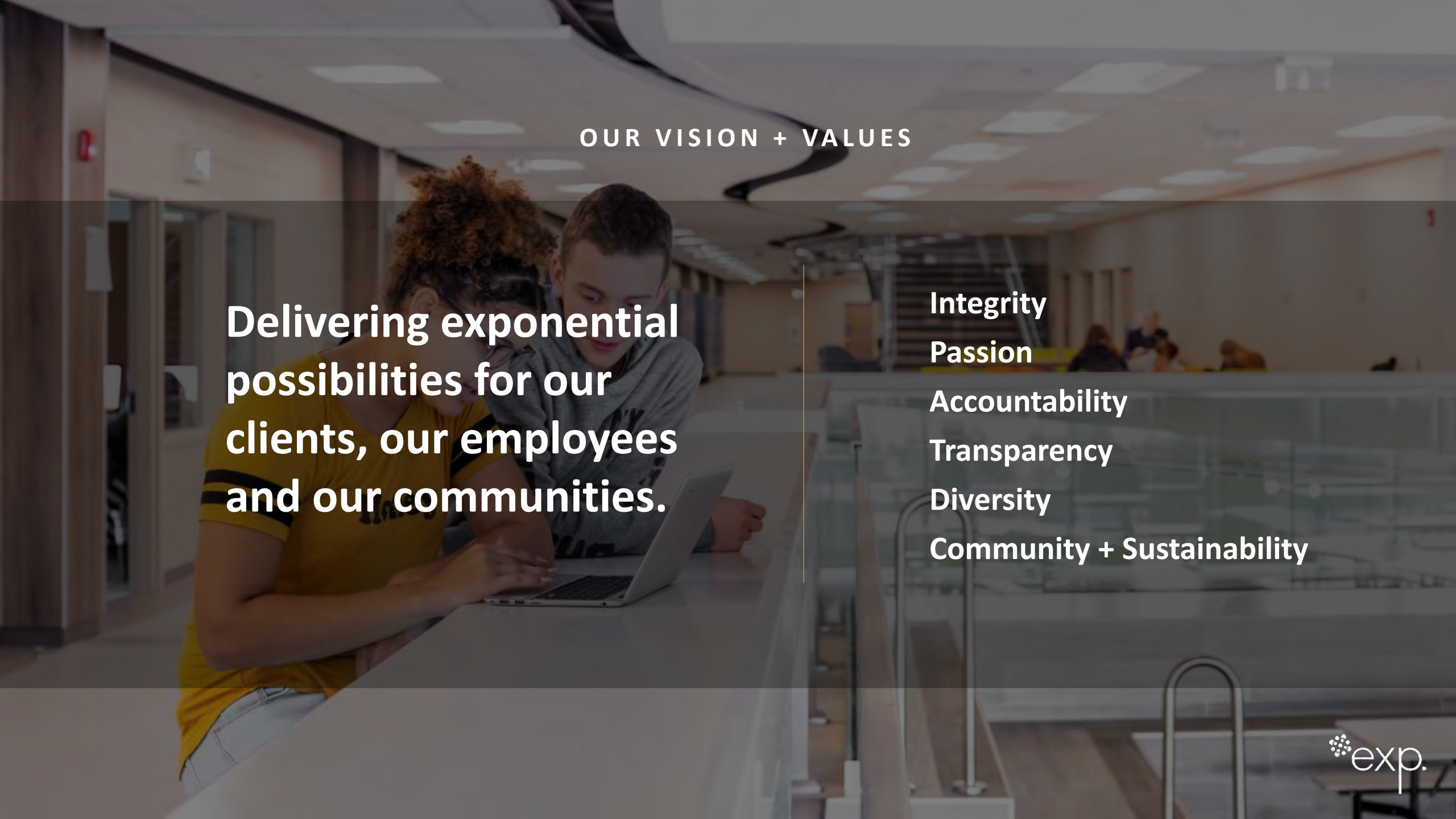
Top 100 Pure Designers
ENR, 2022

#12

MEP Giants Top 100,
Consulting-Specifying Engineer, 2022

#6

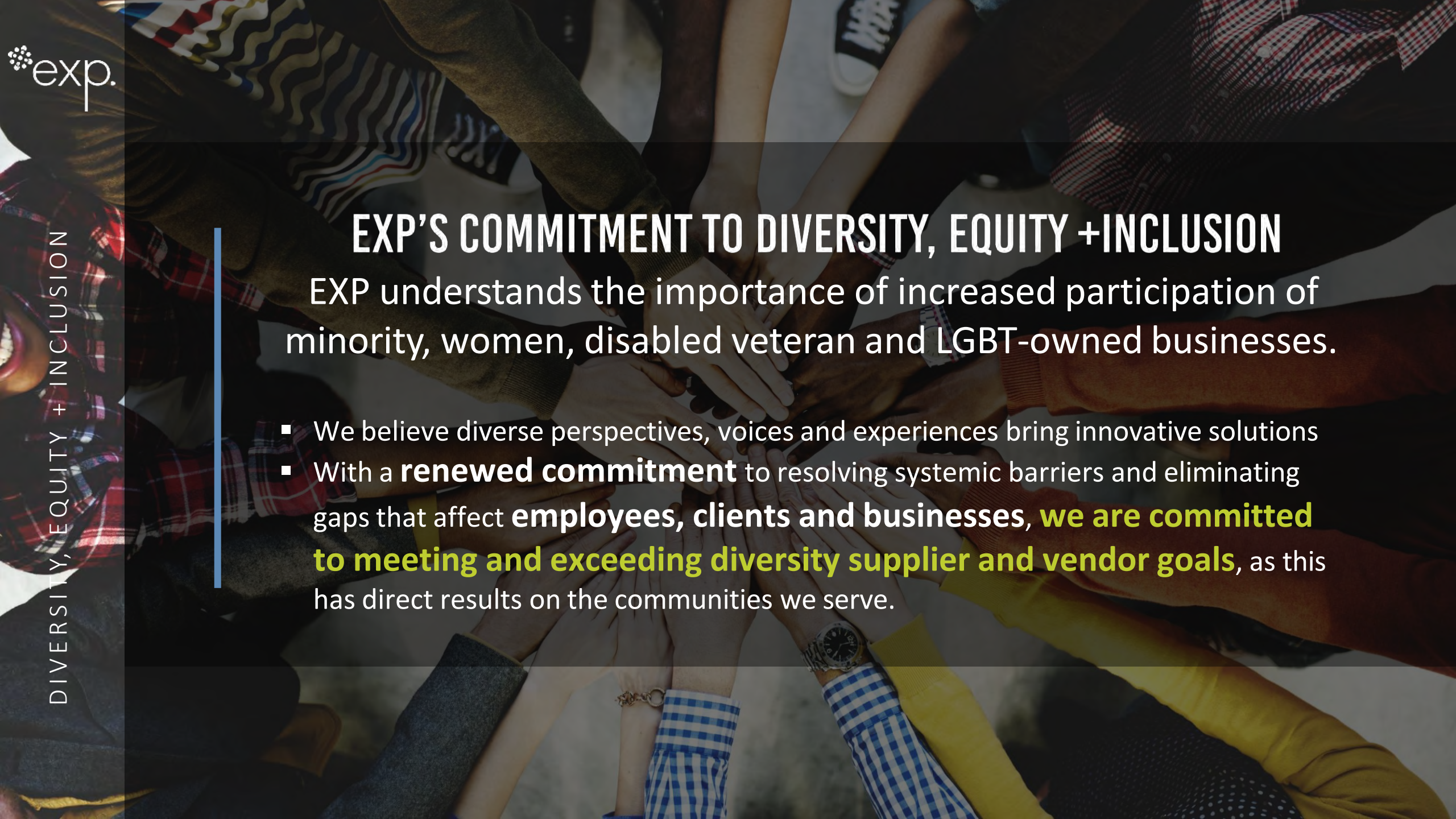
Top Engineering Architecture Firms
BD+C Giants, 2022



OUR VISION + VALUES

Delivering exponential possibilities for our clients, our employees and our communities.

- Integrity
- Passion
- Accountability
- Transparency
- Diversity
- Community + Sustainability

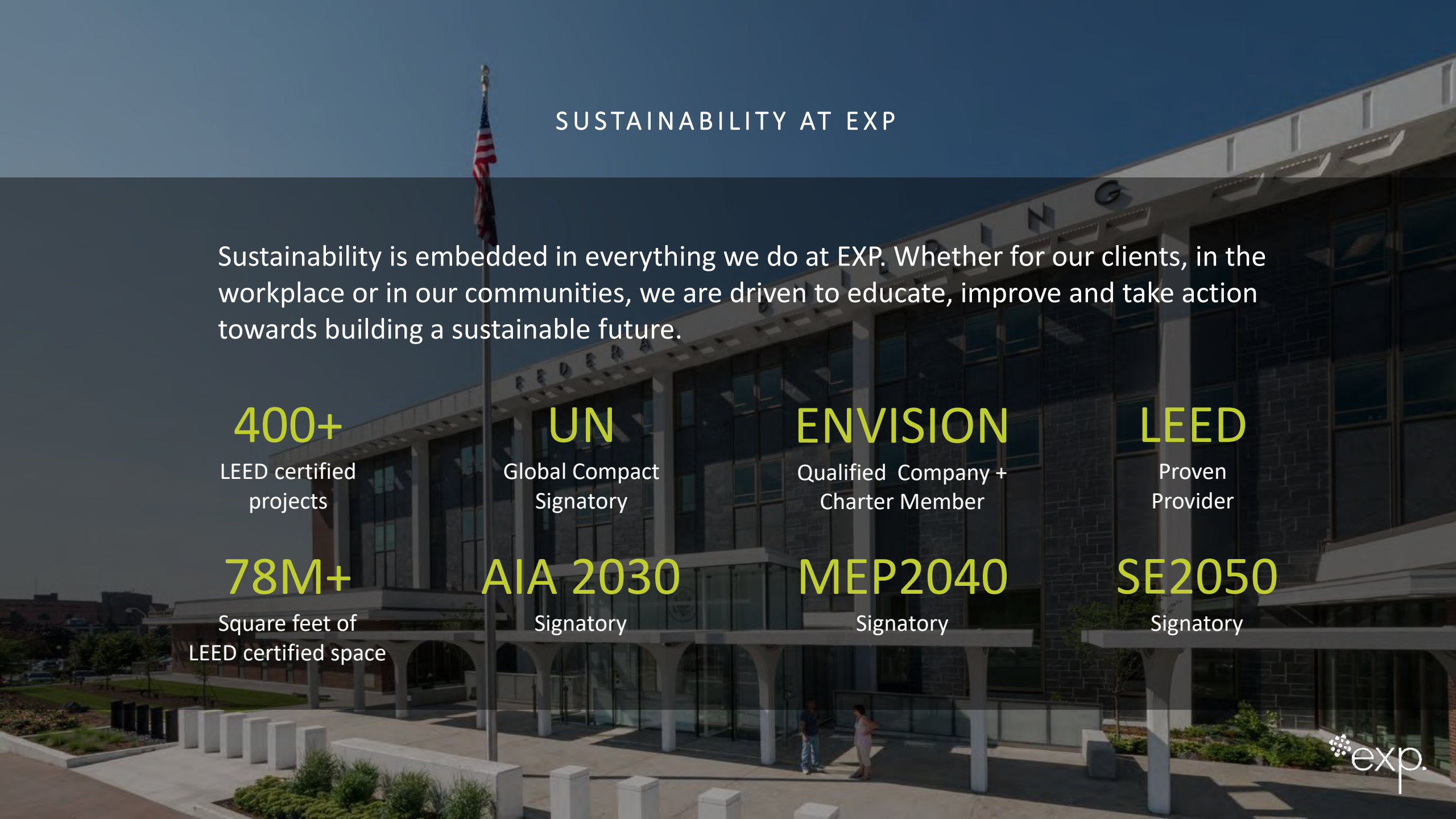


DIVERSITY, EQUITY + INCLUSION

EXP'S COMMITMENT TO DIVERSITY, EQUITY +INCLUSION

EXP understands the importance of increased participation of minority, women, disabled veteran and LGBT-owned businesses.

- We believe diverse perspectives, voices and experiences bring innovative solutions
- With a **renewed commitment** to resolving systemic barriers and eliminating gaps that affect **employees, clients and businesses**, **we are committed to meeting and exceeding diversity supplier and vendor goals**, as this has direct results on the communities we serve.



SUSTAINABILITY AT EXP

Sustainability is embedded in everything we do at EXP. Whether for our clients, in the workplace or in our communities, we are driven to educate, improve and take action towards building a sustainable future.

400+
LEED certified projects

UN
Global Compact Signatory

ENVISION
Qualified Company + Charter Member

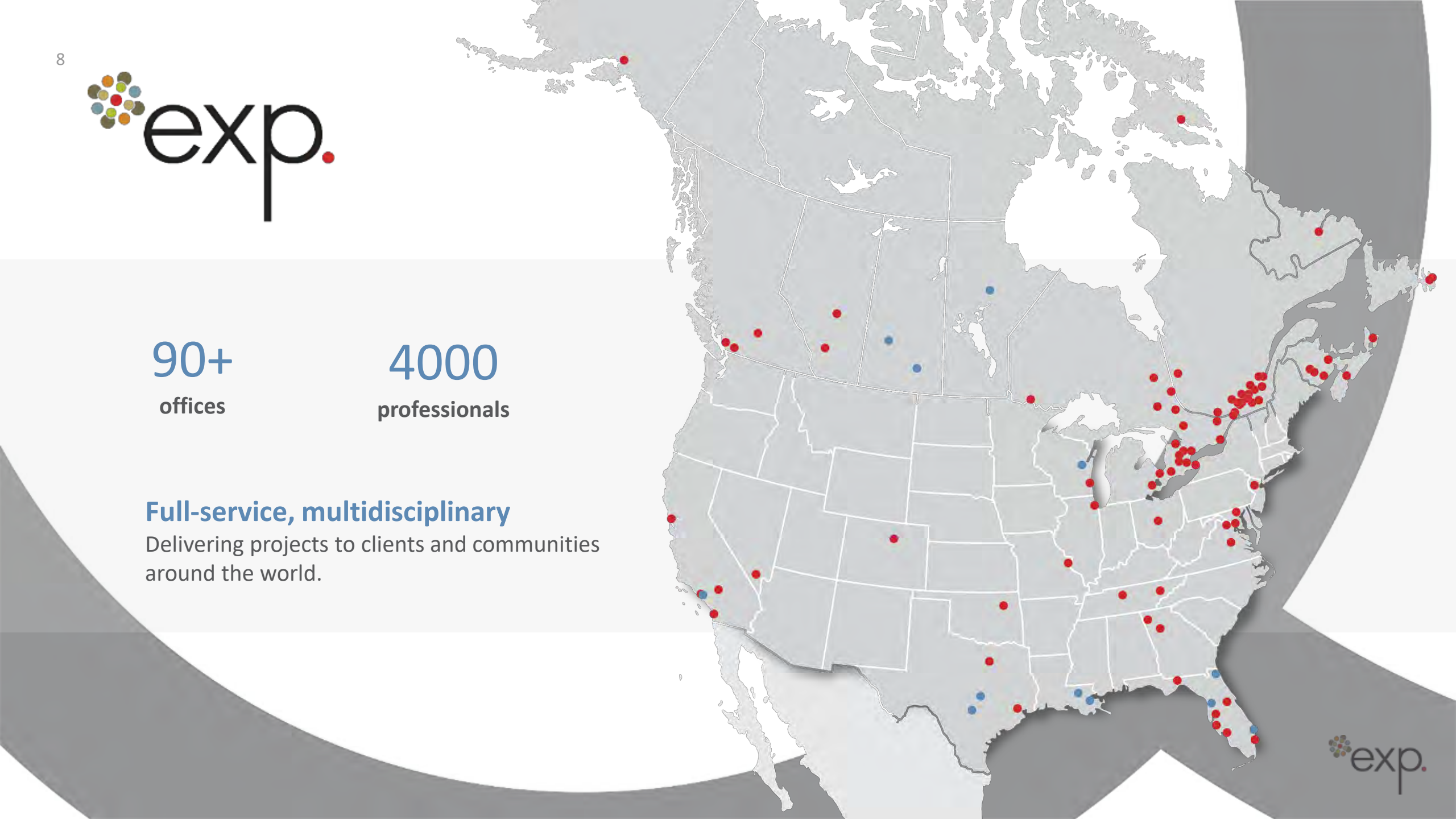
LEED
Proven Provider

78M+
Square feet of LEED certified space

AIA 2030
Signatory

MEP2040
Signatory

SE2050
Signatory



90+
offices

4000
professionals

Full-service, multidisciplinary

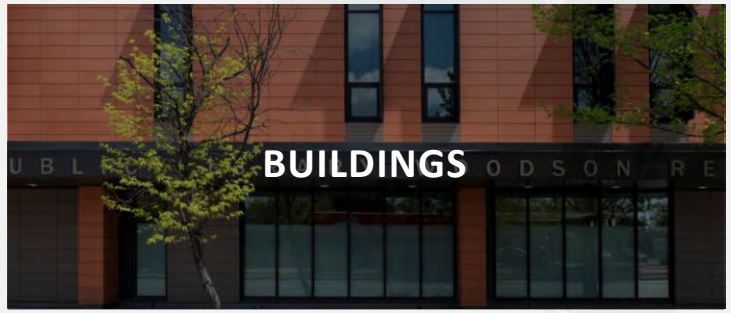
Delivering projects to clients and communities around the world.

MULTIDISCIPLINARY EXPERTISE

WE ARE CLIENT FOCUSED

We're an integrated, motivated team working together on projects big and small – locally and globally.

We deliver a vast range of services across the markets and geographies we serve.



Key Services

Buildings
- Architecture + Interiors
- Building Science
- Structural
- Mechanical, Electrical, Plumbing + Fire Protection
- Lighting Design
- Technology Design
- Intelligent Buildings
- Commissioning
- Air Quality + Industrial Hygiene
- Automation, Instrumentation + Controls

Industrial + Chemical
- Automation, Instrumentation + Controls
- Process
- Front-End Engineering

Earth + Environment
- Environmental
- Geotechnical
- Materials Testing
- Land Development

Infrastructure
- Civil / Site
- Land Development
- Landscape Architecture + Urban Design
- Transportation Planning, Engineering + Design
- Water Services

Program + Project Delivery
- Program + Project Management
- Construction Services
- Building Information Modeling (BIM)
- Geomatics + GIS
- Public Involvement

Operations
- Operations + Maintenance
- Asset Management
- Monitoring

Sustainability, Resilience + Regenerative Design

ESG and Sustainable Development Goals

ESG

ENVIRONMENTAL

Climate change strategy,
Biodiversity,
Water efficiency,
Energy efficiency,
Carbon intensity,
Enviromental
management system

SOCIAL

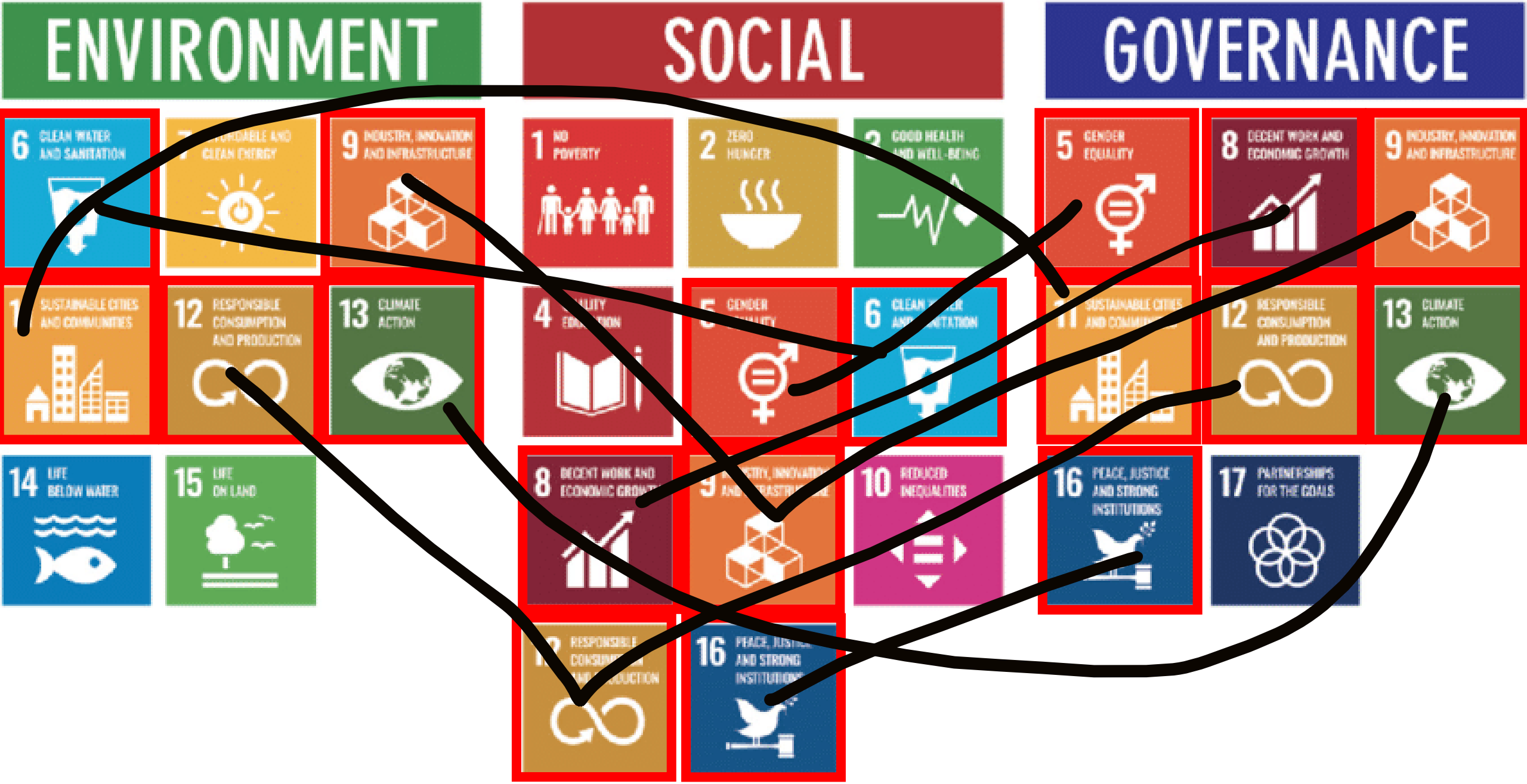
Equal opportunities,
Freedom of association,
Health and safety,
Human rights,
Customer &
products resposibility,
Child labour

GOVERNANCE

Business ethics,
Compliance,
Board independence,
Executive compensation,
Shareholder democracy

SUSTAINABLE DEVELOPMENT GOALS


ENVIRONMENT
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
SOCIAL
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
GOVERNANCE
5 GENDER EQUALITY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS


ENVIRONMENT
SOCIAL
GOVERNANCE
6 CLEAN WATER AND SANITATION
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
1 NO POVERTY
2 ZERO HUNGER
5 GENDER EQUALITY
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9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
4
5 GENDER
6
11 SUSTAINABLE CITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
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15 LIFE ON LAND
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10 REDUCED INEQUALITIES
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
16 AND STRONG

Importance of Integrating ESG Efforts in Projects and Organizational Goals/Targets

- Climate Crisis
- Reduce energy consumption and demand
- Cost savings
- Creating more resilient systems
- Add capacity for expansions / renovations with no addition equipment
- May be mandated by SEC proposed ruling
- Aligns with SDG 7: Affordable and Clean Energy
- Aligns with SDG 9: Industry, Innovation and Infrastructure
- Aligns with SDG 11: Sustainable Cities and Communities
- Aligns with SDG 12: Responsible Consumption and Production
- Aligns with SDG 13: Climate Action

What are your drivers? What SDGs are you targeting?

- Maintain and operate buildings that use energy and water
- Building new buildings – energy, water, waste, carbon
- Real estate for future RE systems (rooftops, open space on site)
- EV charging stations
- Connecting communities through multi-model transportation

SEC PROPOSED RULE 33-11042

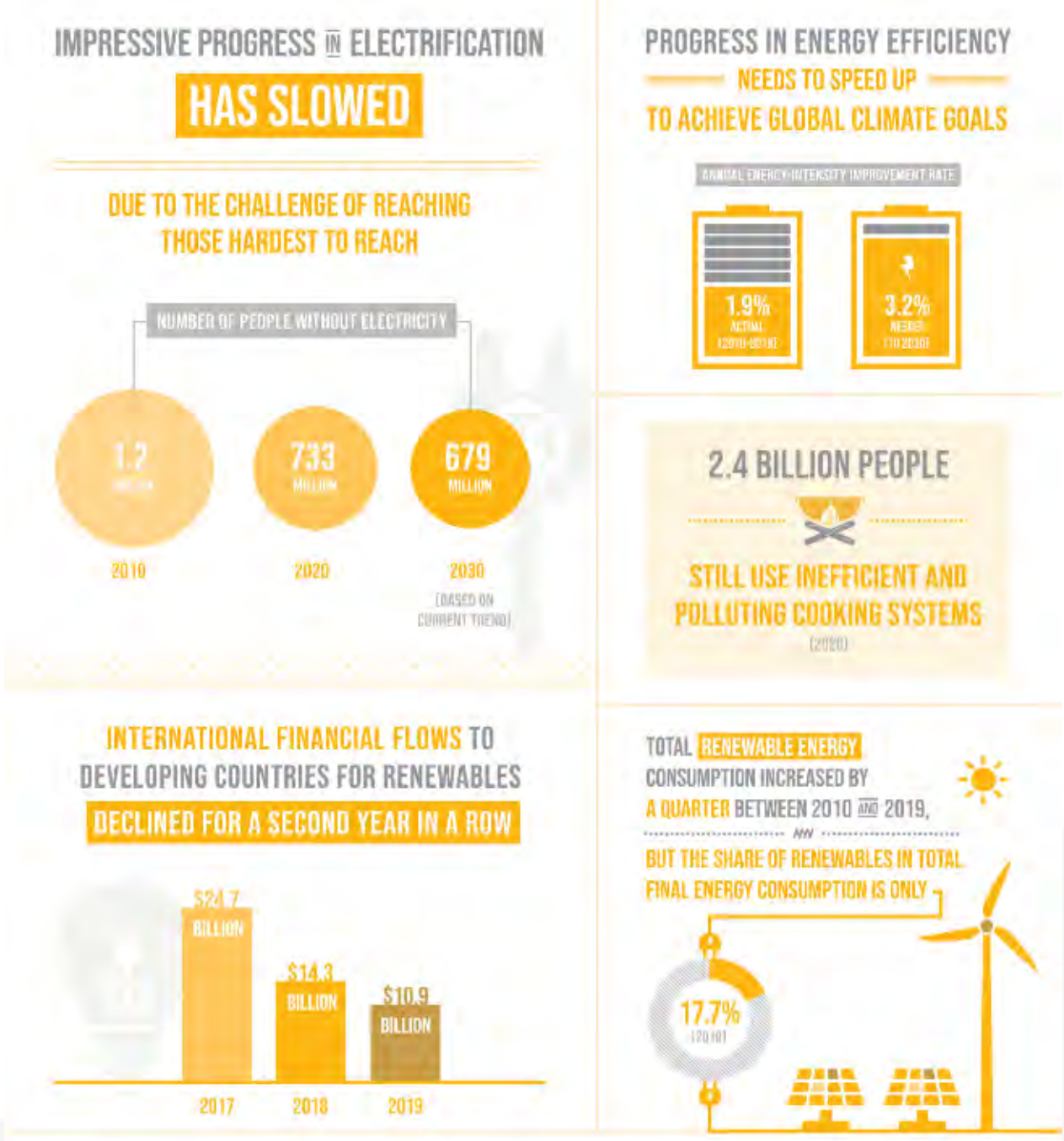
The Enhancement and Standardization of Climate-Related Disclosures for Investors

- Currently **proposed;** *Public comments closed Summer 2022 and reopened in November (still open)*
- Amendments to its rules under the Securities Act of 1933 and Securities Exchange Act of 1934 that would **require registrants to provide certain climate-related information in their registration statements and annual reports.**
- Required information:
  - Registrant's **climate-related risks** that are reasonably likely to have a **material impact on its business, results of operations, or financial condition**
  - Includes disclosure of a **registrant's greenhouse gas emissions** which have become a commonly used metric to assess a registrant's exposure to such risks.
  - Certain **climate-related financial metrics** would be required in a registrant's **audited financial statements.**

SDG 7: Facts and Figures

- 13% of the global population still lacks access to modern electricity.
- **3B people rely on wood, coal, charcoal or animal waste for cooking and heating**
- **Energy is the dominant contributor to climate change, accounting for around 60% of total global GHG emissions.**
- Indoor air pollution from using combustible fuels for household energy caused 4.3M deaths in 2012, with women and girls accounting for 6 out of every 10 of these.
- In 2016, the share of renewables increased at the fastest rate since 2012, up 0.24 percentage points, and reached almost 17.5% owing to rapid growth in hydropower, wind, and solar.

SDG 7: INFOGRAPHICS



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7 AFFORDABLE AND CLEAN ENERGY

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SDG 7: Targets

- 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services
- **7.2: By 2030, increase substantially the share of RE in the global energy mix**
- **7.3: By 2030, double the global rate of improvement in energy efficiency**
- 7.A: By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including RE, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology
- 7.B: By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programs of support

SDG 9: Facts and Figures

- In 2018, 96% of the world's population lived within reach of a mobile-cellular signal, and 90% of people could access the Internet through a third generation (3G) or higher-quality network.
- 16% of the global population does not have access to mobile broadband networks.
- The global share of manufacturing value added in GDP increased from 15.2% in 2005 to 16.3% in 2017, driven by the fast growth of manufacturing in Asia.
- Least developed countries have immense potential for industrialization in food and beverages (agro-industry), and textiles and garments, with good prospects for sustained employment generation and higher productivity

BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

SDG 9: Facts and Figures

- In 2019, the amount of new renewable power capacity added (excluding large hydro) was the highest ever, at 184 gigawatts, 20GW more than in 2018. This included 118GW of new solar systems, and 61GW of wind turbines.
- Capacity investment in solar slipped 3% to $131.1B in 2019, while that in wind climbed 6% to $138.2B – the 1st time wind has outweighed solar in terms of dollars committed since 2010.
- Developing countries continued to outpace developed economies in renewables investment. In 2019, they committed $152.2B, compared to $130B for developed countries.

BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

SDG 9: INFOGRAPHICS

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

GLOBAL MANUFACTURING

HAS REBOUNDED FROM THE PANDEMIC

BUT LDCs ARE LEFT BEHIND

SMALL-SCALE INDUSTRIES

ONLY 1 IN 3 SMALL MANUFACTURERS
ARE BENEFITING FROM A LOAN OR LINE OF CREDIT
(2020-2021)

PASSENGER AIRLINE INDUSTRY

IS STILL STRUGGLING TO

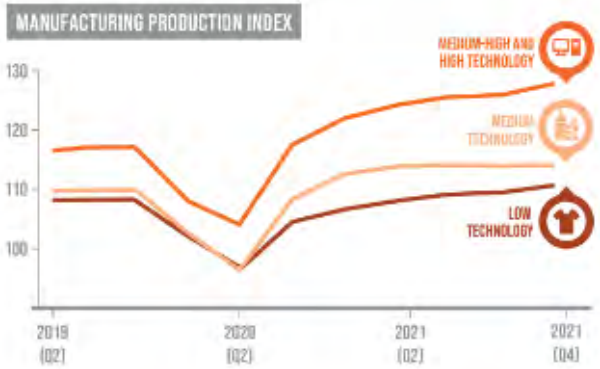
RECOUP CATASTROPHIC LOSSES

2.3 BILLION PASSENGERS IN 2021,
COMPARED WITH **4.5 BILLION** IN 2019

HIGHER-TECHNOLOGY INDUSTRIES

ARE FAR MORE RESILIENT IN CRISES

THAN THEIR LOWER-TECH COUNTERPARTS



1 IN 3 MANUFACTURING JOBS

ARE **NEGATIVELY IMPACTED** BY THE CRISIS

THE SUSTAINABLE DEVELOPMENT GOALS REPORT 2022: UNSTATS.UN.ORG/SDGS/REPORT/2022/

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SDG 9: Targets

- **9.1** Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
- **9.2** Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries
- **9.3** Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets
- **9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities**

SDG 9: Targets

- **9.5** Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
- **9.A** Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States 18
- **9.B** Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities
- **9.C** Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

SDG 11: Facts and Figures

- **Half of humanity – 3.5B people – lives in cities today and 5B people are projected to live in cities by 2030.**
- 95% of urban expansion in the next decades will take place in developing world
- 828M people live in slums today and most them are found in Eastern and South-Eastern Asia.
- The world's cities occupy just 3% of the Earth's land, but account for 60-80% of energy consumption and 75% of carbon emissions.

MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

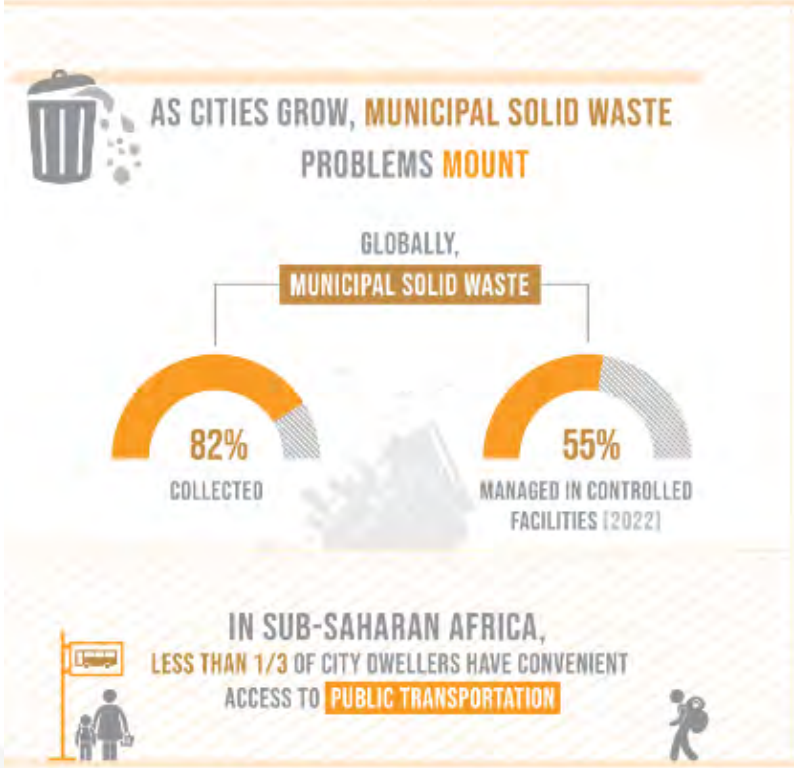
SDG 11: Facts and Figures

- Rapid urbanization is exerting pressure on fresh water supplies, sewage, the living environment, and public health.
- **Cities account for between 60-80% of energy consumption and generate as much as 70% of human-induced GHG emissions**
- 90% of urban growth is forecasted to happen in Asia and Africa in the next 30 years.
- By 2050, 70% of the world population is predicted to live in urban settlements.

MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

SDG 11: INFOGRAPHICS

11 SUSTAINABLE CITIES AND COMMUNITIES



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SDG 11: Targets

- **11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons**
- **11.3:** By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries
- **11.a: Support positive economic, social and environmental links between urban, per-urban and rural areas by strengthening national and regional development planning**
- **11.b:** By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

SDG 12: Facts and Figures

General

- Latest projections show that the global population could grow to around 8.5B in 2030, 9.7B in 2050. The equivalent of almost three planets could be required to provide the natural resources needed to sustain current lifestyles.
- 93% of the world's 250 largest companies are now reporting on sustainability.

Water

- Less than 3% of the world's water is fresh (drinkable), of which 2.5% is frozen in the Antarctica, Arctic and glaciers. Humanity must rely on 0.5% for all of man's ecosystem's and freshwater needs.
- Humankind pollutes water in rivers and lakes faster than nature can recycle and purify

SDG 12: Facts and Figures - Water

- More than 1B people do not have access to fresh water.
- **Excessive use of water contributes to the global water stress.**
- Water is free from nature; the infrastructure needed to deliver it is expensive.
- Water use has been increasing worldwide by ~1% annually since the 1980s.
- Agriculture (irrigation, livestock, aquaculture) is the largest water consumer (69% annually, globally). Industry (including power generation) accounts for 19%; households for 12%.
- From 1995–2015, floods accounted for 43% of documented natural disasters, affecting 2.3B people, killing 157K, and causing $662B in damage.

SDG 12: Facts and Figures - Energy

- **A global switch to energy efficient lightbulbs would save $120B annually.**
- Despite technological advances that have promoted energy efficiency gains, energy use in OECD countries will continue to grow another 35% by 2020. Commercial and residential energy use is the 2nd most rapidly growing area of global energy use after transport.
- Households consume 29% of global energy and contribute to 21% of the CO2 emissions.
- The share of RE's in final energy consumption has reached 17.5% in 2015.
- The global electrification rate reached 89% in 2017 (up 6% since 2010), still leaving about 840 million people without access

SDG 12: Facts and Figures - Food

- Each year, 1.3B tons worth of food (~$1 trillion) ends up rotting or spoiling due to poor transportation and harvesting practices
- 38M children under the age of 5 were overweight or obese in 2019.
- Land degradation, declining soil fertility, unsustainable water use, overfishing and marine environment degradation are all lessening the ability of the natural resource base to supply food.
- The food sector accounts for around 30% of the world's total energy consumption and accounts for around 22% of total GHG emissions.

ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

SDG 12: INFOGRAPHICS

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

UNSUSTAINABLE PATTERNS

OF **CONSUMPTION AND PRODUCTION** ARE ROOT CAUSE OF

TRIPLE PLANETARY CRISES

CLIMATE CHANGE | BIODIVERSITY LOSS | POLLUTION

TOO MUCH FOOD IS BEING LOST OR WASTED

IN EVERY COUNTRY EVERY DAY

HARVESTING | TRANSPORT | STORAGE | PROCESSING

13.3% OF THE WORLD'S FOOD IS LOST AFTER HARVESTING AND BEFORE REACHING RETAIL MARKETS

HOUSE | GROCERY STORE | HOUSEHOLD | RESTAURANT

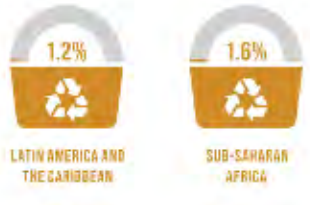
17% OF TOTAL FOOD IS WASTED AT THE CONSUMER LEVEL

OUR RELIANCE ON NATURAL RESOURCES IS INCREASING

RISING OVER **65%** GLOBALLY FROM 2000 TO 2019

VAST MAJORITY OF THE WORLD'S ELECTRONIC WASTE IS NOT BEING SAFELY MANAGED

E-WASTE COLLECTION RATES (2019)



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SDG 12: Targets

- **12.1** Implement the 10-year framework of programs on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries
- **12.2** By 2030, achieve the sustainable management and efficient use of natural resources
- **12.3** By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
- **12.4** By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment
- **12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
- **12.6** **Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle**

SDG 12: Targets

- **12.7** Promote public procurement practices that are sustainable, in accordance with national policies and priorities
- **12.8** By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature
- **12.A** Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production
- **12.B** **Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products**
- **12.C** Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

SDG 13: Facts and Figures

- **Global emissions of CO2 have increased by almost 50% since 1990.**
- Emissions grew more quickly between 2000 and 2010 than in each of the 3 previous decades.
- From 1880 to 2012, average global temperature increased by 0.85°C.
- From 1901 to 2010, the global average sea level rose by 19 cm as oceans expanded due to warming and ice melted. The Arctic's sea ice extent has shrunk in every successive decade since 1979, with 1.07 million km² of ice loss every decade.
- It is likely that by the end of this century, the increase in global temperature will exceed 1.5°C compared to 1850 to 1900 for all but one scenario.
- Average sea level rise is predicted as 24 – 30 cm by 2065 and 40-63 cm by 2100. Most aspects of climate change will persist for many centuries even if emissions are stopped.

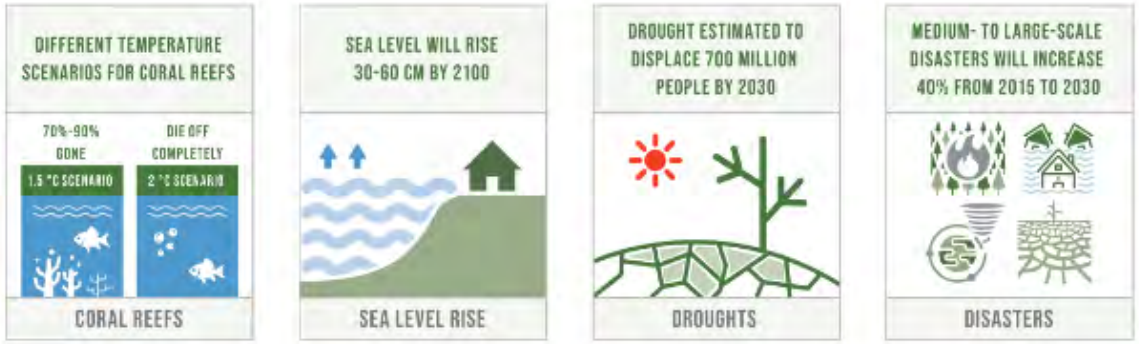
SDG 13: INFOGRAPHICS

13 CLIMATE ACTION

CLIMATE CHANGE

IS HUMANITY'S "CODE RED" WARNING

OUR WINDOW TO AVOID CLIMATE CATASTROPHE IS CLOSING RAPIDLY



ENERGY-RELATED CO_2 EMISSIONS INCREASED

6% IN 2021

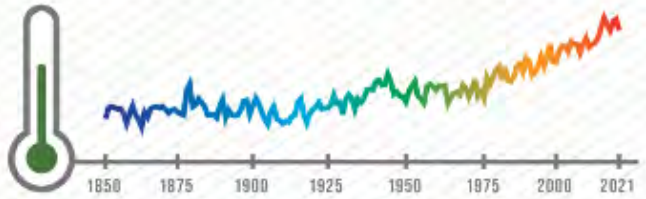
REACHING HIGHEST LEVEL **EVER**

CLIMATE FINANCE

FALLS SHORT OF **$100 BILLION** YEARLY COMMITMENT

DEVELOPED COUNTRIES PROVIDED **$79.6 BILLION** IN CLIMATE FINANCE IN 2019

RISING GLOBAL TEMPERATURES CONTINUE UNABATED, LEADING TO **MORE EXTREME WEATHER**



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SDG 13: Targets

- **13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries**
- **13.2:** Integrate climate change measures into national policies, strategies and planning
- **13.3:** Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
- **13.A:** Implement the commitment undertaken by developed-country parties to the UNFCCC to a goal of mobilizing jointly $100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible
- **13.B:** Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

Internal ESG Reporting

ENVIRONMENTAL, SOCIAL + GOVERNANCE REPORT FY 2022

our journey to a sustainable future

April 2022

CDP

DISCLOSURE INSIGHT ACTION

BRONZE 2022 ecovadis Sustainability Rating

SUSTAINABILITY COMMITMENTS

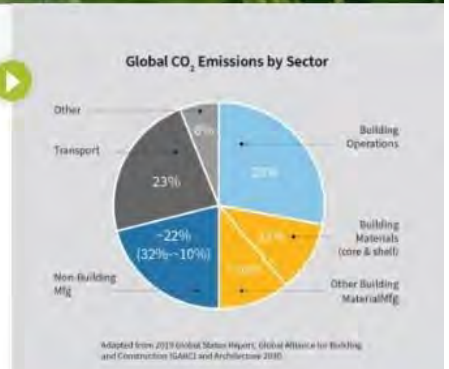
WHY WE ARE SIGNATORIES

The building and construction industry is responsible for 40% of the global carbon emissions. It is critical that architects, engineers, contractors, building owners, policymakers and other associations take accountability for this impact and become leaders and advocates in eliminating carbon from our structures and equipment.

The Carbon Leadership Forum (CLF) is a non-profit organization that propels knowledge through its embodied carbon research and resources, collaboration through its robust network, and action by supporting and empowering its members to advance new ideas and approaches through impactful initiatives.

Through CLF initiatives like the MEP 2040 and the SE 2050 Challenges partner organizations and signatories can advocate for better building materials and equipment, creating a collective call to action for product manufacturers, owners, developers and regulatory agencies.

Working closely with the American Institute of Architects (AIA), CLF has identified a path to collectively approach carbon neutrality in the built environment as a collaborative effort from architects, MEP engineers and structural engineers. In a combined design, construction and advocacy effort from those leaders who have committed to the AIA 2030 Commitment, the MEP 2040 Challenge and the SE 2050 Challenge, we can eliminate carbon from our buildings by 2050.

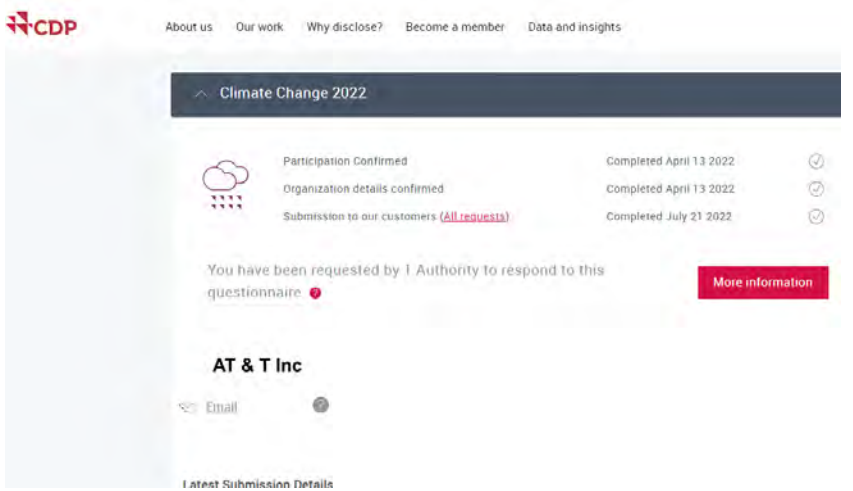


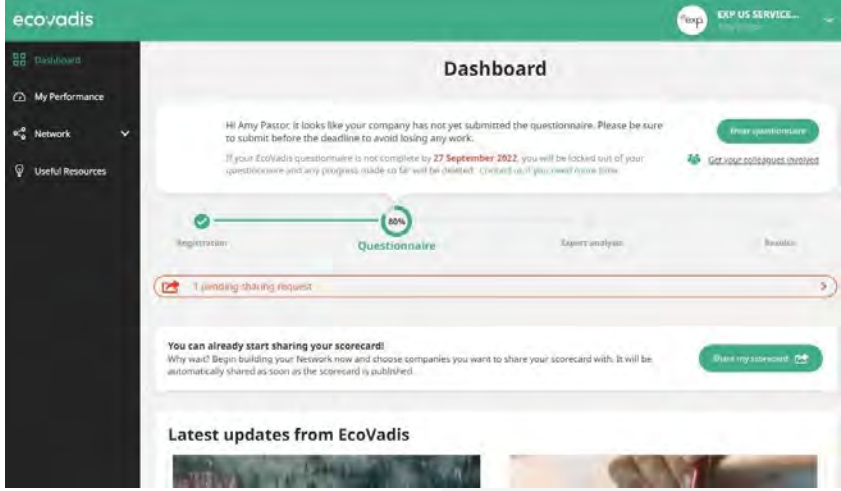
AIA 2030 + SE 2050 + MEP 2040

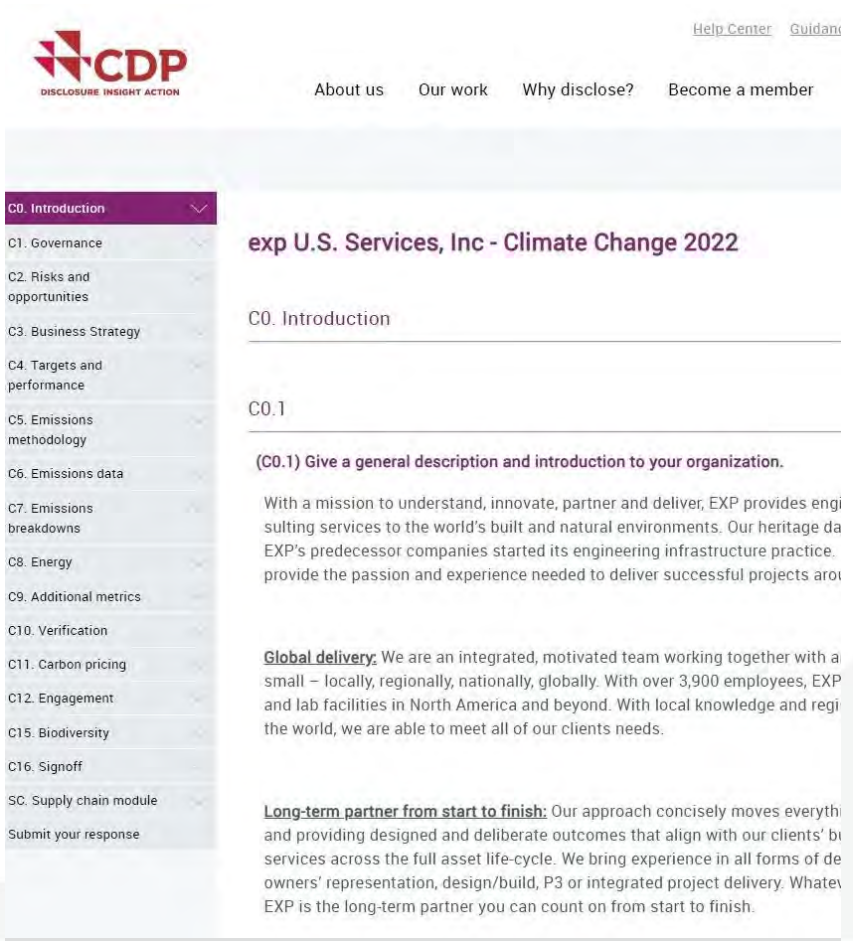
Operational Efficiency

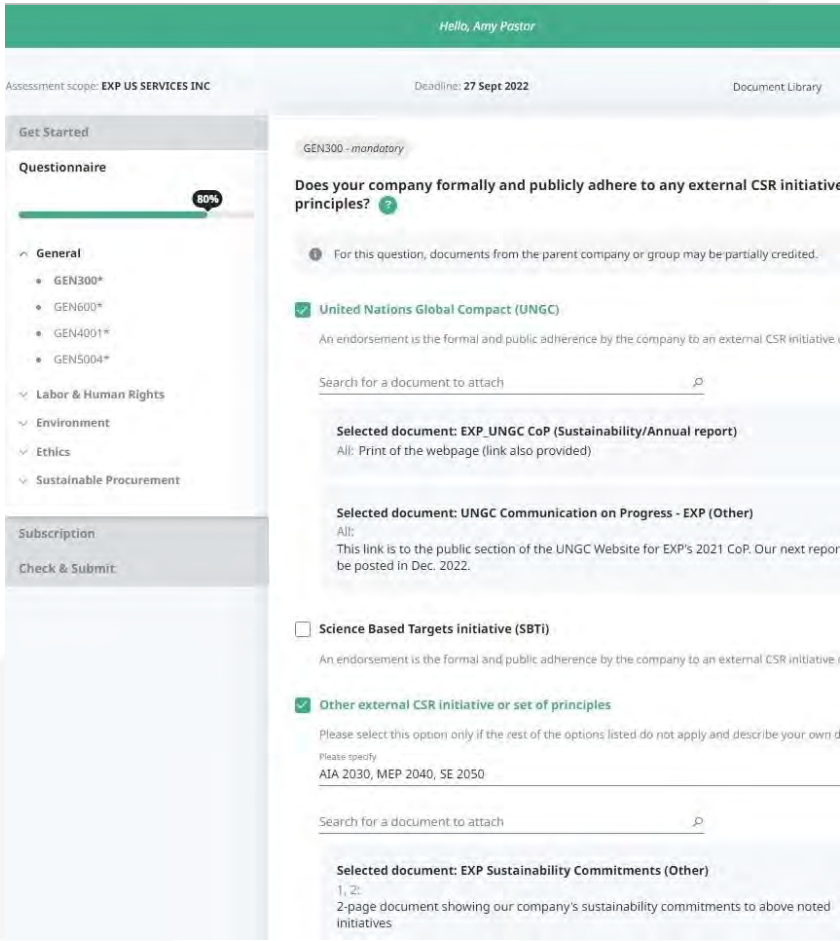
ESG Reporting

- Mandates by Clients for submission of CSR data to 3rd party verification platforms
- Platforms include CDP and EcoVadis
- Data includes collaboration with HR, Legal, EH&S, IS, DE+I and Sustainability









Climate Risk Assessments

IDENTIFICATION OF CLIMATE RISKS AFFECTING EXP'S BUSINESS OPERATIONS

Within each industry and business, understanding climate risks and how they affect our operations – and our clients – has become a key element of EXP's business planning. Acute physical risks, like extreme weather events, can impact our staff's ability to commute to work; our policies and infrastructure have been transformed to enable our 4,000+ professionals the ability to perform their responsibilities remotely. Chronic physical risks, like sea level rise and gradual temperature increases, impact our clients and how they plan, design, construct and operate their facilities. Therefore, it is important that our business model include climate risk assessments for each project. *Transition risks may have the largest impact on our business; where industries rely on fossil fuels, our architects, engineers, technicians, scientists and other professionals must deliver designs that allow for less reliance on fossil fuels, or, for future transitions to no/low carbon technologies.* This includes an assessment of our entire supply chain: where products used on sites and in buildings are carbon-intensive, carbon-free or low-carbon alternatives must be considered.

Our commitment to a better tomorrow today extends beyond the boundary of our organization and to each project we design, client we touch, and each city and region we live, work and play.

EXP'S ENVIRONMENTAL GOALS/TARGETS

As a multidisciplinary firm, EXP has a responsibility to show how we support our clients, our communities and our employees in creating sustainable solutions. One of our fundamental values is a commitment to constantly finding new ways to protect our natural environment and build a sustainable future where people can work well, play well and live well. EXP's 2022 Environmental, Social and Governance (ESG) report places an emphasis on where we are today, and outlines our benchmarks and future targets.

nitment to report annually on our progress, staying relevant in a world of constant change.

dent of Sustainability, Amy Pastor, is the author of the report. She leads the baseline and benchmarking efforts EXP's Scope 1, 2 and 3 emissions, identifies final target dates for reaching climate neutrality, and sets intermediate constant progress. Through ongoing tracking, we are able to communicate our progress to internal stakeholders nts.

GREENHOUSE GAS EMISSIONS WITHIN EXP'S ORGANIZATIONAL BOUNDARY

d to a 5% annual reduction in energy use and associated greenhouse gas emissions and have achieved these baseline year of 2018. We have committed to eliminating the use of paper for non-essential business needs pany-wide initiative for electronic business cards. Goals for reducing travel have also been set – and achieved – to emissions from our baseline year of 2019.

d to annual 3rd party reporting within the EcoVadis and Carbon Disclosure Project (CDP) platforms. Our goals have system and annual reporting tracks and scores our progress.

N OF CLIMATE RISKS AFFECTING EXP'S BUSINESS OPERATIONS

ustry and business, understanding climate risks and how they affect our operations – and our clients – has become f EXP's business planning. Acute physical risks, like extreme weather events, can impact our staff's ability to rk; our policies and infrastructure have been transformed to enable our 4,000+ professionals the ability to perform it otely. Chronic physical risks, like sea level rise and gradual temperature increases, impact our clients and design, uct and operate their facilities. Therefore, it is important that our business model include climate risk each proje tion risks may have the largest impact on our business; where industries rely on fossil fuels, ngineers, technicians, scientists and other professionals must deliver designs that allow for less reliance on fossil ure transitions to no/low carbon technologies. This includes an assessment of our entire supply chain: where products used on sites and in buildings are carbon-intensive, carbon-free or low-carbon alternatives must be considered.

Our commitment to a better tomorrow today extends beyond the boundary of our organization and to each project we design, client we touch, and each city and region we live, work and play.

Sustainable Development Goals (SDG) aligning with EXP's priorities

exp.

exp.

Benchmarking our Carbon Footprint

ANNUAL MTCO2 (COMPANY 31) - SCOPE 1 EMISSIONS

	Chicago	Orlando	San Diego (G)	Ft. Myers - Cleveland Ave	Southfield	Columbus	Ft. Myers - 1st St	TOTAL	TOTAL MTCO2E SM
FY19	0.00	0.00	27.76	0.00	0.00	0.00	0.00	27.76	0.0160
FY20	0.00	0.00	21.31	0.00	*0.00*	0.00	0.00	21.31	0.0123
FY21	0.00	0.00	14.80	0.00	0.00	0.00	0.00	14.80	0.0085
FY22	0.00	0.00	11.85	0.00	0.00	*0.00*	*0.00*	11.85	0.0068
FY23	0.00	0.00	1.69	0.00	0.00	0.00	0.00	1.69	0.0010

Area Summary - Scope 1 only	
Total SF	18,640
Total SM	1,731.70

NOTES
Not full year

ANNUAL MTCO2 (COMPANY 31) - SCOPE 2 EMISSIONS

	Chicago	Orlando	San Diego (E)	Ft. Myers - Cleveland Ave	Southfield	Columbus	Ft. Myers - 1st St	TOTAL	TOTAL MTCO2E SM
FY19	276.50	262.95	42.70	3.47	0.00	0.00	0.00	585.63	0.0538
FY20	268.87	263.92	41.41	4.76	*0.18*	0.00	0.00	579.14	0.0532
FY21	205.28	250.27	37.49	4.37	1.15	0.00	0.00	498.56	0.0458
FY22	196.62	244.42	35.94	4.58	1.22	*1.36*	*0.54*	484.68	0.0445
FY23	41.83	60.07	6.26	0.22	0.21	1.82	1.25	111.67	0.0103

Area Summary	
Total SF	117,107
Total SM	10,879.51

NOTES
Not full year

ANNUAL MTCO2 (COMPANY 31) - SCOPE 1 + 2 EMISSIONS

	Chicago	Orlando	San Diego (E + G)	Ft. Myers - Cleveland Ave	Southfield	Columbus	Ft. Myers - 1st St	TOTAL	TOTAL MTCO2E SM
FY19	276.50	262.95	70.46	3.47	0.00	0.00	0.00	613.39	0.0564
FY20	268.87	263.92	62.72	4.76	*0.18*	0.00	0.00	600.45	0.0552
FY21	205.28	250.27	52.29	4.37	1.15	0.00	0.00	513.36	0.0472
FY22	196.62	244.42	47.80	4.58	1.22	*1.36*	*0.54*	496.53	0.0456
FY23	41.83	60.07	7.95	0.22	0.21	1.82	1.25	113.36	0.0104

NOTES
Not full year

ANNUAL MWh (COMPANY 31) - Purchased Electricity

	Chicago	Orlando	San Diego (E)	Ft. Myers - Cleveland Ave	Southfield	Columbus	Ft. Myers - 1st St	TOTAL	TOTAL MTCO2E SM
FY19	519.23	619.24	188.79	8.18	0.00	0.00	0.00	1,335.43	0.1227
FY20	504.89	621.52	183.08	11.21	*0.30*	0.00	0.00	1,320.99	0.1214
FY21	385.49	589.38	165.74	10.29	1.91	0.00	0.00	1,152.80	0.1060
FY22	369.21	575.59	158.90	10.79	2.04	*2.56*	*1.27*	1,120.35	0.1030
FY23	78.55	141.45	27.69	0.52	0.36	3.43	2.94	254.94	0.0234

NOTES
Not full year

ANNUAL $ (COMPANY 31)

	Chicago	Orlando	San Diego (E + G)	Ft. Myers - Cleveland Ave	Southfield	Columbus	Ft. Myers - 1st St	TOTAL	TOTAL MTCO2E SM
FY19	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	#DIV/0!
FY20	$ -	$ -	$ -	$ -	*$ -*	$ -	$ -	$ -	#DIV/0!
FY21	$ 41,177.48	$ 67,726.50	$ 52,803.77	$ 1,301.41	$ 433.65	$ -	$ -	$ 163,442.81	0.0031
FY22	$ 42,465.29	$ 70,134.01	$ 58,670.16	$ 1,382.41	$ 462.69	*$ 325.48*	*$ 712.97*	$ 174,153.01	0.0028
FY23	$ 10,126.27	$ 19,071.45	$ 10,403.44	$ 138.78	$ 80.20	$ 503.81	$ 1,569.01	$ 41,892.96	0.0027

- Inventory of Scope 1 and 2 emissions from US and Canada offices*
- Inventory of Scope 3 emissions for Printing and Business Travel

Benchmarking our Carbon Footprint - Travel

Travel Reductions - Combined Air and Car Travel								
	FY2020 (BASE YEAR) *4/1/19 - 3/31/20*	FY2021 *4/1/20 - 3/31/21*	FY2022 *4/1/21 - 3/31/22*	FY2023 *4/1/22 - 3/31/23*	Reduction over Base Year (%)			Reduction (%) Compare FY21 to FY22
					FY21	FY22	FY23	
lbs CO2 - Air	3,894,768.26	672,236.10	1,652,894.40	2,039,046.90	82.74%	57.56%	47.65%	-145.88%
lbs CO2 - Car	1,542,201.26	465,748.71	1,621,729.87	785,693.42	69.80%	-5.16%	49.05%	-248.20%
lbs of CO2 (All)	5,436,969.52	1,137,984.81	3,274,624.27	2,824,740.32	79.07%	39.77%	48.05%	-187.76%
MTCO2e (All)	2,466.19	516.19	1,485.36	1,281.29	79.07%	39.77%	48.05%	**-187.76%**

GOAL: 50% below Base Year

At EXP, sustainability is embedded in everything we do. Whether for our clients, in the workplace or our communities, we are driven to educate, improve and take action towards building a sustainable future.

To do this, a sustainability committee has been created to uphold sustainable practices, based on fundamental principles which guide us towards a future with more environmental, social and economic growth.

Sustainable commitments

WE SUPPORT UN GLOBAL COMPACT

ADOPTER architecture 2030 CHALLENGE

MEP 2040

Sustainability news

The recording of the sixth Sustainable Solutions webinar is available

You can now watch the Sustainable Solutions webinar 6 – EXP's sustainable commitments.

more

Important dates

SEPTEMBER 15 — **MEP 2040 Quarterly Forum – A Focus on Owners**
Virtual
Ends on: 2022-09-15

more

Contact

Sustainability committee
sustainability@exp.com

Amy Pastor
Greg Bodnarchuk
Guillaume Halde
Julie Beauséjour
Sarah Wilkinson

explore.

home | my career | my tools | my news | my company | search | legacy intranets

explore ▸ explore v2 (english) ▸ my news

Notice: COVID-19 – latest updates and resources here

important dates

Holidays, conventions and speaking engagements

SEPTEMBER 05 — **Labor Day**
All Offices are closed
Ends on: 2022-09-05

SEPTEMBER 15 — **MEP 2040 Quarterly Forum – A Focus on Owners**
Virtual
Ends on: 2022-09-15
As a signatory firm, EXP is invited to join the MEP 2040 team with our peers and pa

Sustainable Development Goals (SDG) aligning with EXP's priorities

Resources: "The 17 Goals | Sustainable Development Goals." United Nations, United Nations, https://sdgs.un.org/goals

Training and CEU/LU Offerings

Helping Clients Achieve their ESG Goals and Targets

Choctaw Cultural Center

Choctaw Nation of Oklahoma, Durant, OK | *Mechanical, Electrical, Plumbing, Fire Protection, Commissioning*

Carrier Headquarters Building

Carrier Headquarters Building

Carrier Headquarters Building

Lake Nona Wave Hotel

Orlando, FL | Tavistock Development Company

St. Louis Union Station
Historic photo

St. Louis Aquarium
St. Louis, MO | *Mechanical, Electrical, Plumbing, Fire Protection, Technology Design*

Minton-Capehart Federal Building
Indianapolis, IN | *Architecture, Civil, Structural, Mechanical, Electrical*

Minton-Capehart Federal Building (continued)
Exterior

Minton Capehart Federal Building (continued)

East lobby before and after

Minton Capehart Federal Building (continued)

East lobby before and after

Minton Capehart Federal Building (continued)
East lobby after

Margaret Chase Smith Federal Building and U.S. Courthouse

Confidential Client

Florida

Multiple Certifications including LEED Platinum and Net Zero Energy

13

Current or past projects

2+ MW

Onsite renewables

2030

Goal for Carbon Neutrality

award-winning

20+

Years as Trusted Advisor

30

LEED Certified Projects

BUILDING DESIGN AND CONSTRUCTION

LEED

U.S. GREEN BUILDING COUNCIL LEED GOLD USGBC

BUILDING OPERATIONS AND MAINTENANCE

LEED

University of Central Florida (UCF)

Orlando, FL | *IDIQ Commissioning Provider and Sustainability Consultant*

Supporting UCF's Collective Impact Strategic Plan

INSTANT IMPACTS

Facility Improvement Measures (FIM)	Upfront Cost	Projected Savings/yr	Payback Period (yrs)
Pressure wash reflective roof as heat island reduction measure	$2,381 contract + labor	$1,000	2.39
Change LED lights to lower color temp in banquet room	$4.848 supplies + labor	$5,050	0.96
Update building schedules based on occupancy of operations, maintaining a set point of 74°F	$500 labor	$1,540	0.32
Calibrate sensor for operation efficiency	$1,500	$1,705	0.88
Totals	**$9,229**	**$9,295/yr**	

ROADMAP FOR FUTURE SAVINGS

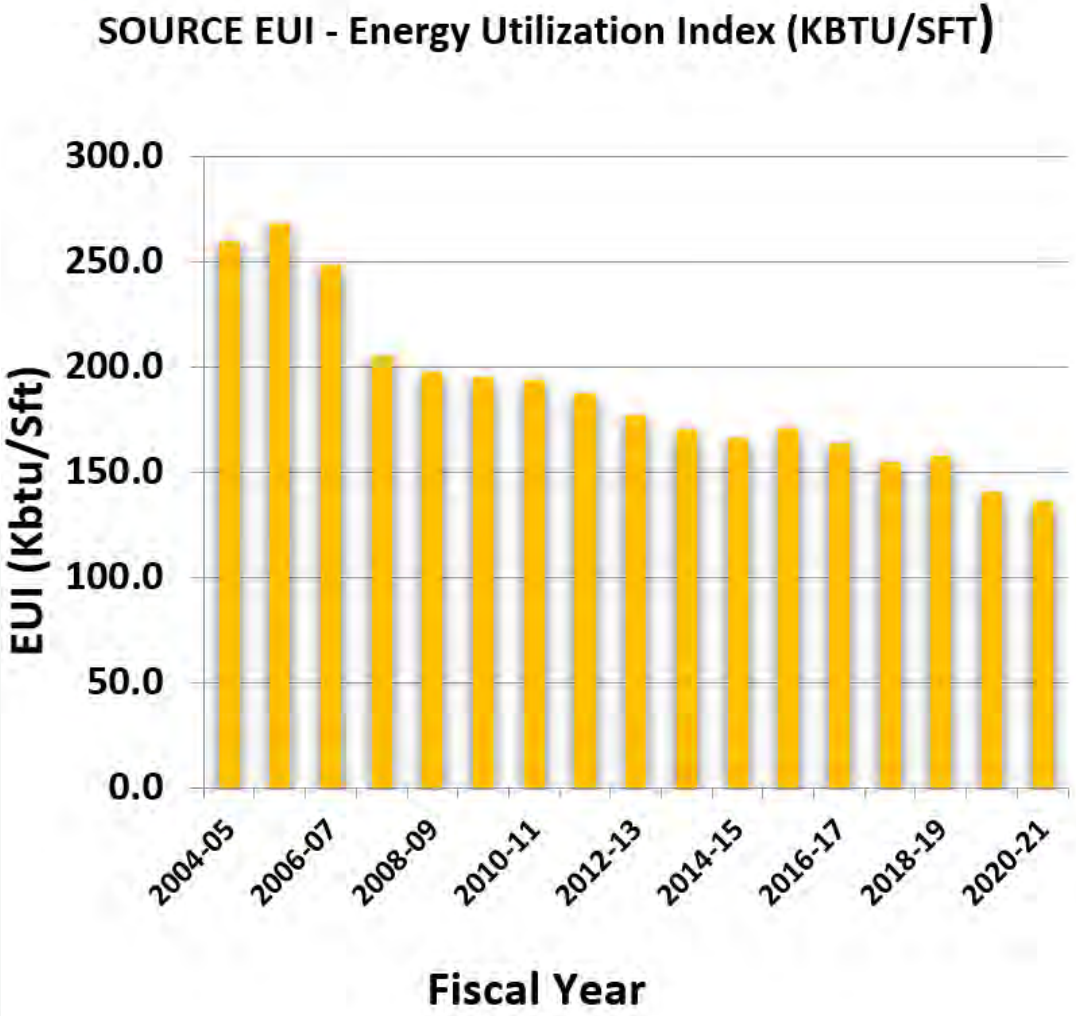
Future FIM	Upfront Cost	Savings/yr	Payback Period (yrs)
Employ static pressure and supply air temperature reset strategies for energy conservation	$1,000	$1,395	0.72
Complete LED lighting retrofits for energy conservation and efficiency	$87,448	$9,275	9.4
Control building pump water operations	$250	$690	0.36
Implement demand control ventilation strategies by managing volume of outside air flow into building to meet code and IAQ	TBD	TBD	TBD
Test/balance all airside equipment to ensure proper airflows are distributed per design	TBD	TBD	TBD
Totals	**$88,698**	**$11,360/yr**	

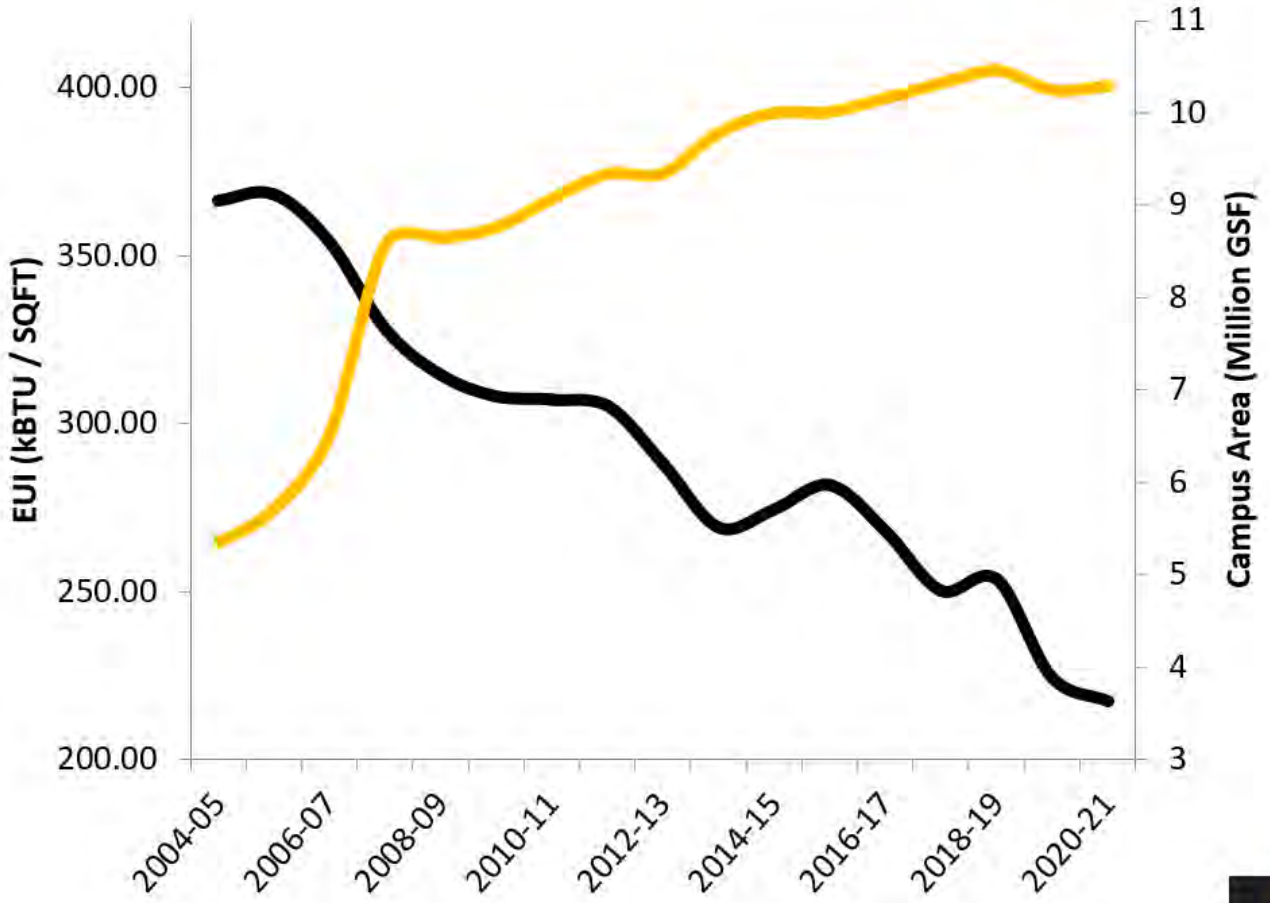
Indoor Water Use Reduction = 31.1% | Outdoor Water Use Reduction = 50.85% | Energy Use Intensity Reduction = 8.3%

Consulting Costs + LEED Registration Costs = $40,050

LEED Impact to UCF's Built Environment

A decreasing Energy Use Intensity





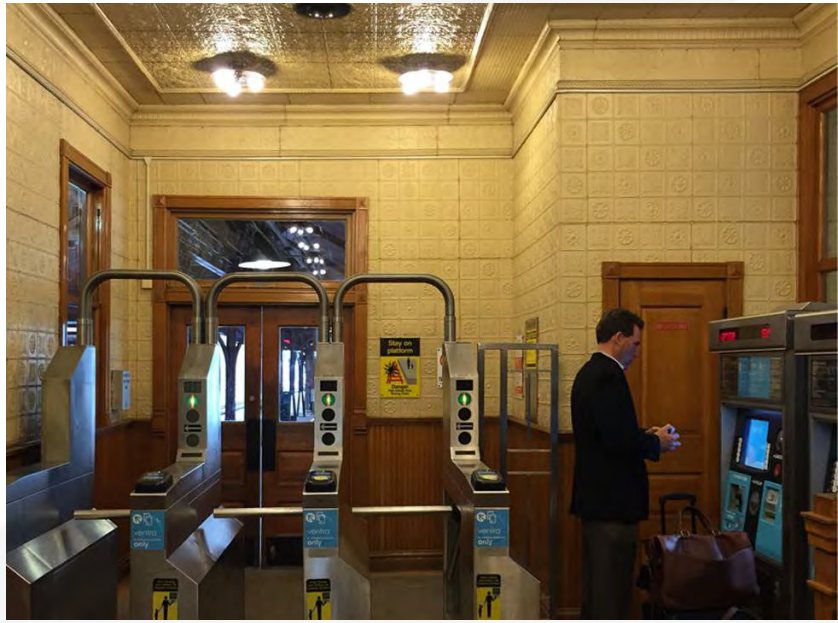
Marina Bay Sands ArtScience Museum, Hotel, Podium and Convention Center

Singapore | *Sustainable Impact Statement, Metering Studies, Solar Feasibility Studies, Retro-commissioning, Energy Audits, LEED Administration, Engineering Rectification*

CTA Red Line 95th Street Station

Chicago Transit Authority Quincy Loop Station

Chicago, IL | *Architecture, Civil, Communications, Electrical, Environmental Design, Fire Protection, Mechanical, Security, Structural*



Chicago Transit Authority Quincy Loop Station (continued)
Chicago, IL

Images courtesy Airport Archive © 1958

St. Louis-Lambert International Airport – Terminal 1

Original terminal

St. Louis-Lambert International Airport – Terminal 1 (continued)
Before renovation

St. Louis-Lambert International Airport – Terminal 1

St. Louis, MO | *Architecture, Interior Design, Structural*

St. Louis-Lambert International Airport – Terminal 1 (continued)

Before renovation

St. Louis-Lambert International Airport – Terminal 1 (continued)
After renovation

St. Louis-Lambert International Airport – Terminal 1 (continued)

Skylight before and after

St. Louis-Lambert International Airport – Terminal 1 (continued)
Skylight after

EXP ROADMAP TO NET ZERO

EXP Services:

- Climate Vulnerability + Risk Assessment
- Sustainable Design
- Commissioning (Envision, LEED, WELL)
- Energy Efficiency Improvements
- Energy Management (EMCS + Metering)
- Heating + Cooling Technologies (Geothermal)
- On-Site / Off-Site Renewable Energy
- Energy Resiliency (Microgrid, Backup Power Systems)
- Fleet Electrification
- Electric Ground Support Equipment
- Electric Vehicle (EV) Charging Infrastructure
- Electric Shuttle Bus Infrastructure
- Low GHG Fuels (Renewable Diesel, Sustainable Aviation Fuel, Green Hydrogen)
- Waste Management (Waste to Energy, On-Site International Waste Handling / Processing, Recycling + Composting Program)
- Water Conservation
- Land Remediation + Development
- Offsets (Carbon Capture, Utilization + Storage, Carbon Offsets)
- Net Zero Revenue Generation Opportunities

City of Montréal New Outremont Campus


35th Street Pedestrian Bridge

35th Street Pedestrian Bridge

HOPE TOWN UNITED + SUSTAINABLE SOLUTIONS

Power Solution:
renewable energy independence
- Solar PV Generation – 5MW
- LNG Microturbine – 1MW
- Battery Storage – 20 MWh
- Smart Grid
- Underground Distribution

BOTTOM LINE: $49M Investment / $128M 10-Year Revenue

Waste to Energy:
harvesting energy from waste
- On-island Waste Disposal
- Free Power and Heat
- No unusable bipraducts
- Minimal emissions
- Expandable business

BOTTOM LINE: $10M Investment / $30M 10-Year Revenue

Domestic RO Solution:
drinkable water for all
- On-demand water supply
- Eliminate the need for individual RO

BOTTOM LINE: $6M Investment / $10M 10-Year Revenue

Communication Fiber:
complete connectivity
- TV, Internet, Phone solution
- Supports network growth

BOTTOM LINE: $8M Investment / $15M 10-Year Revenue

Domestic Hot Water:
hot water from waste heat
- Capture waste heat for on-island use
- Reduces on-island energy demands

BOTTOM LINE: $2M Investment / $2M 10-Year Revenue

Deep Sea Water Cooling:
harvesting energy from the ocean
- Eliminate 35+% of total island energy consumption
- Maintenance free
- Zero impact to the ocean
- 50+ year solution

BOTTOM LINE: $44M Investment / $42M 10-Year Revenue

5G Network:
future of communications
- 4x faster speeds
- More reliable cellular

BOTTOM LINE: Industry Partner

Wastewater Treatment:
reducing pollution
- Reduce environmental impact to land and ocean
- Sustainably treat waste on-island

BOTTOM LINE: $17M Investment

Nam Kong III 54MW Hydropower Project

Laos

Role: Owner's Representation, Environmental, Civil, Geotechnical, Inspection, Structural, Mechanical, Electrical, Commissioning, Construction Management, Sustainability, Water Resources

The Nam Kong III hydropower project is a 54 MW greenfield project in the province of Attapeu, Laos, developed by the private sector. The hydropower development includes a 65m high RCC dam, 470m underground headrace tunnel and a surface powerhouse equipped with 3 x 18MW vertical axis Francis turbines and 115kV transmission line.

As the owner's engineer, EXP provided transaction support and work supervision for the Nam Kong III hydropower project.

Potentia Solar Park Technical Due Diligence
Ontario, Canada
Role: Technical Due Diligence

SOLUTIONS FOR RENEWABLE POWER GENERATION

Various Clients, 800+ Rooftop Solar Projects
Across Ontario, Canada
Role: Engineering, Consulting

Carleton Substation Wind Farm
Quebec, Canada
Role: Engineering, Consulting

Système de biorétention - Avenue Papineau


exp•com