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Meet The Millennials

Who they are
and how they will
change construction

COVER STORY

Millennials Bring New Attitudes

22 Their priorities are sustainability, high ethical standards and career fulfillment. They must be managed differently, or they jump ship.

Cover photos by (left) Aaron Ansarov, (center) Scott Schedivy, (right) Mark Johann. Photo right courtesy of IUPAT.



FEATURE

Trends To Watch at CONEXPO

28 It's time to get ready for the triennial CONEXPO-CON/AGG show. Here is ENR's exclusive list of what is on tap in Las Vegas.

NEWS

Business & Economics

- 10 Accidents:** Three jobsite deaths in Chicago area, New York City raise issues
- 13 Lawsuits:** Former staff seek RMJM bonuses
- 15 Companies:** CDM is set to ink purchase of transportation firm Wilbur Smith
- 18 Business Practice:** Industry firms want directors to offer strategy, says survey

Buildings

11 Seismic Design: Engineers laud interactive ground-motion database

16 Structural Failures: Hundreds of roofs buckle after storms slam Northeast

Transportation

- 12 High-Speed Rail:** Florida governor rejects billions for Tampa-Orlando line
- 13 Mass Transit:** Toronto embarks on first subway extension in a decade

Water & Power

14 Water Supply: Third Lake Mead intake tunnel tough job for water authority

Environment

15 Technology: Laser-guided boring system pinpoints sewer piping

Power & Industrial

17 Nuclear Energy: Enrichment plants starting to move toward production

18 Information Technology: Release of free 3D model viewer rocks the BIM world

DEPARTMENTS

- 2** Online
- 4** Construction Week
- 6** Washington Observer
- 20** Construction Economics
- 42** Products
- 43** Pulse
- 83** People
- 85** Official Proposals (cont. on pp. 86-87)
- 88** Viewpoint



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ADDITIONAL CONTENT ONLINE



Find out what to expect at 2011 CONEXPO. Page 28

UPCOMING ISSUES

- March 7 Asset Management
- March 14 Web News and Updates
- March 21 CONEXPO Special Report
- March 28 First Quarterly Cost Report

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offices: Two Penn Plaza, New York, N.Y. 10121-2298. Phone (212) 512-2000. Postmaster: Please send address changes to ENR/Engineering News-Record, Attention: Fulfillment Manager, P.O. Box 5730, Harlan, IA 51593. Periodicals postage paid at New York, N.Y., and at additional mailing offices. Canada Post Publication Mail Agreement No. 40012501. Registered for GST as The McGraw-Hill Companies. GST #R123075673. RETURN UNDELIVERABLE CANADIAN ADDRESSES TO: DHL Global Mail, 355 Admiral Blvd-Unit 4, Mississauga, ON L5T 2N1. Email: enrcustserv@cdsfulfillment.com. Copyright, printing and reprinting: Titles Engineering News-Record (ENR) and CONSTRUCTION WEEK reg. ® in U.S. Patent Office. Copyright © 2011 by The McGraw-Hill Companies. All rights reserved. Officers of The McGraw-Hill Companies, Inc.: Harold W. McGraw III, Chairman, President, and Chief Executive Officer; Jack F. Callahan Jr., Executive Vice President and Chief Financial Officer; Kenneth M. Vittor, Executive Vice President and

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Millennials Bring

Their priorities are sustainability, high ethical standards and career fulfillment.

The Millennial generation will compose the majority of the construction workforce by 2018, according to the U.S. Census. They are entering in a torrent that can either infuse energy into firms or drown them. Each company will choose what happens by how it adapts to new styles of recruitment, management and retention.

Call them Millennials, Generation Y or Generation Next—all these names are used—but demographers interviewed by ENR and many Millennials themselves agreed the names all try to classify a distinctive group of Americans born after about 1980 who are part of a wave that continues today. Each year, this rising generation of construction professionals and craftspeople gets more relevant not only because of its growing numbers in the workforce but because of the singular qualities it brings. One key quality of Millennials is that they are digital natives—they barely remember the era before computers.

Millennials told ENR they want two things from the construction industry: respect and change, and they likely will get both. The vacuum created by the large numbers of baby boomers (born between 1946 and 1964) now beginning to retire will draw Millennials into managerial roles at an early age.

“The biggest challenge facing the construction in-

Continued on page 24

COVER STORY WORKFORCE

Only nine of 25 Millennial-aged construction professionals and craftspeople surveyed by ENR mentioned “hard work” in response to the question “How do you get older colleagues to take you seriously?”



Conrado Rodrigues, 25

Assistant Construction Manager, SIKON Construction Co. LLC, Deerfield Beach, Fla.

A 2009 graduate with a B.A. in building construction management and now working for SIKON Construction, Conrado Rodrigues believes his generation holds the key to a more productive industry.

“While the older generation tends to react to change negatively, the younger generation is more open to changing the way the process is done and using new technology to increase the efficacy of the building process,” says Rodrigues. “Ultimately, these innovations will help us find new ways to deliver the final product faster, safer and under budget.”

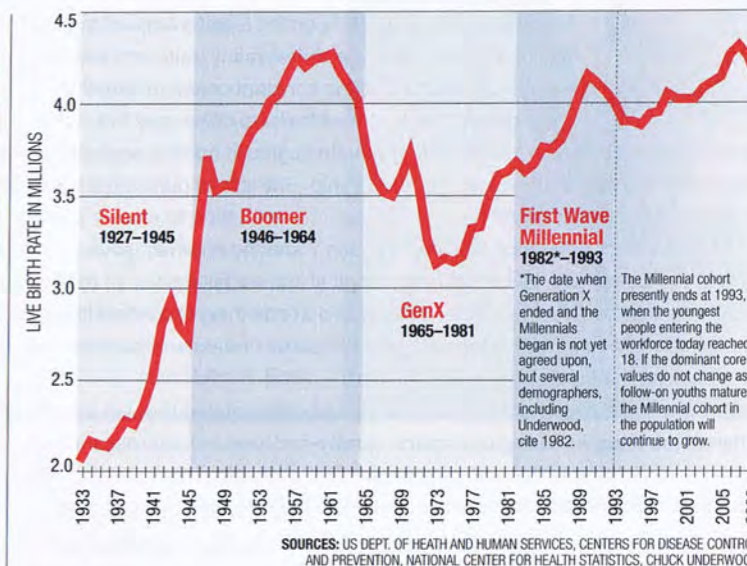
Rodrigues says he believes young people moving into the business bring high ethical standards and a shared conviction that the best way to long-term success is to “treat clients fairly and with respect,” which will promote repeat client business and build a sound reputation.

Rodrigues, who immigrated to the U.S. from Brazil as a child with his parents, is fluent in three languages and not afraid of challenges and change. He chose a less traditional general contractor that allows him to play multiple roles within project management, business development and estimating.

PHOTO BY ARON ANSBROY

New Attitudes

They must be managed differently, or they jump ship. By Luke Abaffy



Who Is a ‘Millennial’?

Generations are defined by the core values they carry for a lifetime, according to Chuck Underwood, founder and principal of Generational Imperative Inc., a Miamisburg, Ohio-based consultancy. The youngest people now flowing into the workforce are first-wave Millennials, aged 18 to 29 years old. Some demographers set the start of this generation slightly earlier, but there is broad agreement on who the Millennials are, what makes them tick and why managers and colleagues should care.

“New generations begin when there’s a significant change in the times they’re going to experience in their youth or the values they develop,” says Underwood. The values of the dominant generation in the workplace become the values of the leaders guiding the nation. The attitudes, beliefs, interests and styles of the 25-year-old Millennials today are a strong predictor of the nation’s direction.

Millennials should be recruited, trained, managed and promoted differently with respect for who they are. Further, different incentives will be needed to retain them. The firms recognizing this will attract the best, Underwood says.

Millennials were born at an average rate of about four million a year; this rate is equal to the rate of the huge baby-boomer generation, born between 1946 and 1964, but perhaps continuing longer—the end has not yet been determined. Underwood holds that membership in a generation is not confirmed until children reach 18 and societal core values are unchanged.

Both the boomers and the Millennials are much larger than Gen X, born between 1965 and 1981; but all are making distinct contributions, shaped by their values. Boomers are change agents, X-ers excel at innovation, and Millennials promise to be terrific employees and people leaders, but they will have demands.

Read Underwood’s full discussion on ENR.com ■

By Judy Schriener



Elizabeth McAndrew-Benavides, 31

Manager of Industry Infrastructure,
Nuclear Energy Institute, Washington, D.C.



"I choose to be an engineer to help the country produce clean electricity and reduce its carbon imprint," says McAndrew-Benavides, a manager of industry infrastructure at the Nuclear Energy Institute, an industry group in Washington, D.C., that promotes nuclear energy. Although the 31-year-old is on the leading edge of the Millennial generation, she shares many traits with her younger cohorts, including constant career revamping and a passion for sustainable energy. She says this passion motivated her to get an undergraduate degree in nuclear engineering and a master's degree in educational leadership. She is now pursuing a Ph.D. in organizational leadership.

"There's a stark difference between the Gen Y and the boomer," says McAndrew-Benavides. "All of the psychological and social aspects of the past 50 years feed into this a little." She adds that one thing she would like to see change in the industry is for companies to better understand generational communication barriers.

She began her career at NEI six years ago. She has rotated through seven different job titles, including operations, quality-and-performance assurance, nuclear engineering and technical assistant to the vice president. She is president of the North American Young Generation in Nuclear group.

dustry today is the transition of power to the Millennial generation," says Jennifer Gross, a 26-year-old design engineer in San Francisco. "Our generation will change how management and employees interact in the A/E/C industry. We have a different approach to the work/life balance [and] the drive to change the industry."

COVER STORY
WORK-FORCE

Ellina Yin, 25

Business Development Manager,
GSE Construction, Livermore, Calif.

Ellina Yin likes to quote Horace Mann, who said, "Be ashamed to die until you have won some victory for mankind." Yin says the deep motivation she drew from that quotation led her to construction wastewater treatment as her path to victory. "I've always had an interest in water and preserving the oceans," Yin says. "I can't imagine myself in any other field."

The 25-year-old is the youngest worker at her company's headquarters. Her youth, coupled with being a woman, differentiates her from most of her co-workers. However, she says, her work ethic aligns most closely to the older people on the staff. She finds satisfaction in hard work but says this does not come automatically with most members of her generation.

"The people who we've hired out of



ELLINA YIN goes over the Mocho Ground Water Demineralization Plant, Pleasanton, Calif.

college seem to have an entitled attitude," Yin complains. "They're very eager to prove themselves, but as far as taking instruction and going through the hard work, I think they have a lot to learn. I started working at 16 and had a more traditional upbringing and value system than many of them."

Offering eloquent quotations and high

In order to mentor the next generation of construction professionals, baby boomers must understand the Millennial mind-set to help groom them for leadership roles. Gross and her peers also are searching for ways to prepare themselves to fill the many positions that will open up as boomers retire. "Many of us know we can move quickly," says Elizabeth McAndrew-Benavides, a 31-year-old manager of industry infrastructure at the Nuclear Energy Institute at Washington D.C. "I went from assistant engineer to engineer to senior engineer in three and a half years."

Banding together is one strategy that comes naturally to Millennials, and they have done just that in forming the Construction Millennials of America, a Facebook-powered group for Millennials only.

Like generations before them, the Millennials' lives were molded partly in response to perceived shortcomings of the preceding generation, Gen X, born between 1965 and 1981. In 1983, Terrel Bell, then U.S. secretary of education, released "A Nation at Risk," a report on the state of the U.S. education system that gave it a failing grade, and, among myriad other societal influences, caused boomers to heighten their involvement in their children's development, demographers say.

Boomers were more informed by scientific studies and child-centered media (Child magazine launched in 1986, Parenting magazine in 1987) than any previous generation, researchers say, and that changed the child-raising environment. According to a University

ideals about the clean earth for which she strives, Yin says she believes hard work is the only way to achieve it—even if it means sometimes starting her day at 4 a.m.

She is a member of the Construction Millennials of America, a group formed to connect young workers as well as identify and address generation-gap issues.

Jonathan Gaul, 30

Business Manager, Local 39
Painters' international union,
Dartmouth, Nova Scotia, Canada

Jonathan Gaul, an industrial painter and union member since age 18, considered leaving the union after earning a B.S. degree in computer science in 2004. But Frank MacKinnon, his 66-year-old predecessor, changed Gaul's course by appointing him training manager; last year, MacKinnon handpicked him over more senior candidates to run the 1,000-member local, which spans four maritime provinces.

"I wanted someone who would do a better job than I did," says MacKinnon. "I saw that in him, so I scooped him up just at the right time." Gaul says he "enjoyed the trade and the guys I was working with, but it never entered my mind to pursue a career

GAUL already a 12-year painters' union veteran, was hand-picked last year to run Canada's only multi-province local, with nearly 1,000 members.

with the union itself." He credits the painters' Young Lions program, launched by General President James Williams in 2009, with focusing union attention on next-gen potential. "You still have to identify people for leadership, but now it's organized," says Gaul.

Gaul already has brought all union training online and is beefing up the local's digital database. "My big challenge is to find new ways to get our voice across to members, particularly younger ones," he says. MacKinnon also credits his rapport with area contractors. "Jon's been through two rounds of collective bargaining," says MacKinnon. "He'll be good."

With Debra K. Rubin



of Michigan Institute for Social Research study, during the period from 1981 to 1997, the amount of time kids aged three to 12 spent watching TV dropped by 23%, while the time they spent playing sports organized by teachers and parents increased by 27%.

Many Millennials grew up being shuttled from teachers to tutors to coaches and then back to the parents. They had far less unsupervised free time than their parent's generation and, as a result, are comfortable working with older adults, says Charles Underwood, a demographer and founder of The Generational Imperative Inc., Miamisburg, Ohio.

"Millennials have a significant respect, reverence and trust of older people," Underwood says. "They

Fifty-two percent of the 25 Millennials surveyed by ENR said their generation should improve communication among industry segments.

came of age with parents, teachers and counselors who were their best friends and role models. They not only need a mentor, they need a buddy. They are excellent team players. They will care about the entire organization, not just their own jobs."

But on the flip side, Underwood says Millennials postpone commitments to career, marriage and parenting. He links the lack of commitment to the job-hopping characteristic of the group, something the Millennials themselves confirm.

"If the organization isn't the right fit, it's perfectly socially acceptable for us to jump," says McAndrew-Benavides. She cautions younger colleagues not to give up too quickly. "Sometimes you have to do work you don't necessarily love for six to 12 months to get where you want," she says.

Underwood says companies that do not meet the Millennial's expectations will have to "settle for the second-tier employees."

Lukas Petrash, a 27-year-old architect in Houston, is similarly impatient to get on. "This generation has a lot of good ideas and talent and wants to use that immediately," he says. "We are used to the Internet, where you can become an instant success overnight."

In a display of devotion to sustainability that is typical of Millennials, Petrash founded Adia (thinkadia.com), an uber-eco, cost-effective house prefabrication company that sells \$30,000 house kits that ship anywhere in the world for \$3,000.

"The Gen Y people have a different value system and way of communicating," says William W. Badger, a professor at Arizona State University in Tempe, who mentors select upperclassmen. When managing Millennials—or Gen Ys, as he likes to call them—he



SEAN ESTILL, 29-year-old mechanical engineer with Leland Saylor Associates in San Francisco says, conditions are tough for the construction industry but, "balancing the knowledge of the older generation with the tech know-how of the younger," is the path to security.

PHOTO (BOTTOM) BY MARK JOHANN

Jonatan Schumacher, 29

Senior Automation Engineer,
Thornton Tomasetti,
New York City

Jonatan Schumacher epitomizes a generation that has grown up with technology, and he is implementing this long-ingrained technical familiarity to keep his firm on the cutting edge and pull his older co-workers into the future.

"He has a very unique set of skills," says Robert K. Otani, vice president of Thornton Tomasetti and Schumacher's manager.

"This complex skill set includes geometry, engineering and architecture—that's a rare combination of skills. It weaves what we do as engineers to architects and fabricators."

Schumacher is working closely with design teams with software called Grasshopper, a scripting interface for architects and designers imbedded inside the rendering software, Rhino. Grasshopper



SCHUMACHER

shows a 1:33 scale model of the Basra Main Stadium under construction in Basra, Iraq, to be ready for the Gulf Cup in 2013.

makes Rhino parametric and gives Schumacher the ability write code using a graphical interface. Now, Schumacher can do in five days with Grasshopper what used to take two months.

"This software is a way to stay connected from inception to fabrication," says Schumacher.

Otani and Schumacher agree the industry is becoming more integrated, allowing for a more rational, informed design before it ever leaves the architect. Though the process is streamlined, the demand is high and Schumacher is working hard. "I've been called a workaholic," he says. "But I love doing this. It's like a chess game."

notices they want fewer rules and more freedom. "The new perception of fairness in management is to treat everyone as special, not to treat everyone the same. The bad boss micromanages and controls. The good boss gives high degrees of freedom."

Badger's co-researcher, Avi Wiesel, says the Millennials work best if information is "cut into bits of what they need to know" and delivered on a schedule of when they need to know it. Computers process information the same way.

In 2009, in a Pew Research Center survey of 1,850 Americans on the factors that define the Millennials and previous generations, 73% cited use of computers and new technology.

Badger says his students have an outside-the-firm professional network—comprising friends, family and other connections—which they use to answer questions 24 hours a day. "Their speed of communicating is so much faster than us old people," says Badger. He thinks the technological communication skills of construction project managers will definitely change as the Millennials take the stage. "Older construction folks aren't well equipped to do this," he says.

Sean Estill, a CMA member and mechanical engineer for Leland Saylor Associates, San Francisco, says, "Many in the older generation can barely use Excel, but the young people only work on-screen and are very comfortable with computer modeling. Most old guys saw Green and LEED as a fad, but the young embraced it—and it has become a standard in design."

The Pew survey also found 58% of the respondents cited a lower work ethic as being the biggest deficiency of Millennials compared with previous generations.

**COVER STORY
WORK-FORCE**

Sixty percent of the 25 Millennials surveyed by ENR cited the poor economy as one of the biggest challenges facing the construction industry and their careers.

Rick Cherf, professor of architecture and construction management at Washington State University, Pullman, is pessimistic. He says few of his students have what it takes to be successful in construction.

"In our industry, if you're going to be successful, you've got to work really hard, a minimum of 50 to 60 hours a week," says Cherf. "Do they want to work hard and stay in the industry or quit?"

Shiry Zofnat, 31, who works as a director of acquisitions and development for the Trump Organization in New York City, doesn't fear for the future of the industry, although she worries about losing the "superior on-the-job training experience" of the older generation. She adds, "Nothing is ever going to stop the torch from being passed. People will retire when they retire, and those who excel will excel."

Brian Bowen, a 75-year-old retired construction manager turned professor at Atlanta's Georgia Institute of Technology, is hopeful. "I think the industry really needs more brain and less brawn," he says. "A trend that we've seen very much is a lot of people returning to get a master's degree and upgrading their skills, recognizing that this is what's needed in the industry today." As technology creeps onto construction sites, tech expertise and "ways to use it are going to be really paramount," he adds. "The Millennials have a fabulous opportunity to bring this industry up."

Conrado Rodrigues, a 25-year-old assistant construction manager with SIKON Construction Co. LLC, Deerfield Beach, Fla., agrees. "The industry as a whole has evolved," says Rodrigues. "The young generation of construction professionals is better educated, trained and focused than ever before." ■

PHOTO (TOP) BY SCOTT SCHEWY



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