

TOP 10

Investment
companies
in the USA

SENTIENT TECHNOLOGIES

CEO Babak Hodjat on
creating the world's largest
distributed AI platform

SCHNITZER STEEL

Sustainable procurement
at the global leader in
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FOREWORD

WELCOME TO THE latest edition of Business Chief USA. This June, we have an issue jam-packed with insight for business leaders.

For our leadership feature this month, Babak Hodjat, CEO of Sentient Technologies, discusses his plans for the future of the company and the current state of play with artificial intelligence

Meanwhile, we caught up with Everbridge, a company which manages critical events from terror attacks and natural disasters to IT outages by using state-of-the-art software to keep businesses running and employees safe.

Finally, looking into people management, Sony Electronics' Head of Corporate Communications Cheryl Goodman discusses the rise of women in STEM and how females can be encouraged to make it to the top.

Shedding a more global light on the subject, we asked Lloyd Snowden of Oliver Wight to talk us through the importance of value

chains in sustainable business planning, and how making the most of them can add to any business.

We've also brought you the most exciting businesses Los Angeles have to offer and looked at Investopedia's 'Best Wealth Management Firms' and Fortune's '40 Best Companies in Financial Services' to bring you a list of the top 10 investment companies in the United States, by revenue.

Be sure to take a look at our company profiles where we share the most exciting new developments for big businesses in the region. This month features Oportun, T5 Data Centers, the UCSF PCMB Project, Server Farm and more.

We hope you enjoy this month's magazine, and as always welcome your feedback on Twitter.

@Business_Chief

Enjoy the issue!



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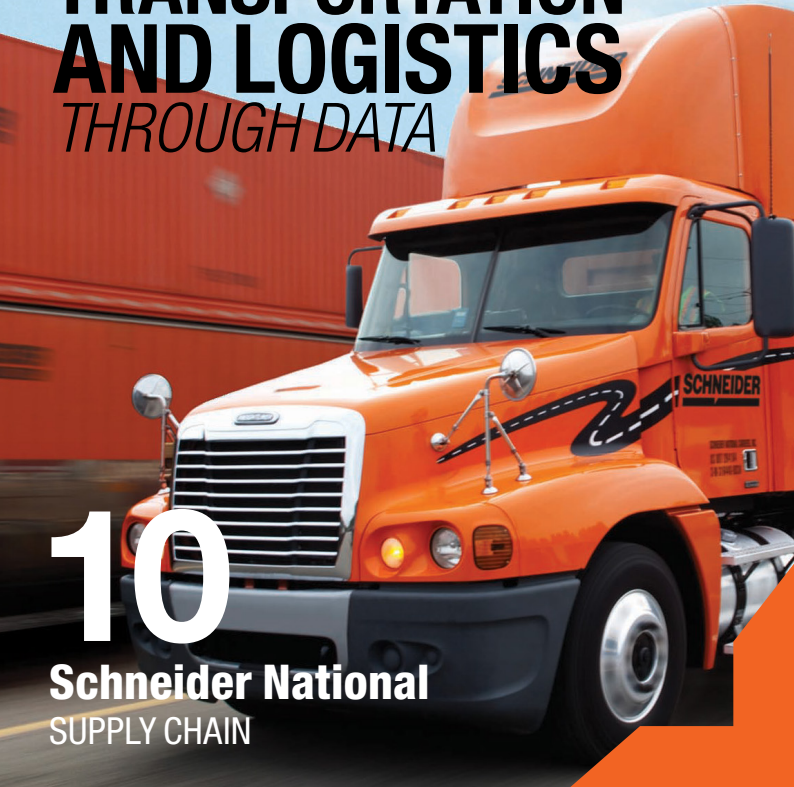
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REDEFINING TRANSPORTATION AND LOGISTICS *THROUGH DATA*

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Schneider National
SUPPLY CHAIN

The background features a glowing blue circuit board with binary code (0s and 1s) scattered throughout, creating a high-tech, digital atmosphere.

GETTING UNDER THE SKIN OF AI

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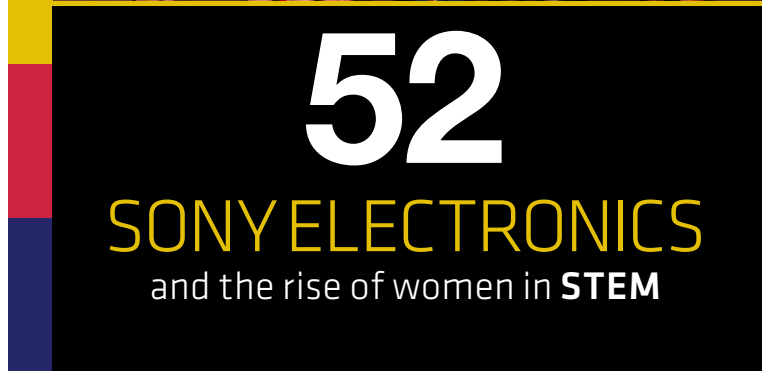


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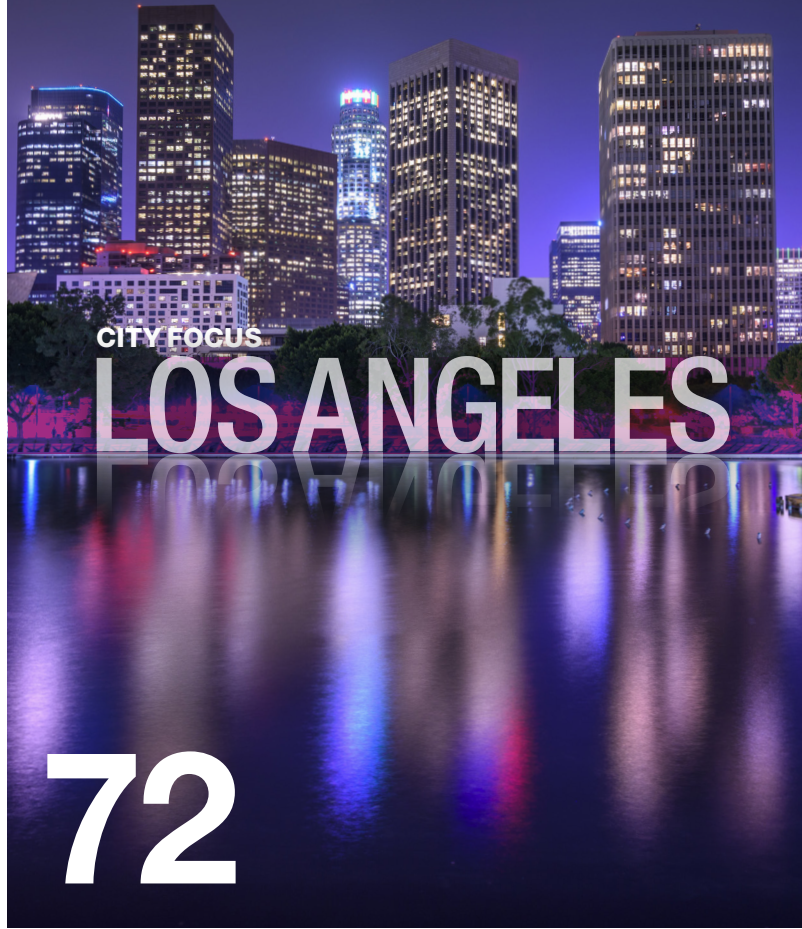
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HOW MORE CAN
BE DONE TO MAKE
THE MOST OF
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CITY FOCUS

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SUPPLY CHAIN



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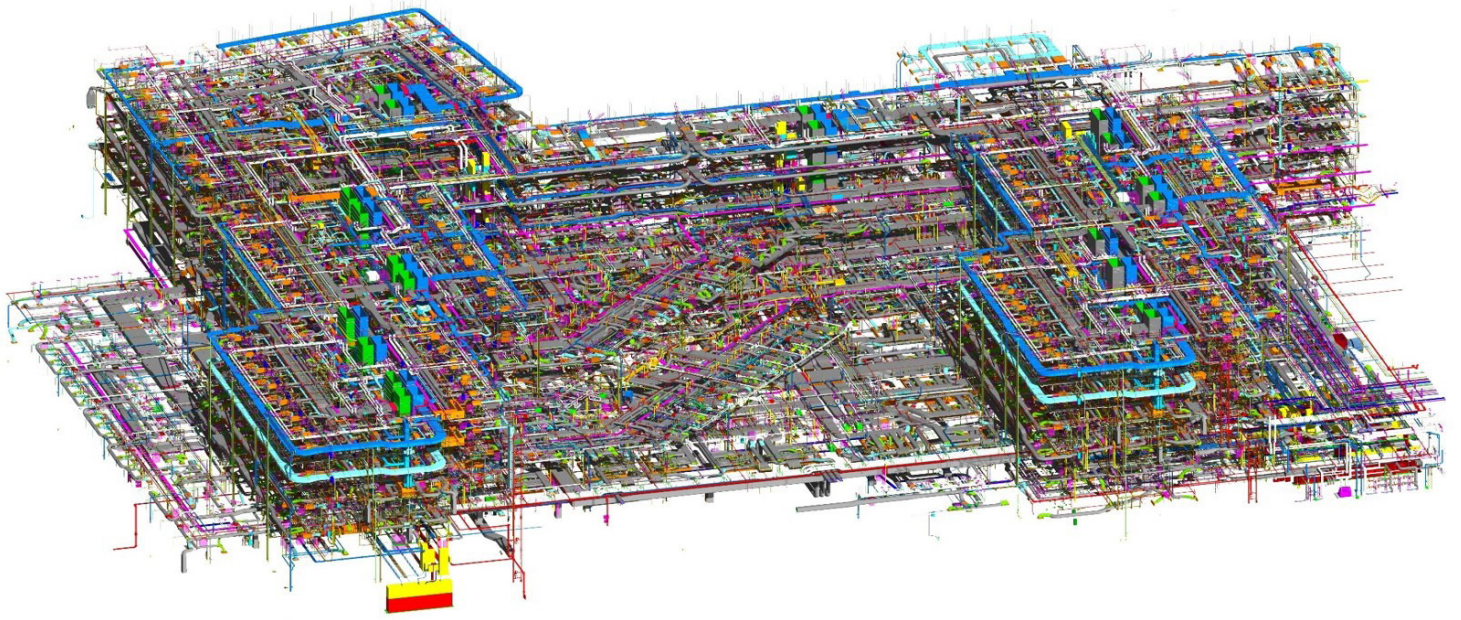
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NAHB Industry forward
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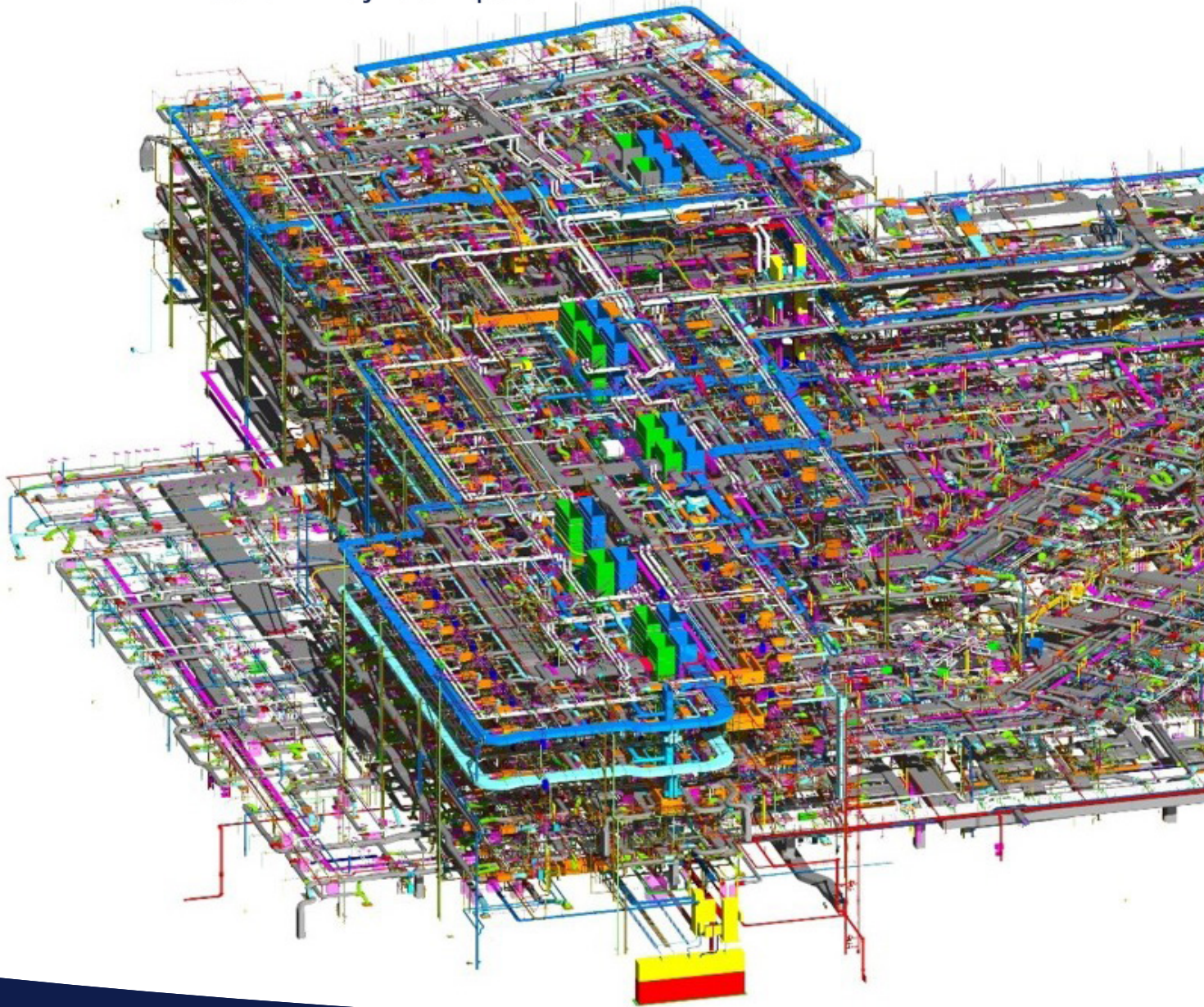
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CONSTRUCTION

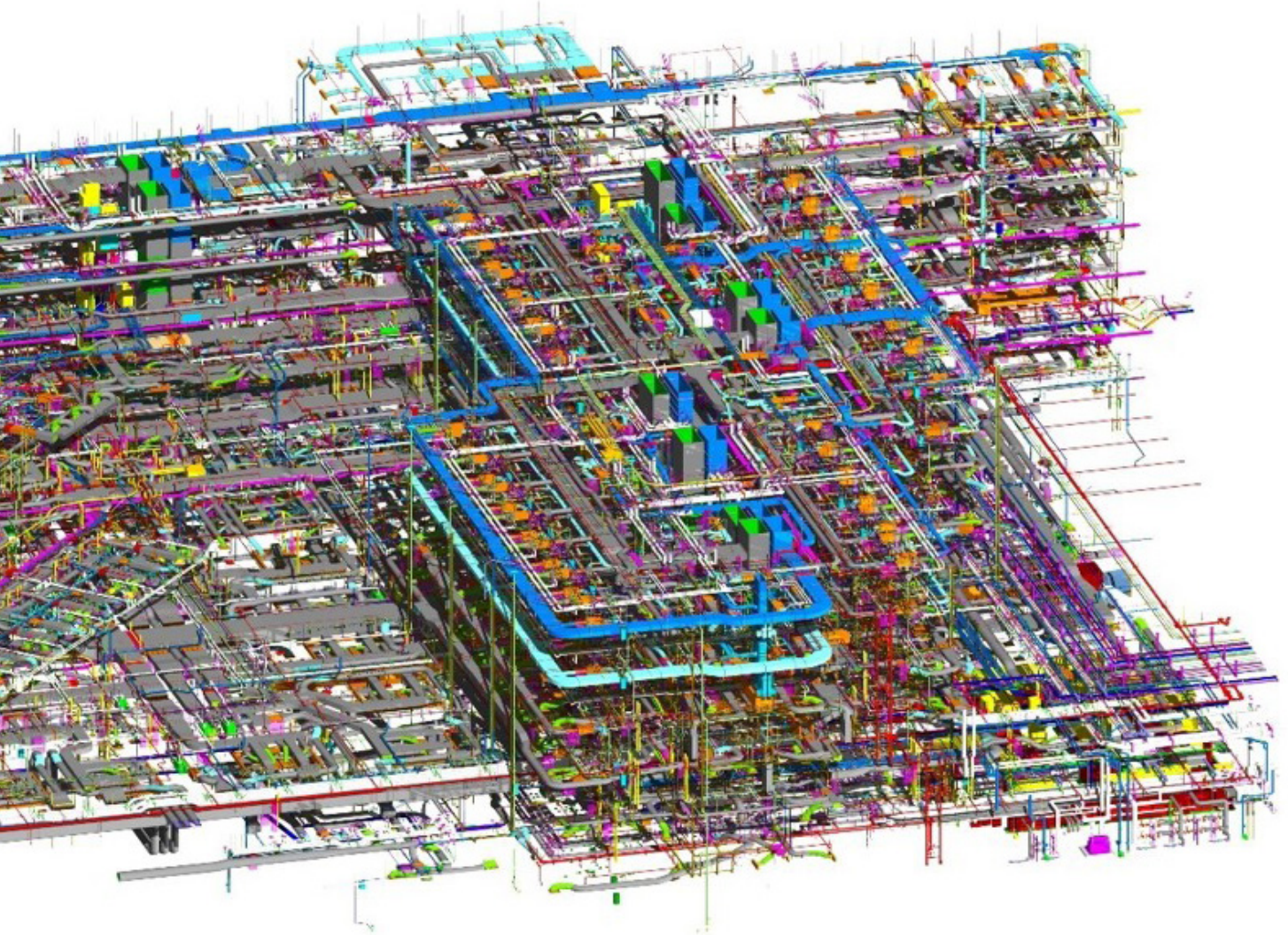


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The Precision Cancer Medicine Building

A purposeful building with leading facilities management



Delivering industry-leading clinical treatment and world-class research, the University of California, San Francisco is set to revolutionise the healthcare sector once more with its state-of-the-art Precision Cancer Medicine Building

Written by **Laura Mullan**
Produced by **Tom Ventura**

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

The UCSF Health recently was named among the nation's premier medical institutions for the 17th consecutive year, ranking as the fifth best hospital in the country and the top-ranked hospital in California, according to US News & World Report



Globally recognized for its world-class research and patient care, the University of California, San Francisco, (UCSF) is set to continue its legacy as a leading healthcare provider with its state-of-the-art facility for cancer treatment.

Located at UCSF Health Mission Bay, the Precision Cancer Medicine Building (PCMB) is an unprecedented advance for people with cancer.

Championing personalized evidence-based treatments, the 180,000 square foot, seven-story facility aims to place patients and their families at the center of efforts to ensure that care is carefully tailored to each individual's biology and life circumstances.

This year, the American Cancer Society, predicts that approximately 1.7mn people will be diagnosed



with cancer across the country.

Bruce Mace, Director of Facilities Management at UCSF Health, believes that this state-of-the-art facility not only signals a new chapter for the institution, but will also change the way we treat the disease.

“The Precision Cancer Medicine Building is a new way of looking at cancer treatment,” explains Mace.

“It speaks to utilizing different

modalities of treatment – whether it may be chemotherapy, radiation or holistic treatment, for instance – and mixing those modalities to target the individual’s needs because all cancers are different at a genetic level. The Precision Cancer Medicine Building is a facility which is going to allow the further development of the precision cancer treatment option.”

Consistently topping the

leader-board rankings, UCSF Health has earned a strong reputation for its medical outpatient care and academic research.

Combining leading research and clinical practice

UCSF Health was recently named among the nation's premier medical institutions for the 17th consecutive year, ranking as the fifth best hospital in the country and the top-ranked hospital in California, according to US News & World Report.

Meanwhile, its academic offering has also received worldwide recognition, being rated among the best universities in the world, according to another ranking by US News & World Report.

Just a few steps away from the Benioff Children's Hospital, Helen Diller Family Comprehensive Cancer Research Building and UCSF Bakar Cancer Hospital, the LEED-certified Precision Cancer Medicine Building aims to connect the University's Mission Bay and Mount Zion practices into one location.

In doing so, it hopes to marry

the university's industry-leading clinical practices and world-class research capability to transform the way we approach cancer care.

A multi-modal approach to cancer treatment

"UCSF Health has different cancer treatments that take place at different locations so the knowledge that is learned, the treatments that are utilized, and the services that are provided to our range of cancer patients is spread across our campuses," says Mace.

"The Precision Cancer Medicine Building aims to become the very core of our cancer program.

"UCSF's educational side – all the research, research buildings, and the educational components – are close to our Mission Bay Hospital, and so PCMB aims to take the knowledge that's gained to the bedside in a very short pipeline," he adds. "The learning and treatment cycle is very small and it's always spinning, which will ensure that we provide the finest care to our patients."

Set to open its doors in mid-2019,



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‘The UCSF Health recently was named among the nation’s premier medical institutions for the 17th consecutive year, ranking as the fifth best hospital in the country and the top-ranked hospital in California, according to US News & World Report’

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the Precision Cancer Medicine Building is notable not just because of its poignant mission and ethos. It's also being brought to life through an innovative approach to construction and facilities management.

Emphasising facilities management

With a background in construction, architecture, planning and design, Mace has been Director of Facilities Management at UCSF for the past eight years.

He says that although facilities management can sometimes be viewed as an afterthought in the construction sector, facilities management has been involved front and center in the Precision Cancer Medicine Building's vision.

"Facilities management is about the environment of care," explains Mace. "It's all the infrastructure systems that directly support patient care throughout our hospital system.

"Today, we have roughly 120 buildings and four hospitals. In the case of Mission Bay Hospital and the Precision Cancer Medicine Building,

we are a tertiary and quaternary acute care treatment enterprise. We get some of the most difficult, most acute cases here so it's hyper-critical that we deliver a stable, safe environment for the care of that segment of our patient population."

During the construction phase, Mace has tried to make facilities management a key consideration by harnessing the latest cutting-edge technologies.

Championing collaboration between people, systems, and business structures, UCSF Health has taken an integrated project delivery (IPD) approach to the building delivery which has been consolidated by its use of a Building Information Modeling for Facilities Management (BIM4FM) system.

Integrating technologies IBM Maximo and Autodesk Revit (BIM360), Mace and his team have created what he describes as a "living as-operated model of the building that we can utilize on a daily basis".

Leveraging this state-of-the-art computerized maintenance management system (CMMS), UCSF



has created an in-depth, meticulous and functional model of the Precision Cancer Medicine Building that won't just be used during construction; it will also be used for facility management operational purposes.

Technological ingenuity

Responsible for serving acute care of patients with cancer, 100% uptime will be critical at the Precision Cancer Medicine Building.

Mace believes that the university's latest BIM4FM system goes the extra mile to ensure the facility runs smoothly and that facilities management remains a priority.

"IBM Maximo is a computerized maintenance management system, so it manipulates work orders and preventative maintenance and it also tracks the work history and the repair history," he explains. "It's all the information surrounding the about



60,000 assets that we are responsible for on a daily basis. So, medical gas delivery, electricity, air handlers and each piece of equipment – you name it. They're all found within this system.

“This information is illustrated in a detailed 3D model through Autodesk Revit, integrated within IBM Maximo utilizing the Autodesk Large Model Forge Viewer, so if I look at my screen and touch an eye wash, for example, it will give me

the work order history, repair history and I can also open a work order to start the management cycle.”

Value-adding BIM4FM

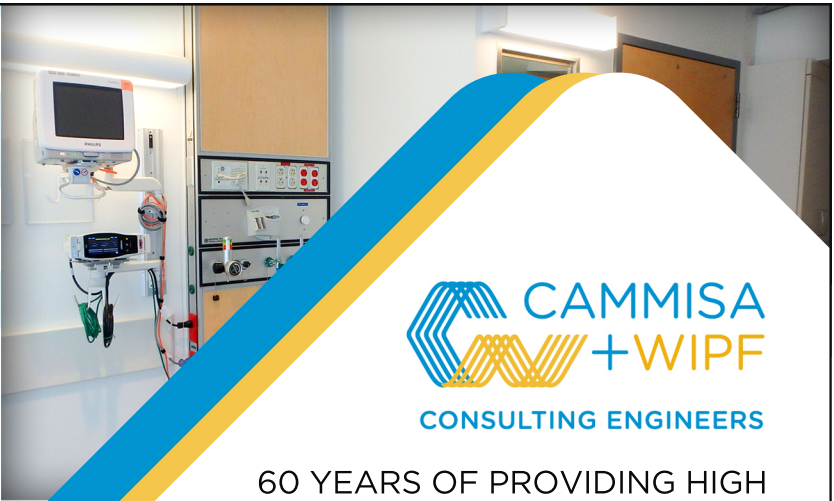
With such a substantial investment, Mace believes that the system will truly add value to day-to-day operations, championing best in class practices.

“What’s the value of the BIM4FM system?” reflects Mace. “Well, for example, if we have a leak on a pipe

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The university's BIM4FM system ensures the facility's operations run smoothly



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system, we can touch that leak in the model and it will identify where the upstream isolation valve is, i.e., how we can turn it off immediately. It will also tell us the downstream areas that will be impacted by loss of water, and it'll give us all the information on the system itself – pipe size, flow, materials - all the things we need to know to repair it.

“One particular case which really opened my eyes up to the possibilities of the system was an incident in the middle of the night where we had a leak somewhere within a 7-story fire-rated encased structural steel column chase and the engineers couldn't identify and isolate where the water was coming from,” reflects Mace.

“They called both the Chief Engineer

Chris Shirar and myself, and for the first time ever, instead of going to look at reams of 2D paper plan sets, we ran for the electronic model and asked building engineers to turn off the necessary systems one at a time as we worked our way through the model. We had it diagnosed, isolated and repaired by the next morning when, in the past, that kind of a leak could've taken two or three days to completely diagnose, isolate, contain and repair, costing us valuable patient care hours as well as revenue. This system is going to save us huge amounts of time and I think that's the most critical added value.”

Through this scrupulous BIM4FM model, UCSF Health can explore every individual asset in the building,

“That's sort of the magic sauce, that facilities management is a key focus and is a contributing driver in the project”

– Bruce Mace, Director of Facilities Management

“I think the learning experience here is what’s tremendously exciting”

– Bruce Mace, Director of Facilities Management

whether its eye washes or pipes, at the touch of a button. All the data is in one place so the system reduces the need for paper, quickens the speed of repairs and ensures the best practice in facilities management.

“What really changed is we’re facilities management. We’re responsible for the operation of the building at the end of the cycle, yet, for the first time ever, our department was invited by VP and Senior Capital Project Architect Stuart Eckblad to submit a BIM Execution Plan (BEP) and a Data Dictionary for inclusion in writing the specification requirements of the “best-value” contract,” observes Mace. “That’s sort of the magic sauce, that facilities management is a key focus and is a contributing driver in the project.”

Harnessing big data

Unlike traditional BIM models, UCSF Health’s model for the Precision Cancer Medicine Building uses much more data to deliver a more detailed model, despite using just 5% of the mammoth data it has acquired.

“There’s a lot of data that goes into



UCSF has 120 buildings and four hospitals

building a BIM building,” notes Mace. “The Level of Development (LOD) can be, and typically in construction, is about LOD 300. We currently use 5% of the huge volume of data we have that relates directly to fire and life safety, regulatory, patient care and environment of care and we have a LOD of 400 or 500. The added level of detail for these specific items is more granular and that’s critical.”

The implementation of this cutting-edge integration has been a true learning experience for the

team at UCSF Health, but thanks to its close collaboration with the builders, the tradesmen, the programmers and all those involved, UCSF Health has pioneered a new way of going about construction and facilities management.

Working alongside experts from Stantec, Cupertino, Southland, CRTKL, VueOps, Honeywell and Rudolph & Sletten required the expansion of “working session” collaboration and a quantum leap in work process

for this data output demand.

“This hasn’t been done before,” says Mace candidly. “It’s forced us to be very collaborative. We want to be. It’s a very big change for the university and the industry. I think it’s helping us bring about cultural industry change.”

A changing culture

Looking to the future, the Precision Cancer Medicine Building is set to open next year and will undoubtedly deliver the world-class care UCSF Health is known for.

However, its innovative BIM4FM platform isn’t just confined to this ongoing project. Mace and his team are already implementing this electronic operations model to the Mission Bay Hospital and the Gateway Medical Building over the coming months.

“In the future, all of our buildings as we build them new will be to this standard,” he says. “We also want to take the data and integrate it not just with new builds but also connect it with already-built projects.

With regard to use cases and system-wide benefits, the UCSF



Health BIM4FM team has partnered with the University of California Office of the President to participate in a “Construction/Procurement Center of Excellence” to support shared development of a focused effort to connect real-time construction and



UCSF Health



life-cycle data with other downstream users. Program manager Dylan Paul indicates that the timely and accurate collection of such data during construction has the potential to save the UC system over \$70mn annually.

“The learning experience here

is what’s tremendously exciting,” concludes Mace. “I think we’re making huge headway on our milestones approach and the myriad benefits of harnessing the data output of object-based architecture keep coming into view.” ■