Bentley Systems Announces Acquisition of Mobility Simulation Leader INRO

April 14, 2021

To Extend Mobility Digital Twins for Dynamic Multimodal Simulation

EXTON, Pa.--(BUSINESS WIRE)--Apr. 14, 2021-- Bentley Systems, Incorporated (Nasdaq: BSY), the *infrastructure engineering software* company, today announced the acquisition of INRO Software, a global leader in multimodal transportation planning, traffic simulation, and mobility visualization software. The acquisition expands Bentley's capabilities in the important growth area of mobility digital twins, just as countries including the U.S. are poised to make a generational investment in infrastructure, and as transportation systems must evolve faster to accommodate both urbanization and carbon reduction goals, and the transition to electric and autonomous vehicles.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20210414005928/en/

Image produced with Emme (www.inrosoftware.com/emme) using data from Metro (https://www.oregonmetro.gov/) (Image courtesy of INRO)

INRO, based in Montreal, Quebec, Canada, has for more than 40 years contributed to the advancement of mobility simulation and modeling for metropolitan, regional, and national transport and transit operators and planning agencies. Users of its multimodal simulation offerings include some of the world's busiest transit systems and metros, such as Transport for London, Transport for New South Wales, the Washington State Department of Transportation, the Swedish Transport Administration Trafikverket, and the public transport system of São Paulo SPTrans.

INRO's products include *Emme*, a multimodal transportation planning system for urban, regional, and national transportation forecasting; *Dynameq*, a vehicle-based traffic simulation platform for city-wide traffic planning; and *CityPhi*, a mobility visualization solution providing data visualization and visual analytics of large-scale mobility and geospatial datasets.

Combining the capabilities of INRO's advanced traffic and vehicle simulation with Bentley's passenger and pedestrian simulation and civil design software, including CUBE, Streetlytics, LEGION, and OpenRoads, places Bentley in a very strong position to deliver comprehensive mobility digital twins of multimodal transportation systems at urban, metropolitan, regional, and national scale.

Advancing Mobility Digital Twins

Urban planners are seeking to understand the ongoing impacts—on transportation system performance, reliability, and accessibility—of the new opportunities and challenges of private and shared mobility, the propensity for cycling or walking, connected autonomous vehicles, and potential congestion charging. With respect to their traditionally circumscribed use of transportation modeling tools in isolation and only on occasion, multiple advantages are now attainable through mobility digital twins, which can be continuously updated with as-operated engineering conditions and with observed traffic data. Mobility digital twins bring these functions together so that infrastructure planning and simulations can be continuously valuable throughout engineering, construction, and operations.

The pandemic experience reinforces the resilience value of sustaining "evergreen" planning and engineering modeling and simulation to maintain fitness for purpose during unanticipated eventualities. With the priority now on "building back better," it is increasingly recognized that the most economical way to augment infrastructure capacity, while accomplishing the needed energy transitions toward climate sustainability, is to optimize the utilization, configuration, and life extension of existing mobility assets, while adding integrated and appealing public transit options.

This requirement now sets the stage for mobility digital twins that need to be multimodal, need detailed dynamic traffic assignment and agent-based methods for veracity, and need to scale up to systemwide and regionwide—uniquely hallmarks of INRO. As the leader in infrastructure digital twins, Bentley's iTwin platform can now bring together—with the best-validated aggregate and individual vehicle and pedestrian simulation—3D/4D continuous surveying and reality modeling, civil engineering and project delivery, and asset and network performance. Ultimately, the opportunity for digital cities is to save their constituents time in their day, while at the same time improving congestion and climate resilience, and safety.

"We are very pleased to welcome INRO to Bentley Systems," said Robert Mankowski, senior vice president, digital cities, Bentley Systems. "Professor Michael Florian and his team led the research of advanced multimodal network modeling methods which helped establish state-of-the-art mobility

simulation, and in this next generation his son Dan is leading its software future in our mobility digital twin advancement. With the addition of INRO and its world-class team, Bentley Systems can even better accelerate cities and regions in going digital to 'build back better'!"

Dr. Michael Florian, founder of INRO, said, "Bentley is a recognized leader in transportation across the infrastructure lifecycle from planning and design to heavy civil construction and road network management. My colleagues and I are very excited to join Bentley and to help realize the vision shared by thousands of cities and urban regions throughout the world to improve their sustainability and quality of life."

Image 1: Emme

Caption: Image produced with Emme (www.inrosoftware.com/emme) using data from Metro (https://www.oregonmetro.gov/)

Image 2: Dynameq

Caption: Image produced with Dynameq (www.inrosoftware.com/dynameq) using data from SFCTA (https://www.sfcta.org/)

Image 3: CityPhi

Caption: Image produced with CityPhi (www.inrosoftware.com/cityphi) using data from http://www.andresmh.com/nyctaxitrips/

Image 4: INRO Products

Caption: INRO is a global leader in multimodal transportation planning, traffic simulation, and mobility visualization software

Video: Seattle synthetic travel demand model

Caption: Illustration of ~20 million activities completed over the course of a day by 3.6 million people from a synthesized travel demand model of the Seattle metropolitan region. Activities are shown as time-animated vertical extrusions of population movements colored by purpose. The heads-up display summarizes the visible population by current activity. Video prepared by INRO using CityPhi (www.inrosoftware.com/cityphi). More information on source data, provided by PSRC, is available at https://www.psrc.org/activity-based-travel-model-soundcast.

About Bentley Systems

Bentley Systems (Nasdaq: BSY) is the *infrastructure engineering software* company. We provide innovative software to advance the world's infrastructure – sustaining both the global economy and environment. Our industry-leading software solutions are used by professionals, and organizations of every size, for the design, construction, and operations of roads and bridges, rail and transit, water and wastewater, public works and utilities, buildings and campuses, and industrial facilities. Our offerings include *MicroStation*-based applications for modeling and simulation, *ProjectWise* for project delivery, *AssetWise* for asset and network performance, and the *iTwin* platform for infrastructure digital twins. Bentley Systems employs more than 4,000 colleagues and generates annualized revenues of more than $800 million in 172 countries. www.bentley.com

View source version on businesswire.com: https://www.businesswire.com/news/home/20210414005928/en/

Press:
Christine Byrne
+1 203 805 0432
Christine.Byrne@bentley.com
Follow us on Twitter:
@BentleySystems

Source: Bentley Systems, Incorporated