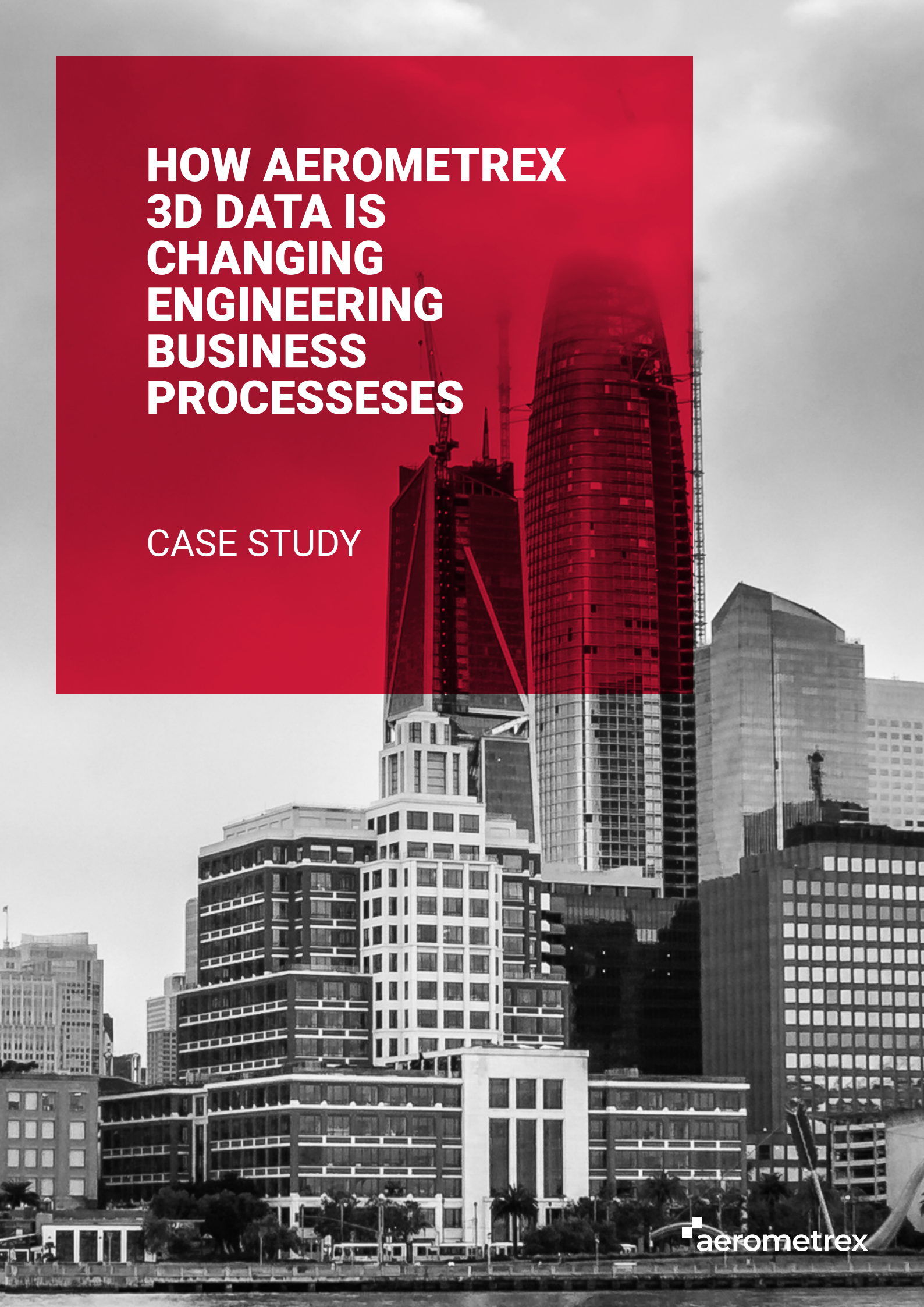
HOW AEROMETREX 3D DATA IS CHANGING ENGINEERING BUSINESS PROCESSESES

CASE STUDY



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QUALITY DIGITAL TWINS CONTRIBUTING TO RESILIENT INFRASTRUCTURE

About WSP
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WSP develop creative, comprehensive and sustainable engineering solutions for a future where society can thrive.

Equipped with an intimate understanding of local intricacies, world-class talent and proactive leadership, WSP plan, design, manage and engineer long lasting and impactful solutions to uniquely complex problems.

From local beginnings over 130 years ago to a vast international presence, WSP has enjoyed continuous growth and enrichment of its service offerings.

Every milestone reached has enabled them to better fulfill their purpose of preparing communities and environment for the future.

Aerometrex has become a trusted 3D data provider for engineering and professional services giant WSP USA. WSP has, purchased the Denver, San Francisco, Miami, and Los Angeles datasets and is currently commissioning 3D models for future projects across their broad range of work.

We spoke to WSP USA Vice President Tom Coleman (TC) and Technical Lead of the Visualization and Data Intelligence Group Mark Kaufman (MK) about how our data helps WSP operations and better understand the transition towards 3D as the default starting point for their projects.

CHOOSING AEROMETREX 3D DATA

WSP is a company of over 56,000 people globally with projects spanning the entire built environment of construction, infrastructure, power, energy, water, and environmental sectors in almost every highly populous American city. A company so ubiquitous can pick from any 3D data provider but chose Aerometrex. Mark and Tom explained why:

TC: Because we couldn't get Aerometrex data from anyone else! The data is so tremendous that the people we show it to inside the business are left scratching their heads.

MK: To be perfectly honest, Aerometrex is the highest quality, highest resolution 3d data that we've seen so far available to us. Take the Denver model... when I first saw that Union Station, it just blew my mind. That quality is important for the USA market, where projects within the built environment are starting in 3D. These Aerometrex representative environments within a tolerance of two to five centimetres is pretty spectacular.

This video showcases the enhancement of our Denver 3D model using street-level imagery to more accurately depict the character of the historic Union Station.

Salesforce Park from the 2 cm San Francisco model showing the quality of Aerometrex 3D data

PRODUCTS READY FOR THE SPATIAL EXPERTS

Starting with complete datasets reduces WSP's need to in-house their creation. Their 3D modelling and staging work now begins with ingesting Aerometrex 3D data into their preferred platform to begin the next phase of work. Mark and Tom described how their teams are responding to the new data:

MK: We used to build everything from scratch with GIS data and aerial maps, starting with 2d data and building it up in 3d. That's a lot of work, and you can only get to a certain level of detail. Now you're able to integrate these city-size models directly into game engines and stage complex scenes in real-time. Our teams look at the results and go you pulled that off and how many days?! We can do what once took two or three weeks worth of back-and-forth in three hours. It quickly answers many questions, and you're moving the design forward from there.

TC: I think I shocked the group in Tampa out of their seat because they'd already spent so many hours building traditional models, then we saw you have a new streaming model of the whole city! They get so excited by seeing that new data. We show the data to people they say wow I didn't know you could do that with 3D models. We're not quite working at engineers or survey detail but three centimetre horizontal or vertical accuracy is amazing at the scale of the 3D models.

US Bank Tower from Aerometrex Los Angeles 3D model.

HOW THE DATA CHANGES WSP'S WORKFLOW

High quality 3D data simplifies WSP USA's entire workflow; reducing the need to create data in-house and allowing their project teams to quickly advance through the concept, design, consultation, and bidding phases. Crucially, the Aerometrex 3D models bring a level of real-world context that strengthens their scenario-building, as Mark explains:

"Starting with more accurate information from a 3D model makes staging data much easier. I can slice and dice the data, add buildings, get rid of the ground surfaces, or do whatever I need. Then I quickly and interactively build models in front of my clients and get that real-time feedback.

Also, the 3D reality mesh solves the data disconnect. Clients know there's a Starbucks here or Wells Fargo Bank building there, but in the past all they'd see is a big extruded shape. I think that's a crucial aspect of what Aerometrex is offering. This reality mesh allows us to get beyond this kind of "foam core" of shapes that are somewhat volumetrically representative of the real world to something that's actually there in the real world.

I think it's crucial to note that Aerometrex can be the entire model, or it can be part of the broader data solution. I think, for a lot of what we're going to do, it will be part of the solution, but a very key part of the solution."

Learn more about how Aerometrex's 3D data solutions can help your business.

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