



## STILES CONSTRUCTION: Tapping into the power (and taming the challenge) of construction photos

*A Smartvid.io-Procore Integration Case Study*

### ABOUT STILES CONSTRUCTION

Stiles Construction is a division of Stiles Corporation a full-service development and construction firm based in South Florida. Stiles has developed over 43 million square feet of award-winning real estate, including office, industrial, retail, mixed-use and residential projects throughout the Southeast.



### THE CHALLENGE

Stiles' Director of VDC, Kris Lengieza, knew there had to be a better way to manage photo and video content. At the project level, pictures and videos gathered in the field were often hard to find; at the company level, content needed by teams across operations, safety, marketing and risk management would end up stuck in various siloed systems. Content requests from office personnel were a distraction and often overlooked. In addition, there was a lack of an approval process for

the use of project imagery for marketing and distribution. This resulted in frustration across the board and far too much time wasted in search of critical images. What's more, there were missed opportunities for analysis.

### AGGREGATING AND ANALYZING WITH MACHINE LEARNING

Kris explains, "Having been an early tester of the Smartvid.io platform, I was happy to hear that they integrated with Procore. It went from a nice idea to a must-have extension of our Procore implementation." First, the Smartvid.io platform aggregates all of the photos and videos taken by project teams, regardless of whether they are captured with Procore's mobile app or "off the shelf" equipment such as digital cameras, cell phones or GoPros. Smartvid.io's machine-learning engine then uses speech and image recognition to analyze and organize all files synced from Procore and uploaded from other devices. Pictures and videos are automatically tagged (with "SmartTags") based on visual and audio content that matches tag definitions configured by Stiles. The team is able to create and assign tags manually in order to drive processes within safety, training, and business

development; as one example, selected content can easily be tagged as “approved for marketing” or “pending safety review” in order to streamline approval processes and consolidate access to data that was previously unavailable.

## IMPLEMENTATION

Smartvid.io was implemented as a solution for challenges at both the project and company levels. Kris and the Stiles team were in the middle of their Procore role out, so he put an emphasis on avoiding the introduction of new field processes or training. As Kris says, “It was important to me not to burden project teams with ‘yet another’ system. Smartvid.io plugged into the project’s Procore instance, and the tags just started appearing.” Procore users can then use their familiar search interface in Procore’s photos area to search for all tags found by Smartvid.io. As new SmartTags are added in Smartvid.io by the machine learning engine or through manual tagging (e.g., approved for marketing), these new tags dynamically appear in Procore as well.

The integration was first rolled out at the project level. In one example, Kris synced a Procore project, that was already underway. Once connected, Procore content immediately began flowing into Smartvid.io. Automatic visual and audio tags were then applied and “pushed” back into Procore, making content searchable directly within the Procore system.

The Smartvid.io integration also gave some project teams a new capability: using narrated videos to record project progress and milestones. Stiles workers could use tagging functionality by simply narrating videos and uploading them; the SmartTag engine automatically identifies and tags the key terms that have been specified by employees. Kris explains, “We showed a couple of the Project Teams how to use the Smartvid.io app for videos on our weekly job walks. The speech recognition tags automatically populated into Procore albums generated every week alongside their frame images, so there was no duplication of effort. We got imagery in Procore while maintaining access to the full video in Smartvid.io in case questions came up later.

Field personnel were able to direct the camera to a specific spot, and then provide a voiced-over narration of what was being observed.”

Then the implementation moved to the company level. The company-level photo approval process between safety, operations and marketing to approve imagery for release to the owner or sales/marketing was the first target. Non-field or project personnel often create a burden on the project team and/or IT to retrieve imagery as needed. Every proposal created or owner-communication then requires emails back and forth between multiple parties to make sure that photos are safe, on message, and have been approved by all relevant parties.

As Kris noted, “siloes systems and poor naming conventions, plague everyone today, moving all of this imagery to one, searchable system helps us get more organized and automate workflows.”

Kris and the team created saved searches for specific SmartTags (automatic tags) as well as manual tags for things like “approved for marketing”, “needs safety review”, and “for release to owner” that keep us all on the same page.” As a subsequent phase, Kris and his team are planning to apply Smartvid.io’s computer vision based analysis of jobsite imagery to push real-time notifications to safety and quality staff when specific conditions are observed. “For mid-sized companies like ours with limited management resources compared to the number and scope of projects we’re working, technology like Smartvid.io can get us more ‘eyes on our work sites’ and dramatically extend the benefits of our safety and quality programs.”

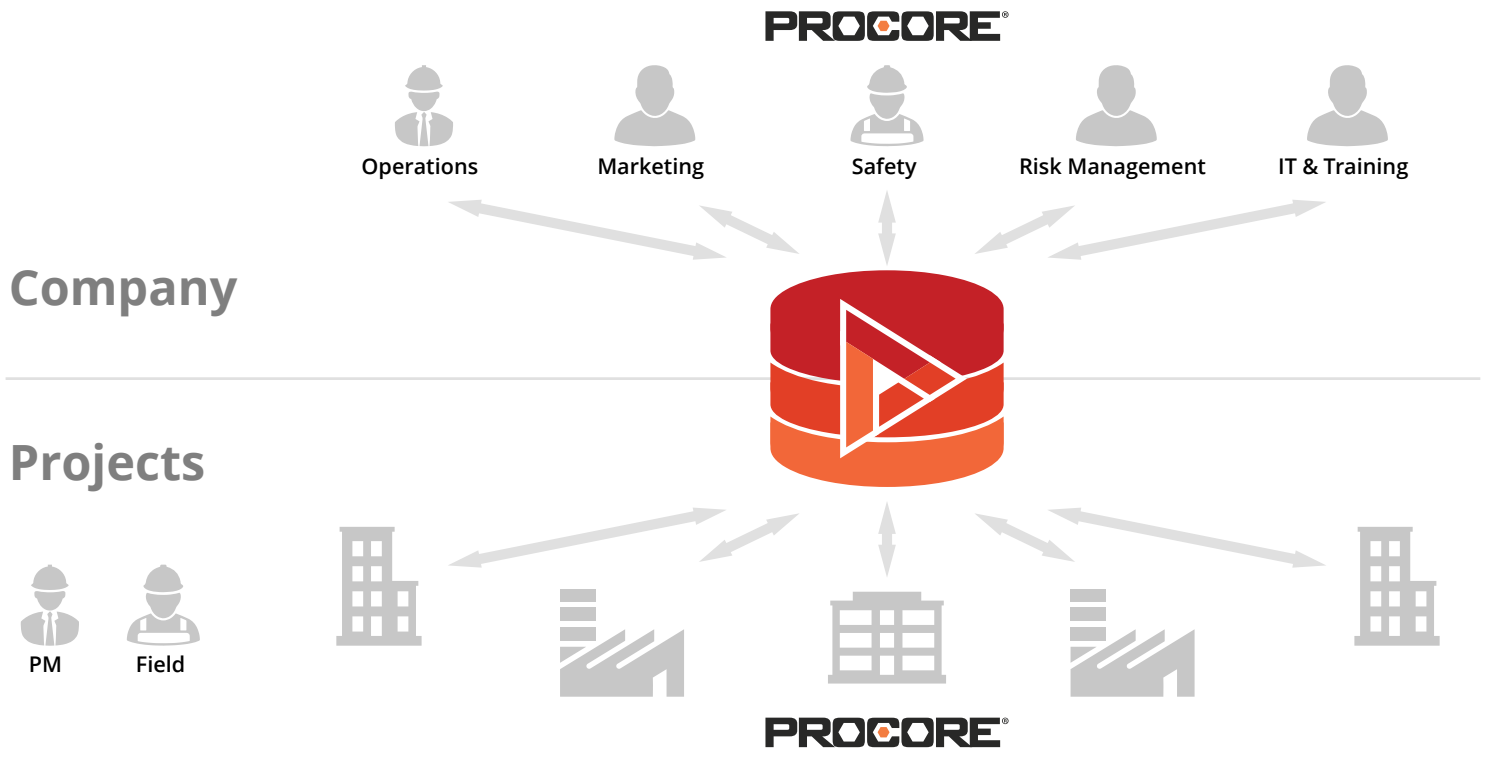
### **KRIS LENGIEZA, Director of Virtual Design & Construction, Stiles Corporation**

*“Photos and videos have traditionally been difficult to find, share and approve leading to many hours of wasted time. By integrating Smartvid.io with Procore, we’ve centralized and standardized how we manage our digital media assets at both the project and company level. The benefits are saving time in search and approvals, lowering risk by improving access to critical imagery, and better external communication.”*

# RESULTS

Implementing Smartvid.io as a tight integration to Procore has made Stiles' media management more automated and its content more accessible, than ever before. Results included:

- Staff took advantage of process improvement and took more pictures, leading to better documentation and reduced risk.
- Both existing and new content - regardless of where it is located - has become centralized and easier to find, with all project imagery now aggregated in one place.
- The process of managing approvals of content for external release was greatly improved.
- Better documentation led to better location of safety infractions, better compliance, and lowered risk.



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Stiles is a full-service commercial real estate firm headquartered in Fort Lauderdale, Florida with a clear mission: Invest. Build. Manage.

# SMARTVID.IO

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Smartvid.io is a software company headquartered in Cambridge, MA which provides machine learning tools for the management and analysis of industrial media.