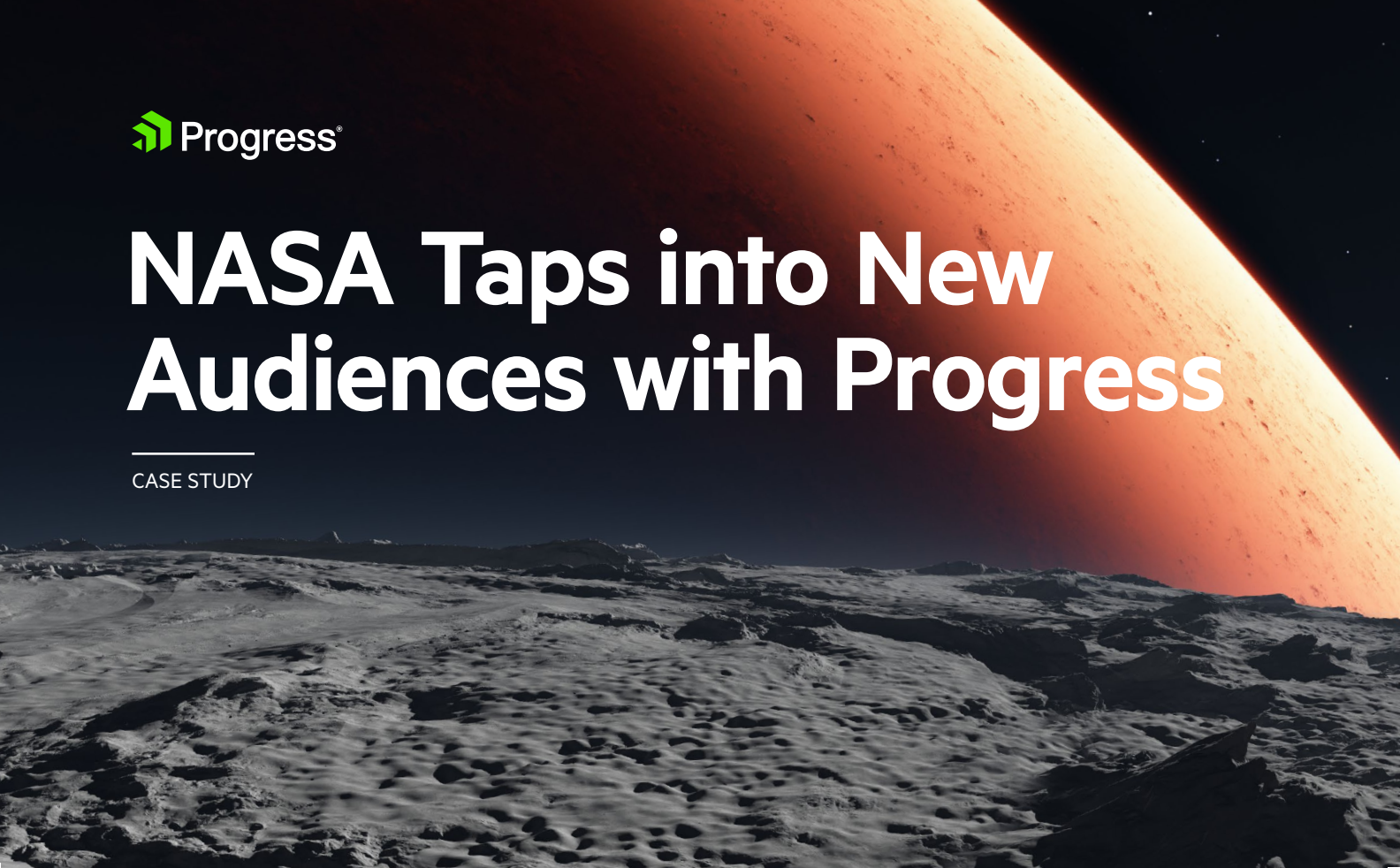


NASA Taps into New Audiences with Progress

CASE STUDY



Challenge

CLIENT



INDUSTRY
Government

PRODUCTS
Progress Telerik

SUMMARY

With new data pouring in from NASA's Mars rover, the space agency realized it needed to rethink the way it collected and presented data to users.

NASA's Curiosity—the Mars rover that has been exploring the red planet since it landed in 2012—has captured the hearts and minds of space enthusiasts over the years. Millions of people across the globe have seen images and video captured by the car-sized rover across its four-year trek and hundreds of people head to NASA's online properties on a daily basis to further explore the data collected by the rover.

A pivotal part of any exploratory mission is data collection. From photographs to sample analysis to travel logs, every piece of data needs to be recorded accurately and archived appropriately so other scientists can use it as needed for their research. However, information archival in itself is a tricky subject. The rover missions are nondeterministic by nature, so the data needs to be presented in the right context.

Ahead of the 2012 landing of Curiosity, the engineers at NASA's Planetary Data System at Washington University realized they needed to step up their game and rethink how they organized and archived data. They wanted to do more than simply provide the scientific community with the “what” and “where”—the engineers at Washington University wanted to add the “how” and “why” by

presenting insight and context that added more value to the data recorded.

This led to the creation of The Analyst's Notebook, a web application that gives users the ability to replay missions day by day in great detail. The Analyst's Notebook was a big step forward, but as more data was collected, the team behind the Analyst's Notebook realized the application needed to be improved even further to handle new demands.

"To take the application further, we needed some help with our development. But when I started looking at tools, I was fairly disappointed with what I was seeing," explained Tom Stein, Senior Computer System Manager, NASA's Planetary Data System at Washington University. "I was seeing some packages that would do only part of what we needed, while others covered everything but not at the scope we needed. I was really about to give up and just go ahead and write everything myself."



"With the Telerik tools, we can repackage the data and improve navigation so information can be shared with an audience that couldn't appreciate the data before. Telerik helped us open up the Notebook and the Mars Data to more users around the world. "

Tom Stein, Senior Computer System Manager,
NASA's Planetary Data System at Washington University

Solution

After an exhaustive search, the engineers at NASA's Planetary Data System at Washington University finally decided to go with Progress Telerik Ultimate suite. For Stein, Telerik Ultimate Suite was the complete package, which set it apart from the rest of the competition—it had all the tools needed to level up the Analyst's Notebook right now, and it also provided the capabilities NASA needed to ensure future scalability. After NASA decided to move forward with DevCraft, the integration took about one year.

Prior to using Telerik family of products, the biggest challenge Stein's team faced with the Analyst's Notebook project was getting bogged down while trying to create the infrastructure and framework that tied everything together. This meant the developers behind the application were spending more time integrating add-ons and ensuring cross-platform functionality, while the content was pushed to the back seat.

Telerik provides the framework for that, enabling the developers to spend more time on the components and content that directly impacts the end user experience. As a result, scientists using the Analyst's Notebook benefit directly—the data is being published faster and it's easier to find.

"While our data collection and storage process has not changed, with Telerik, we've really transformed the way our end users can find, view and access the data," Stein explained. "It's really made it easier for those end users to get what they need out of the data, so they can go on with their science."

Telerik tools also helped the Planetary Data Systems team improve the user experience of the Analyst's Notebook. Because anyone can use the Analyst's Notebook, regardless of their experience in the field, NASA wanted the site to be highly accessible

and intuitive for even citizen users. Telerik provided NASA with the tools to make the interface more approachable for experienced scientists and first-time users alike.

An added problem was the continued rising expectations of users. “Our users have great web experiences with industry giants like Microsoft, Apple and Google, and they expect the same from us,” Stein said. “Previously, the Notebook was basically just an archive—a bunch of files categorized into directories based on mission day number. For people unfamiliar with the application, it was basically like trying to understand a foreign language,” Stein said.

“With the Telerik tools, we can repackage the data and improve navigation so information can be shared with an audience that couldn’t appreciate the data before,” he added. “Telerik helped us open up the Notebook and the Mars Data to more users around the world.”



“To say that using Telerik tools slashed our development time is an understatement. Not only did the competing tools lack so many of the functions and features that we have come to rely on in Telerik, they were not robust enough to support us even with the tools they did offer. We would not be where we are today without Telerik.”

Tom Stein, Senior Computer System Manager,
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Results

The Planetary Data System team saw the benefits of implementing Telerik almost immediately. From the development of new content to the implementation of new features, the agency was better equipped to maintain the Analyst’s Notebook and provide a more compelling end user experience.

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Telerik tools also helped the Analyst’s Notebook team do more with less. The development team working on the project is small, so being able to operate more efficiently and within budget was a huge win for them.

“Using the Telerik tools, we know we’re getting more than our money’s worth,” Stein explained. “We can’t afford to hire two new developers, but we can easily afford Telerik, which more than compensates for those two developers we don’t have. For every developer we have using Telerik, we can turn out the same work that three developers would be able to do without it.”

Just as Curiosity continues to encounter new challenges on its mission, the Analyst’s Notebook is always facing new obstacles. After all, with new users comes new requests and new requirements. However, Stein is confident that his team will be able to tackle all those challenges with Telerik, resulting in a web application that’s always improving to meet the users’ expectations.



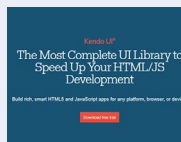
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For a free Kendo UI demo

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