onshape® by ptc

Onshape Case Study

SPIN MASTER

INDUSTRY: CONSUMER PRODUCTS

The Challenge

At Spin Master, innovation moves at a rapid pace. As one of the world's leading children's entertainment companies, Spin Master develops hundreds of new products each year for recognizable brands like Hatchimals, PAW Patrol, Rubiks, Tech Deck, Bitzee, and more. Each one requires rapid iteration, cross-functional collaboration, and precise execution under tight timelines driven by seasonal launches and shifting consumer preferences.

Legacy file-based CAD systems created friction inside an engineering organization built on a foundation of speed and experimentation.

"We have an extreme amount of design changes," explains Hamid Hashemi, Senior Director of Engineering & BlueSky Innovation at Spin Master. "A fire truck suddenly becomes a dinosaur and has a major significant design path change. Working with files was a complete nightmare."

Spin Master's globally distributed teams frequently struggled with outdated files, duplicated versions, broken references, and lost design intent. Engineers spent too much time validating if they were working from the latest designs.

"At least 30% of our engineers' time was spent making sure a CAD file was the right version," Hashemi says. "We were looking for a system where it's not about working harder and harder. It's about, how do we reduce friction?"

Spin Master needed a modern design approach to match their culture of speed and innovation. They made the switch to PTC's Onshape.

Results

- **5X faster design time**
  with cloud-native product development
- **20X Improvement**
  in collaboration speed across global development teams
- **Built-in PDM**
  enables rapid iteration without disrupting active development
- **Onshape tools reduce engineering friction**
  to refocus on innovation

"Innovation is part of our DNA. Onshape helped remove the friction that was getting in the way of bringing those ideas to life."

– **Hamid Hashemi**,
Senior Director of Engineering & BlueKy Innovation, Spin Master

How Spin Master Achieved 5X Faster Design and 20X Faster Collaboration by Eliminating CAD Friction

By providing a single source of design truth, Onshape helps the global toy company spend more time bringing new play experiences to life.

Spin Master's lineup of new toy releases for 2026 include familiar brands like Rubik's and Primal Hatch.

Single source of design truth enables 5X faster development

Spin Master's engineering organization operates across multiple disciplines, offices, and time zones. Mechanical, electronics, and prototype engineers work alongside firmware developers, industrial designers, and manufacturing partners.

Before Onshape, managing that level of complexity inside file-based systems created constant operational headaches.

"By the time the CAD files are downloaded, reviewed, and there's a meeting set up, in most cases the development has already progressed and changes have already been made," Hashemi says.

By switching to Onshape's cloud-native CAD platform with built-in product data management, Spin Master established a single source of truth for design data across its engineering organization. The result? **5X faster** product development timelines.

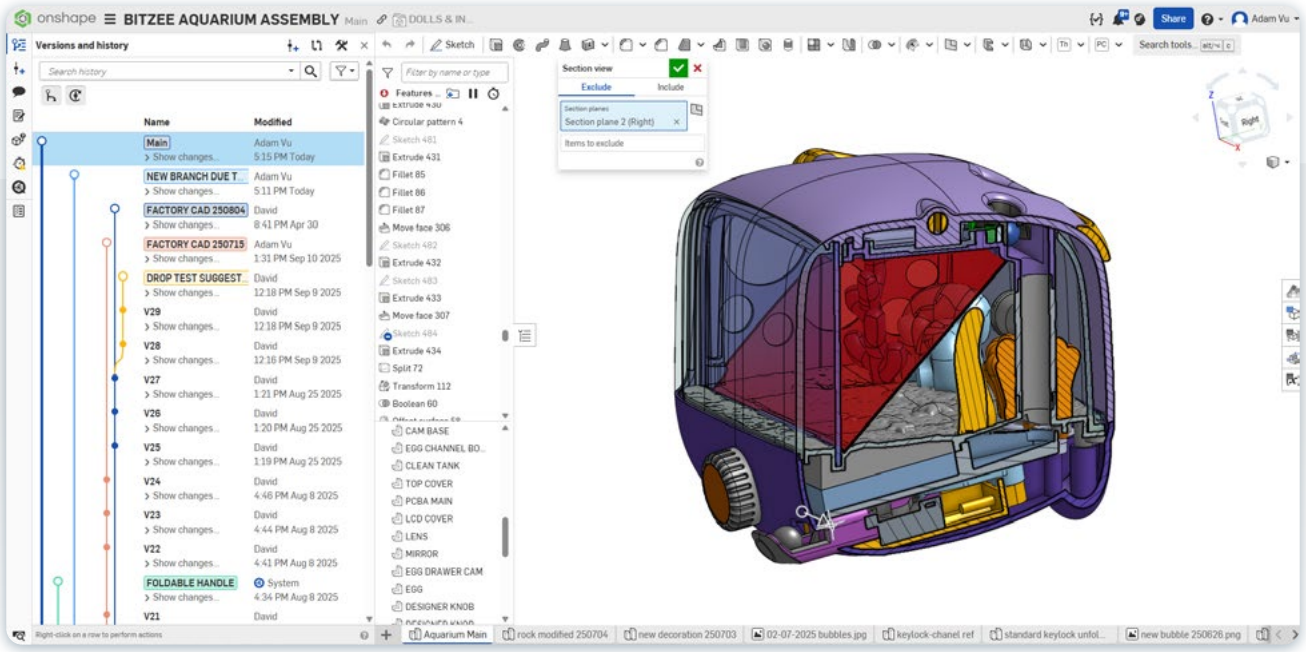
Today, teams collaborate directly within shared Onshape documents in real time instead of managing disconnected files and duplicated data. That shift dramatically accelerated development speed.

"We looked at what was worked on overnight by our Asia teams, and all of a sudden we could work on it the minute we opened it," says Senior Prototype Engineer Evan Hughes. "Rather than an hour later once we had imported everything."

Real-time global collaboration boosts engineering efficiency by 20X

Spin Master's product development process depends on constant collaboration between globally distributed teams.

"Sharing design data within any organization is critical," Hashemi says. "The nuance of that is absolutely critical to the success of the product and the experience of the customer."



A Section View of Spin Master's Bitzee Aquarium assembly in Onshape.

Small interaction details, motion timing, play patterns, and mechanical refinements often became difficult to preserve when teams worked across exported files and disconnected versions.

"There was no hierarchy, no history to build upon," Hughes says. "So much time was wasted just doing that rather than actually doing work."

With Onshape, teams now collaborate directly inside the same live design environment instead of exchanging exported files. Engineers in North America and Asia can simultaneously access the latest product data, review changes in real time, and continue development without waiting for file transfers, imports, or version validation. Non-CAD stakeholders can review live models directly in a browser without requiring exported files or specialized licenses.

"They can go around and move the model, see the sizing they need, and understand the space we're dealing with without even printing a model," says Adam Vu, Prototype Engineer.

That real-time accessibility enabled faster communication and decision making, contributing to a reported **20X improvement** in collaboration speed throughout their product development process.

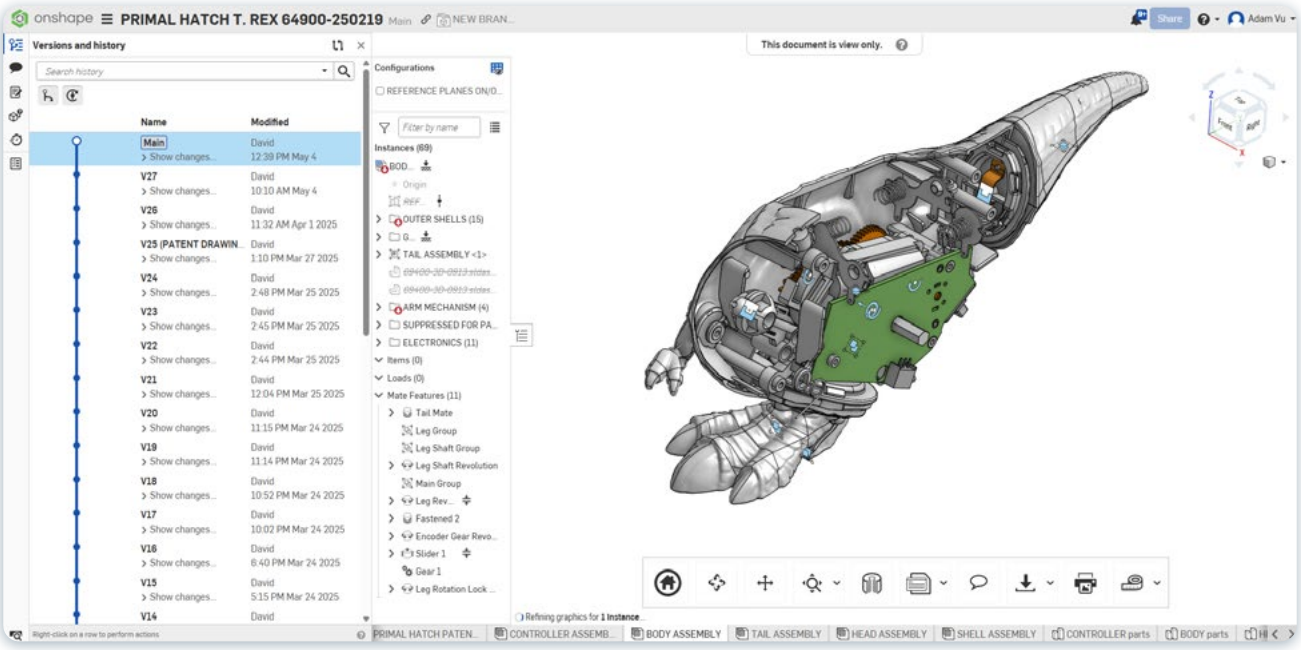
The Spin Master Bitzee Aquarium toy in its final packaging. Onshape enabled faster engineering communication and decision making for the company, contributing to a 20X improvement in collaboration speed.

Branching & merging encourages rapid, risk-free iteration

Iteration is central to Spin Master's innovation process. Their products evolve continuously throughout development as teams review prototypes, test play patterns, and refine interactions to maximize emotional engagement and product quality.

Traditional CAD workflows made managing that level of iteration difficult. Every design exploration risked disrupting product data or introducing versioning issues.

Onshape's built-in PDM, particularly branching and merging, fundamentally changed how Spin Master's teams approach experimentation.

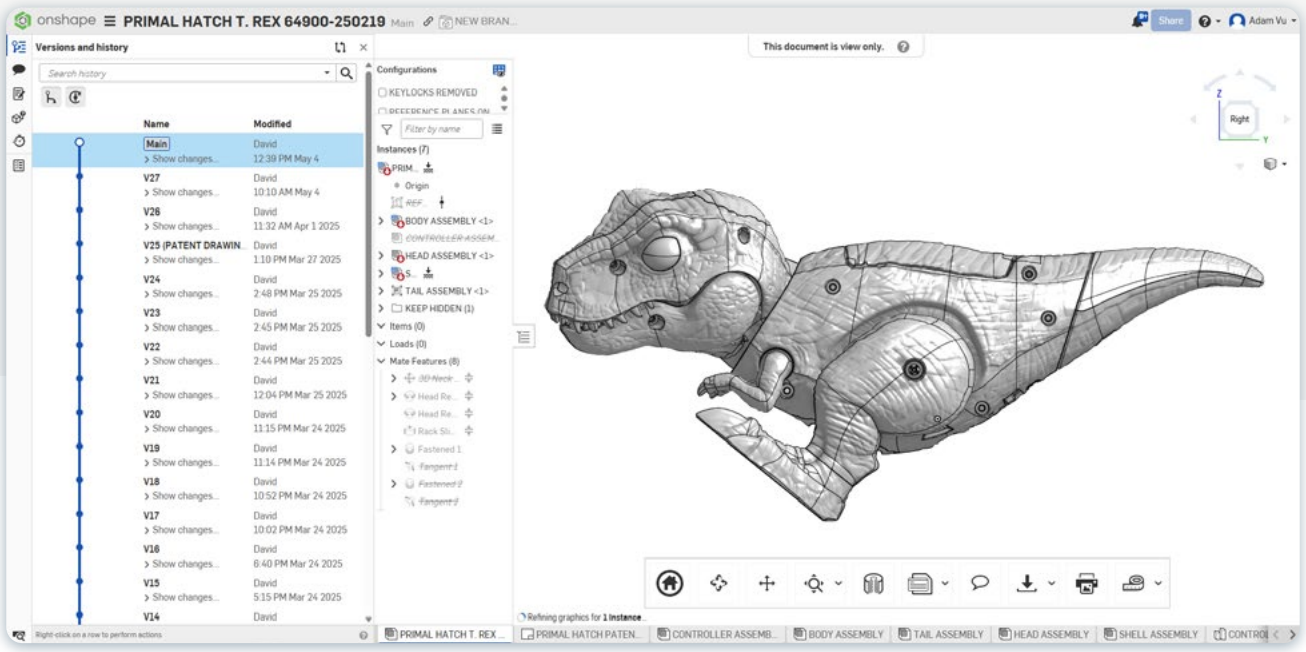


An Onshape Section View showing the interior design of Spin Master's Primal Hatch T. Rex toy.

"The ability to explore multiple design paths simultaneously without jeopardizing your main design is critical," Hashemi says. "We didn't believe that this could actually be possible."

For engineers working directly in development and prototyping, branching quickly became one of the platform's most impactful capabilities.

"Branching and merging has been a game changer," Hughes says. "We can go back to previous concepts instantly instead of rehashing thousands of archived files."



The Primal Hatch Jurassic World toy dinosaur's versions and history in Onshape. Thanks to Onshape's branching and merging, the main design and all branches can be accessed and referenced at any point during the product development process.

Vu relies heavily on branching during early-stage product exploration.

"I'll branch off, make my own workspace, and work in that area," he explains. "Then we can merge back together in case one of us has a better idea."

That flexibility allows Spin Master to experiment rapidly with less risk, preserving design history while keeping active development moving.

The final Primal Hatch Jurassic World interactive toy dinosaur and egg in its packaging, designed in cloud-native Onshape by Spin Master engineers.

Cloud-native CAD tools refocus design power on innovation

Being web based and accessible from any device, Onshape's cloud-native architecture simplifies CAD onboarding, reduces hardware constraints, and eliminates many of the workflow bottlenecks Spin Master's engineers previously accepted as unavoidable.

"There's no crashing, no stalling at work because of lost data," Hughes says.

"You don't need a really beefy computer," Vu adds. "Within a week you can understand enough to get by, and within a month you should feel natural in Onshape."

The engineering team has also embraced custom features and automation workflows to further streamline development. Vu created a custom costing feature that automatically estimates resin and material costs directly from CAD geometry. Teams are also increasingly leveraging AI-assisted workflows to automate repetitive tasks and accelerate iteration cycles.

Spin Master's Primal Hatch Megalodon interactive toy in use. Onshape's cloud-native CAD tools have helped Spin Master's engineers reduce design friction, regaining more time for innovation.

Spin Master's Primal Hatch Megalodon interactive toy, designed in Onshape.

Onshape support responsiveness and product updates released every three weeks have further enhanced Spin Master's workflows.

"We put in quite a few tickets, and when we finally see that come through an update, it's great because it's exactly what we're looking for," Hughes explains.

For Spin Master, those incremental workflow improvements add up to a big picture where engineers experience less friction, leaving more time to focus on creativity, experimentation, and bringing new play experiences to life.

"Onshape helped remove the friction that was getting in the way of bringing those ideas to life," Hashemi says. "Now we can focus on the more important tasks, which are the ideation, the engineering, and the innovation that our team is all about and the company's about."