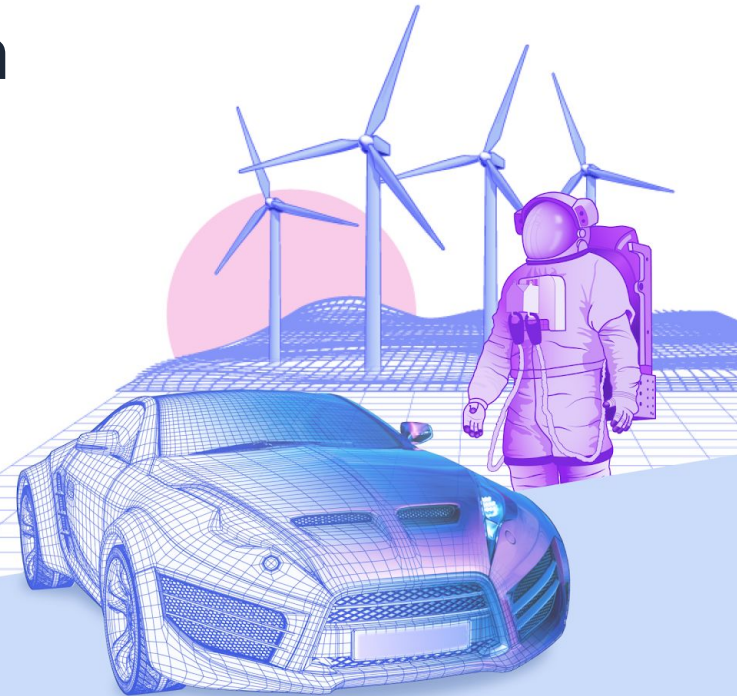




Leverage Cloud collaboration to accelerate time to market (without switching your CAD/PLM)

Adam Keating
Co-Founder & CEO of CoLab Software



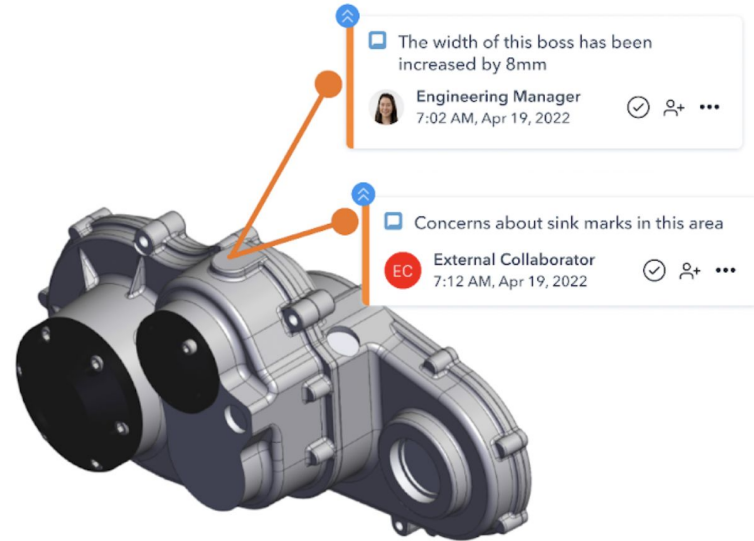
What we will cover today

Overview

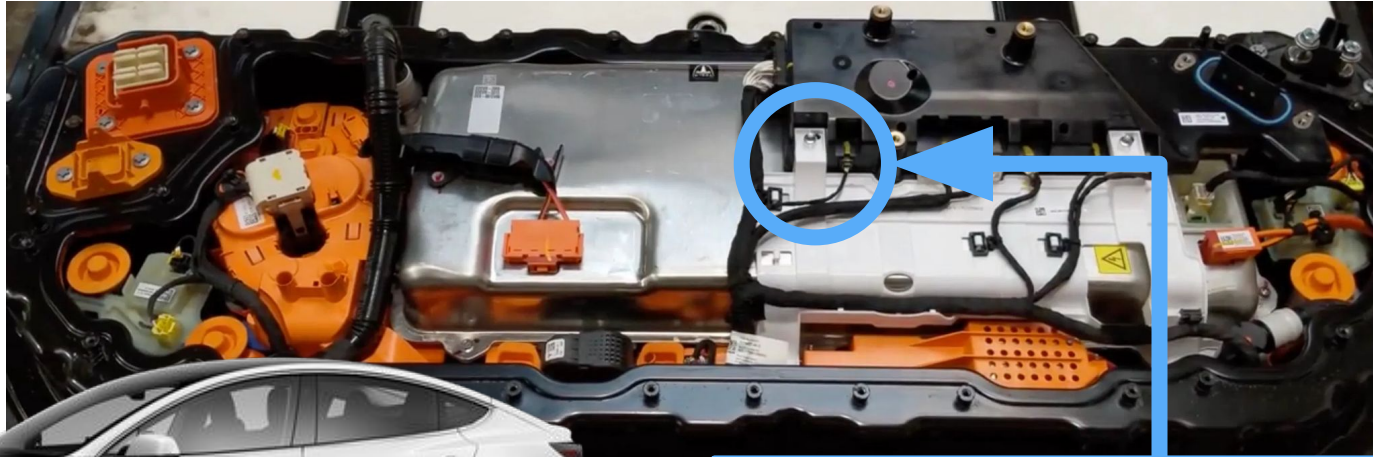
Uncover how engineering teams are solving the product development bottleneck through cloud-enabled design engagement (without switching CAD/PLM)

Plan

1. The Bottleneck in Hardware Product Development
2. How you can solve it with cloud-enabled Design Engagement
3. Why PLM & Generic Tools Can't Do It Alone
4. The Solution: PLM + DES
5. Q&A



Hardware is hard - but we are making it harder



Simple parts on complex mechanical systems take 8+ weeks to review because brilliant engineers are forced to communicate in massively inefficient ways

Today's engineering teams face **sky high expectations**



Designing more complex products than ever before



Pushing quality higher, and costs lower



Shorter product lifecycles, faster time to market

...all in the middle of a supply chain crisis.

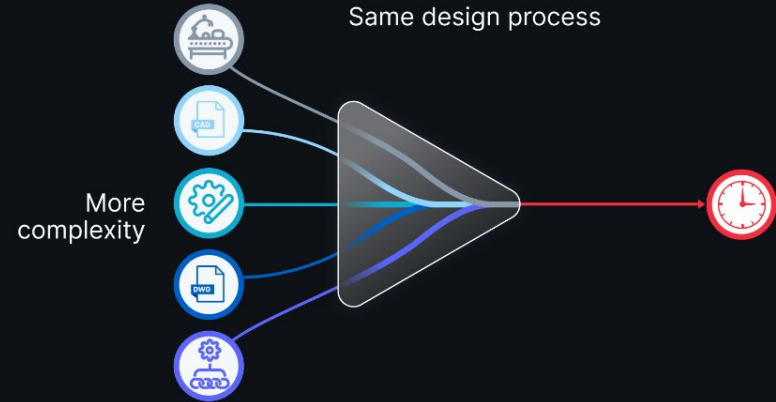
20 Years Ago

Your design process



Now

Same design process



As **complexity** increases...

your process becomes a **bottleneck**...

and it hurts **time** to market

That means engineers are forced to:



Communicate using screenshots, because it's too hard to share files



Waste time hunting down the latest revision, which is buried in an email chain

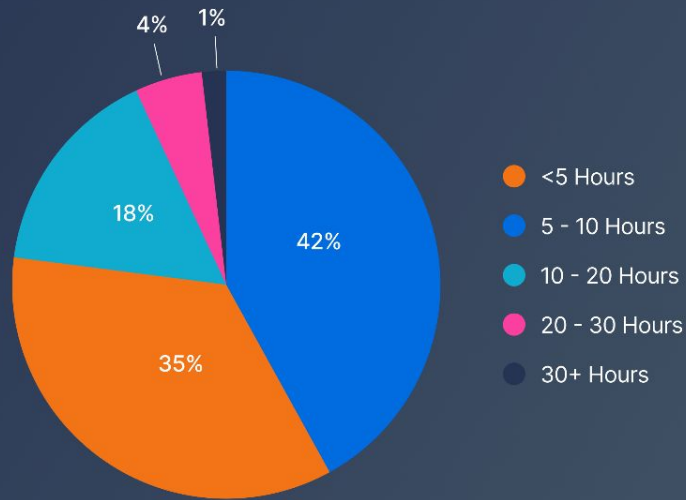


Spend way too much time in meetings, sometimes during odd hours



Track everything in complicated spreadsheets

How many hours per week do you spend in design-related meetings?

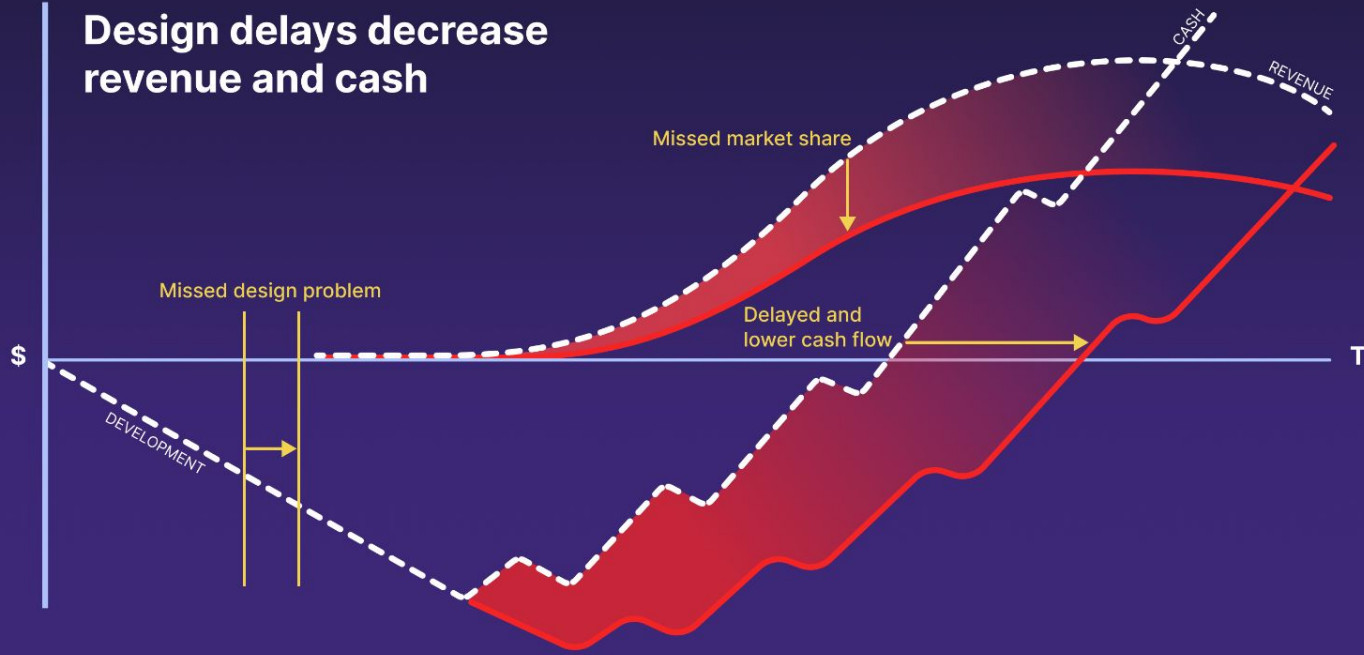


How does your team conduct design reviews?



From 93 Engineering Leaders in January 2022

Design delays decrease revenue and cash



A person in a red and blue plaid shirt is gesturing with their hands while speaking in a meeting. In the foreground, a wooden table holds an open laptop, a notebook, and a smartphone. The background is blurred, showing other people in a professional setting. The entire image has a blue color overlay.

The root cause of costly late design mistakes and development bottlenecks is miscommunication.

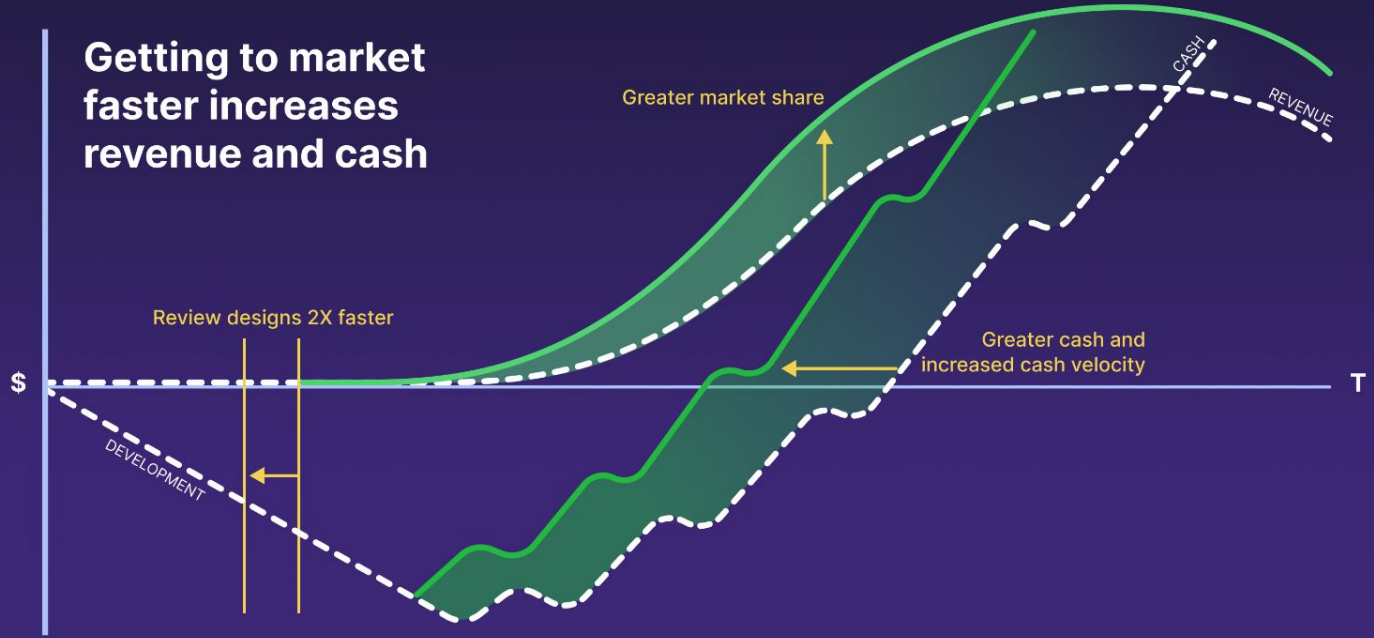
A hand holding a glowing lightbulb against a purple and pink gradient background. The lightbulb is the central focus, with its filament visible. The hand is positioned at the bottom right, holding the base of the bulb. The background is a smooth gradient from light purple at the top to a darker pink at the bottom.

On the flip side, the companies that

FIX THE BOTTLENECK

will unlock massive value by getting to market faster.

Getting to market faster increases revenue and cash





Cloud makes communication easier - but you
already know that.

So why hasn't it happened?

What options do engineering teams evaluate to leverage the cloud for better communication?

1. Switch to cloud-native CAD/PLM
2. Lift and shift existing on-prem CAD/PLM to the cloud
3. Add generic cloud-collaboration tools to the mix

Cost of Switching to a New CAD/PLM

1. Complex Implementation
2. Learning Curve and Disruption
3. Functionality Gaps
4. Questionable ROI

Existing PLMs can't (and shouldn't) do it all

1. Legacy Infrastructure
2. Conflict of Interest: Complexity (Control) vs. Creativity (Collaboration)
3. Low Adoption Outside Engineering

Generic cloud tools don't cut it

1. Lack engineering context
2. Don't play nice with your tools and data
3. Noise
4. Compromise decision-making quality



These are **important investments.**

But they won't solve your **communication problem.**



CoLab is the world's first

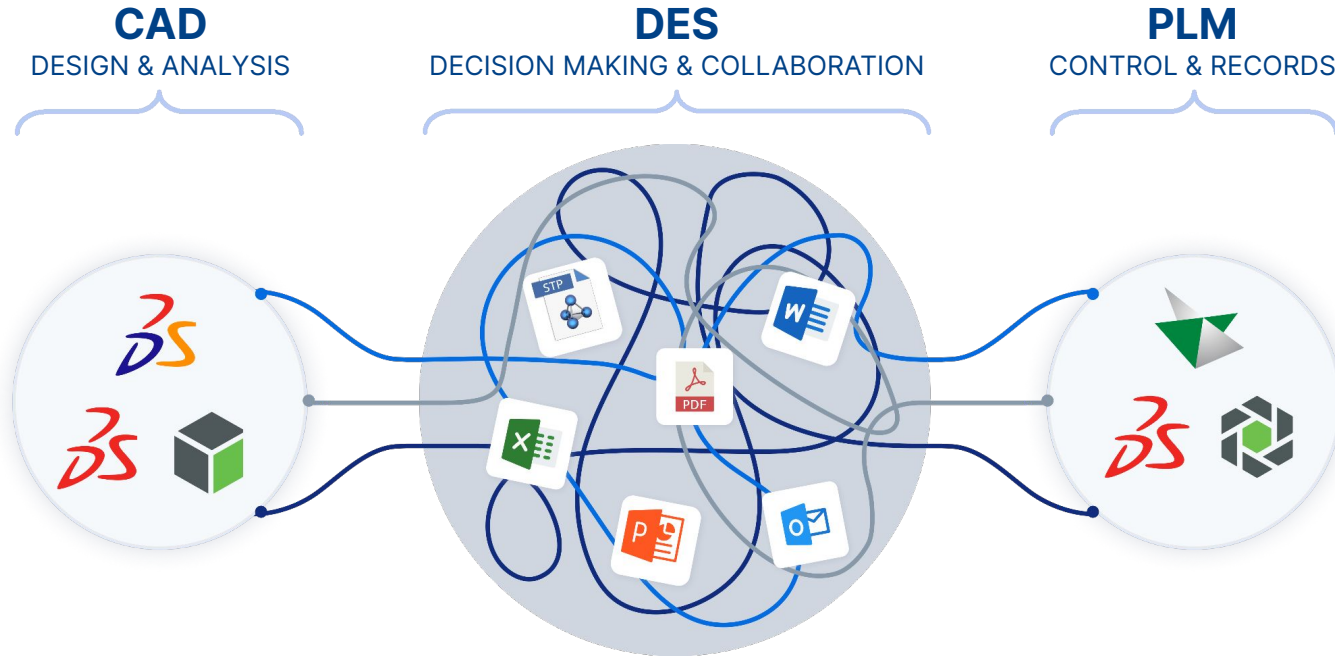
DESIGN ENGAGEMENT SYSTEM

Secure File Sharing

Contextualized Feedback

Automatic Feedback Tracking

CoLab is a Design Engagement System for product decision making



1 Accelerate NPD and catch mistakes sooner by **rewiring your design review process**



2 Unlock the power of external partners through **tighter supply chain collaboration**



3 Reduce costs by making it **engineering led, virtual and continuous**



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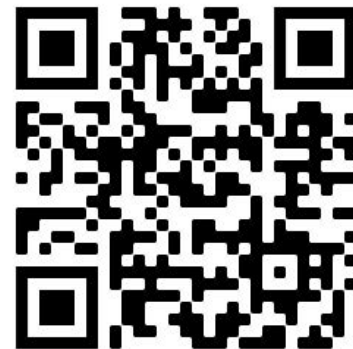


Taylor Young
Chief Strategy Officer

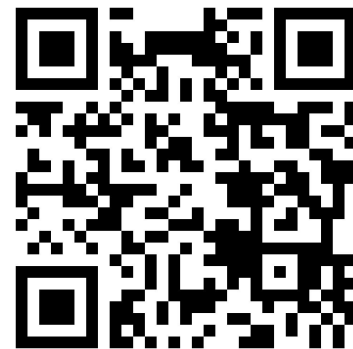


MJ Peters
VP Marketing

Adam Keating
on LinkedIn



Slide Deck (PDF)

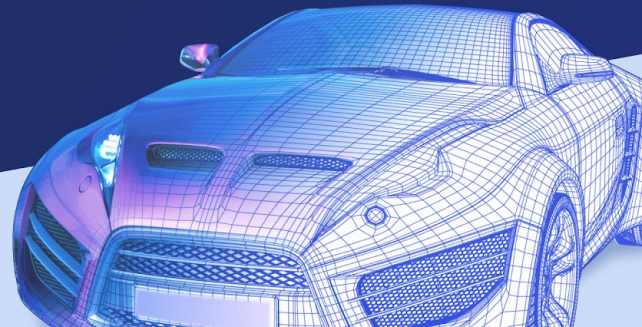




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Effective design review = faster time to market

What's not working

Review processes make it harder — not easier — for everyone to engage.

Critical design knowhow isn't documented.

Reviews don't happen early, so mistakes pop up late.

Why it needs to change

Process bottlenecks hurt time to market.

Poor communication leads to bad decisions.

Design review effectiveness drives speed and quality.

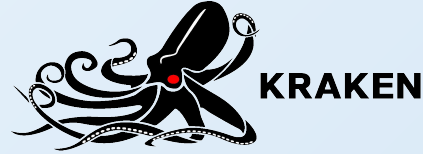
How to get started

Create a design review process and make it the standard.

Rethink how you **engage** your engineers in the design process.

Asynchronous design review

Kraken Robotics



Before

Set a bold vision for quality and speed, but industry tools weren't ready.

Frustrated with industry standard review processes with slideshows, PDFs, meetings, emails and excel trackers.

After

All design decision making centralized in a single tool.

ME/EE teams working seamlessly - in real time and async.

File sharing and communication happens in the same place.

Issues tracked automatically as reviews take place.

Impact

Consistent YoY decrease in manufacturing errors.

Review process that users love and meets ISO 9001 requirements.

Faster design iterations + while improving quality = New Working Potential!

Before

Peer Check process constantly slowed down by technology limitations

Too much admin work, leading to errors, duplication, and limited oversight

After

Eliminated unnecessary tools (9 tools down to 4)

Eliminated unnecessary process steps and admin work

100% paperless process

CAD and design review fully integrated, powering better decision-making

Impact

Review process that users love and meets ISO 9001 requirements

Notable improvement to NQC (Non-Quality Cost)

2

Turn suppliers into partners

What's not working

Sharing via email, you lose control of sensitive IP.

Sharing via PLM is expensive and complex.

It's too hard to collaborate with suppliers — which means everyone does the bare minimum.

Why it needs to change

Suppliers have domain expertise that you're not tapping into.

Companies with resilient supply chains weather economic downturns and global uncertainty.

How to get started

Reframe the relationship: how can you treat suppliers as partners?

Engage suppliers in new product development early.

Before

Wanted to work closer across locations/value chain.

Hard to get the right person the right file at the right time.

Impossible to keep up with changes from OEM.

PLM costs and complexity were prohibitive.

After

Data sharing with internal team and suppliers is secure and simple.

Everyone has access without the cost/complexity of PLM.

Real time design reviews power meaningful engagement with prospects during RFQ's.

Impact

Engineers reduced design review time by 75%.

How Mobis engages with their prospects and suppliers has become a competitive advantage, helping them win major OEM contracts with customers like Fiat Chrysler Automotive.

3

Engineering led cost reduction

What's not working

Aggressive VA/VE targets, but limited strategy or process to achieve them.

VA/VE is predominantly workshop based and in person.

Many VA/VE ideas are never captured or implemented.

Why it needs to change

Pressure for better margins.

Cost reduction targets increase 5%-10% every year.

Missing several years in a row has compounding effects.

How to get started

Create a forum where everyone can contribute.

Workshop centric to workshop augmented.

Go virtual and automate the admin.

Before

Wanted to do better during COVID, not just survive.

In person VA/VE events a few times per year.

Expensive travel, limiting how many can participate.

Hard to document ideas and follow up on implementation.

After

Virtual VA/VE enables the team to do more events every year.

More people get involved, which means more ideas (up to 100% more per event).

All ideas are tracked in the context of the design so there is no homework.

Impact

Eliminated travel costs; quadrupled engagement.

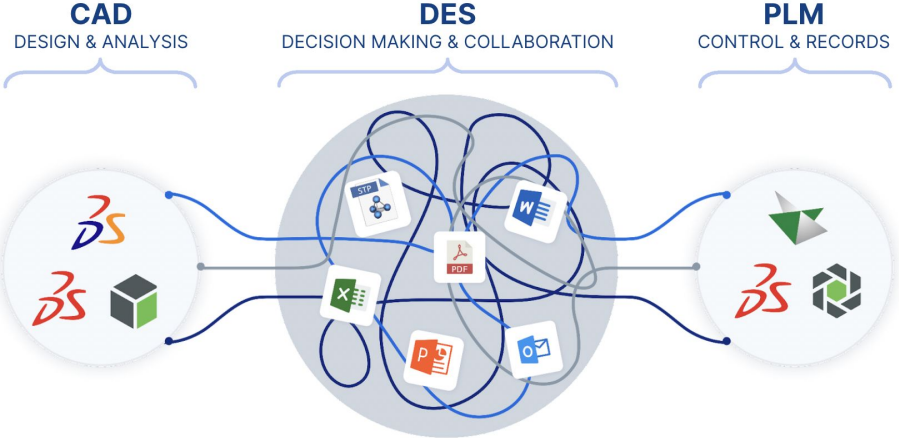
Double the high quality ideas.

Review times shortened from weeks to days.

Achieved ambitious 8 figure targets 2 years in a row.

	Cost of Switching CAD/PLM	Existing PLMs can't (and shouldn't) do it all	Generic cloud tools don't cut it
1.	Complex Implementation	Legacy Infrastructure	Lack engineering context
2.	Learning Curve and Disruption	Conflict of Interest: Complexity vs. Creativity	Don't play nice with your tools and data
3.	Functionality Gaps	Low Adoption Outside Engineering	Noise
4.	Questionable ROI		Compromise decision-making quality

More *engaging* design decision-making (without changing your CAD or PLM)



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