BRIDGING THE GAP BETWEEN ECAD AND MCAD DOMAINS

to Gain a Competitive Advantage in Electronic Product Design

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THE GOAL

get your products to market faster

The Challenge - Achieve First-Pass Success!

Top Pressures to Improve the Design Process

Best-in-class companies meet their deadlines, stay on budget, and meet stability and reliability requirements.
These achievements should not be taken for granted, as most companies struggle with those goals.

56% of companies cite the need to launch products quickly as their top pressure to improve the design process

Best-in-class companies are **49%** more likely to meet product launch targets

Goal: Sustainable Competitive Advantage

Source: Aberdeen Group, Why Printed Circuit Board Design Matters to the Executive: How PCBs Are a Strategic Asset for Cost Reduction and Faster Time to Market

Let's look at what best-in-class companies do

Integrate ECAD-MCAD Co-Design into your design flow as a meaningful process for getting to market first and gaining your own competitive advantage!

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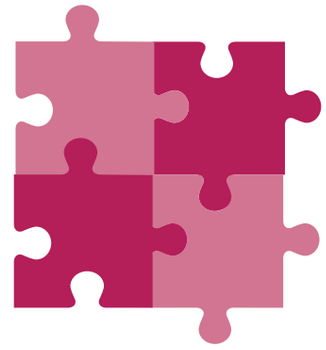
ELECTRO-MECHANICAL COMPLEXITY

is often a barrier to first-pass design success

Did you know that design respins due to poor electro-mechanical integration result in delayed time-to-market and unplanned costs?

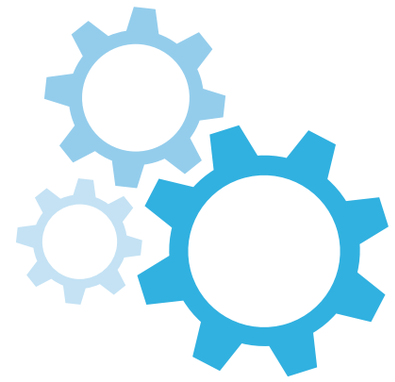
What you may not realize is that… companies that utilize ECAD/MCAD co-design capabilities in their design flow are able to avoid design respins and achieve first-pass design success.

50%



of complex products require at least **one additional design iteration** to address electro-mechanical issues

68%



of corporations cite ECAD-MCAD design synchronization as a **significant product design challenge**

Source: Aberdeen Group, Why Printed Circuit Board Design Matters to the Executive: How PCBs Are a Strategic Asset for Cost Reduction and Faster Time to Market

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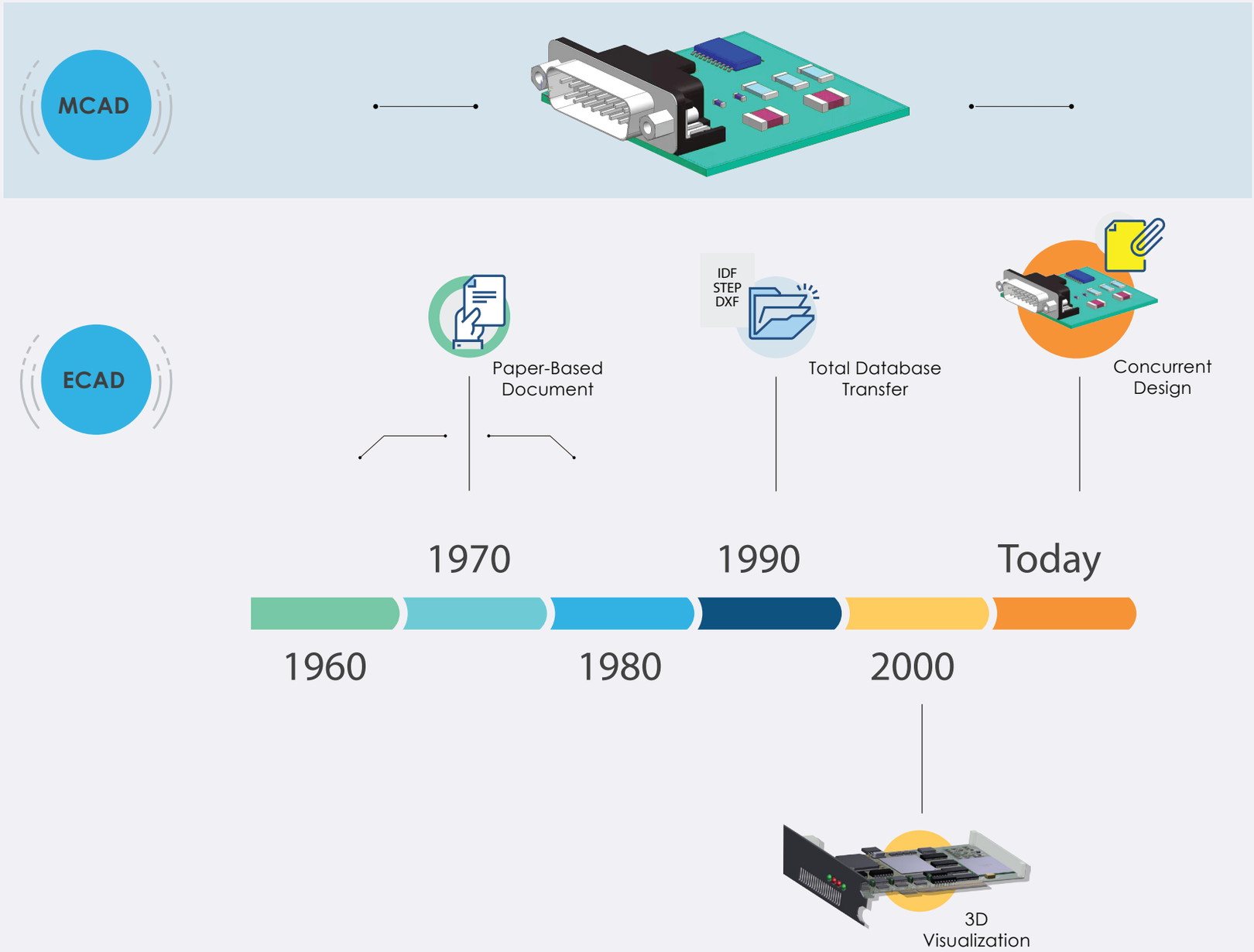
HOW TRADITIONAL ECAD-MCAD DATA

data exchange works

Generic "one-way" file transfers that don't provide direct design feedback, like IDF and DXF, are no longer acceptable options.
Error-prone, they result in design respins that delay a product's time to market.

The Evolution of **ECAD-MCAD Data Exchange**



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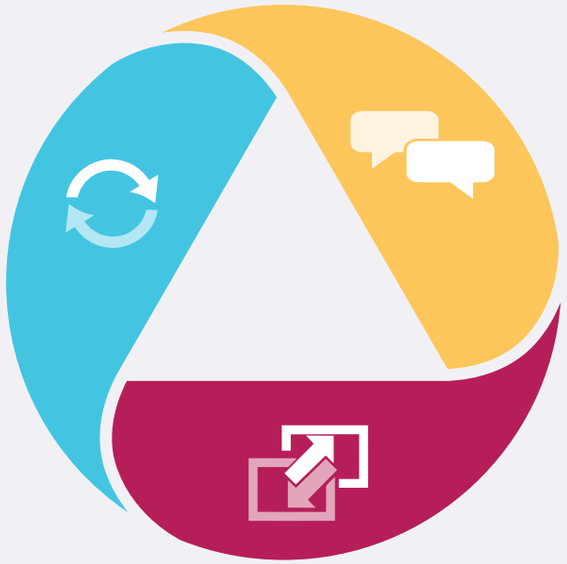
HOW ECAD-MCAD

data exchange works

EDMD collaboration uses the ProSTEP iViP standard to enable ECAD and MCAD teams to collaborate in real time.

ECAD-MCAD teams can propose, preview, accept, and counter-propose design intent from the earliest stages of PCB design and component placement.

ECAD-MCAD data exchange enables you to:



1. Exchange the data you want, whenever you want
2. Access ECAD models in MCAD, and MCAD models in ECAD
3. Send incremental updates rather than replacements

Allows for Co-Design with All Major MCAD tools such as Siemens NX™, CATIA®, PTC®, and SolidWorks®.

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ADVANTAGE

of ECAD-MCAD co-design

Increase Productivity

Enables 'what-if' scenarios to avoid costly, time-consuming design iterations

Allows ECAD and MCAD designers to co-design in their own environments without learning new tools

Provides more time for new projects due to fewer design iterations

Improve Design Robustness

Facilitates the optimization of today's complex, compact form factors

Ensures high quality, reliability, and performance

Reduces risk and prevents errors

Increase Collaboration and Efficiency

Provides consistent, iterative communication throughout the development process

Accelerates decision making to mutually agreed upon changes

Left-shifts 3D clearance and collision checking into the ECAD domain

Achieve First-Pass Success

Provides an integrated process for avoiding rework due to electro-mechanical issues

Reduces design iterations by verifying design intent throughout the development process

Increases the probability of meeting the product launch date

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MEET COST AND TIME-TO-MARKET GOALS

through ECAD-MCAD data exchange

Companies that implement ECAD/MCAD data exchange are more likely to meet their cost and time-to-market goals and deliver higher-quality products than companies that do not use ECAD/MCAD co-design.

Poor electro-mechanical co-design processes, or a lack thereof, account for projects missing their time-to-market and cost targets by 50% or more.

Impact of poor Collaboration

1 NO
consistent, continuous communication to keep the ECAD and MCAD data synchronized

2 NO
what-if evaluations to avoid costly and time-consuming design iterations

3 NO
process for negotiating proposed changes between the ECAD-MCAD domains

4 NO
methodology for validating design intent early and often

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ARE YOUR COMPANY'S ECAD-MCAD

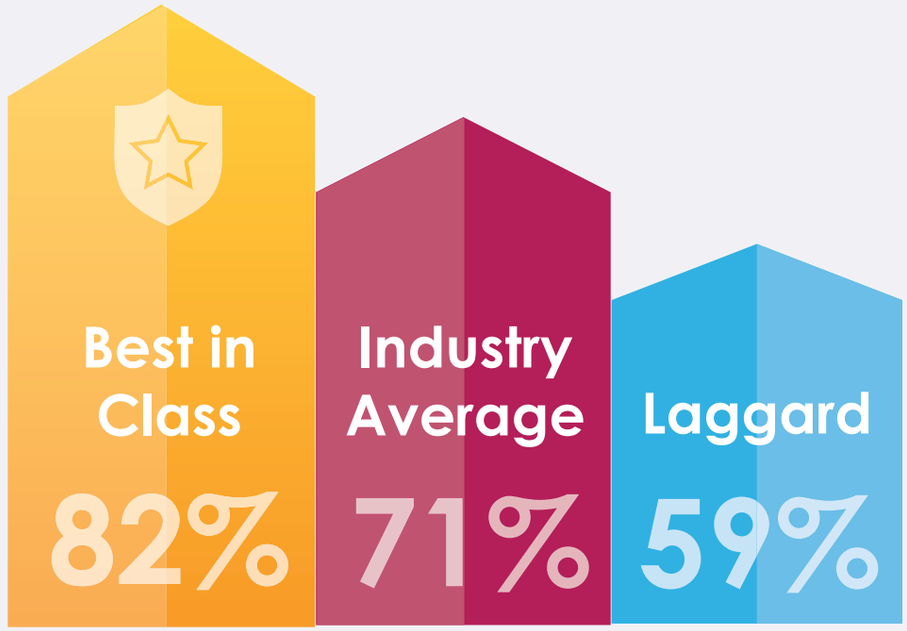
co-design practices best-in-class?

Integrate ECAD-MCAD Co-Design into your design flow as a meaningful process for getting to market first and gaining your own competitive advantage!

Best-in-class companies

are 82% more likely to utilize a process where ECAD and MCAD data are incrementally exchanged

Source: Aberdeen Group, Why Printed Circuit Board Design Matters to the Executive: How PCBs Are a Strategic Asset for Cost Reduction and Faster Time to market



Why collaborate

- Reduces time to market
- Creates more robust designs
- Increases productivity
- Enables first-pass success

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