



POWERSYS

**Revolutionize E-design,  
Accelerate Electrification.**

[powersys-solutions.com](http://powersys-solutions.com)



## Who we are.

Powersys is a global electrical engineering software and services provider, offering fully customized solutions to accelerate the design of Power Systems.

We're on mission to **move electrification industries forward, faster.**

With the state of our planet driving our purpose, we deliver next-generation solutions for fully optimized, production-ready electrical and electromagnetic systems design.

Since 2002, we've enabled clients in e-mobility and infrastructure industries worldwide to manufacture more robust, optimized electric components and systems.



ELECTRICAL VEHICLES



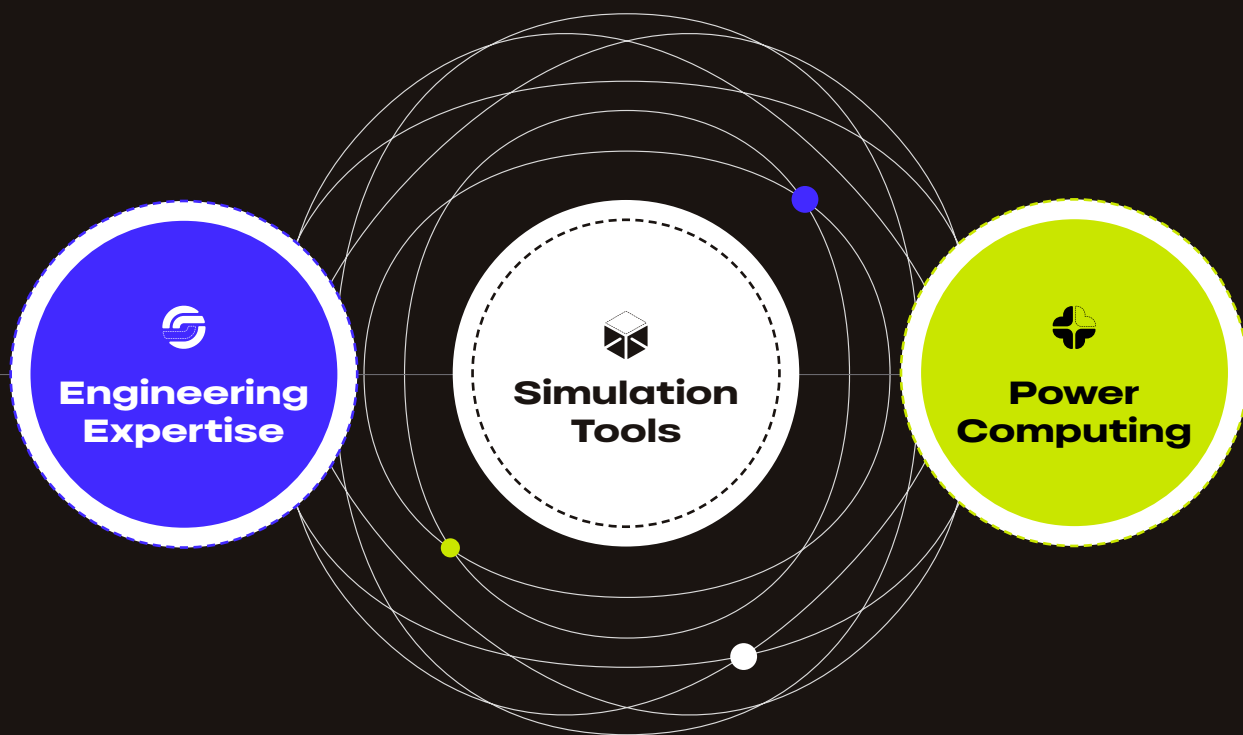
CHARGING / INFRASTRUCTURE

We're committed to ensuring our clients' innovation succeeds by eliminating their need to choose between speed and accuracy. Accelerate your timeline to an optimized prototype that's ready to excel in full-rate production.

**Increase design robustness,  
decrease time to market.**



# A customized, turnkey CAE design factory



## An electric design optimized for performance... and for manufacturability

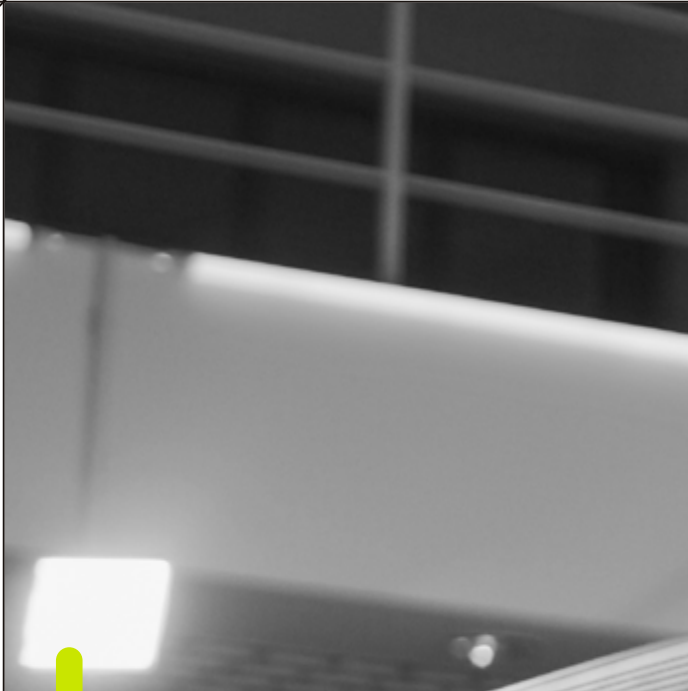
Whether you need an individual tool to complement your current design workflow or an entire customized, turnkey CAE design factory, we'll help you achieve a design equipped to handle reality.



## Our inspiring clients



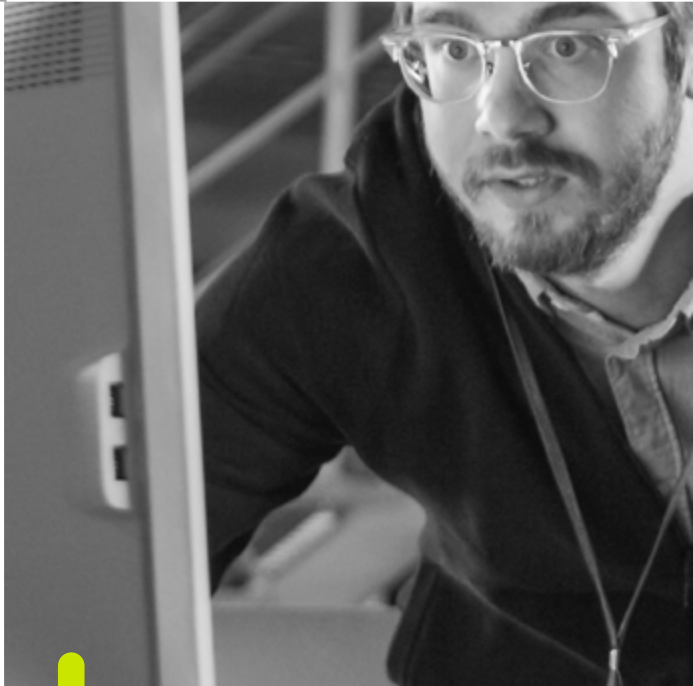




Electrical  
engineering  
**is in our  
DNA**

## Software Integration

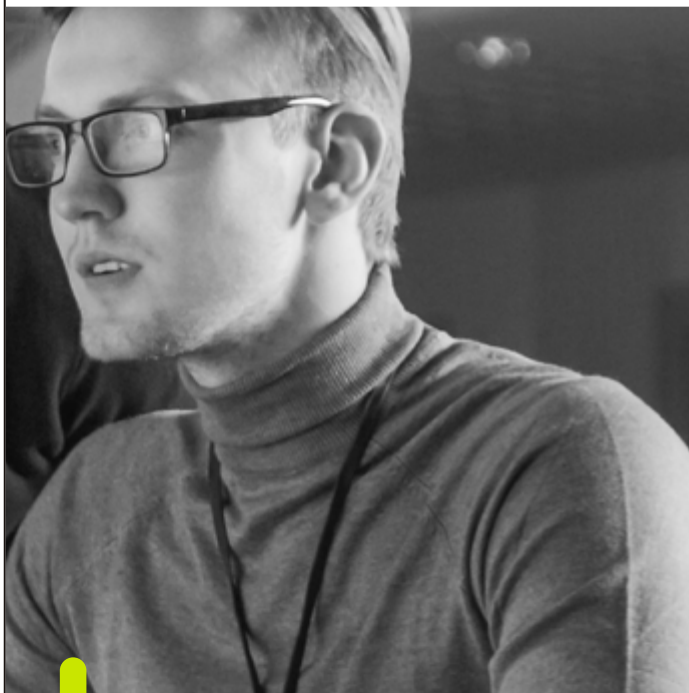
The design workflow's efficiency relies on how well the simulation software and IT environment work together. Our turnkey CAE «design factories» generate electrical designs robust enough that are suitable for full-rate production, and seamlessly integrate into your manufacturing and IT systems.



## Workflow Design

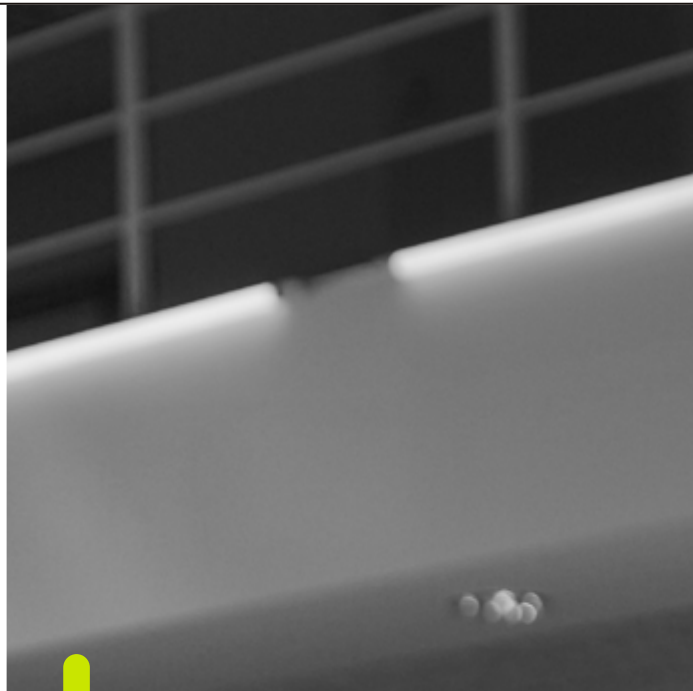
Automated workflow and optimization are a must to achieve design production objective.

Our electrical workflow experts analyze existing systems, identify improvement areas, design and implement new processes to increase efficiency, reduce costs, and improve overall performance.



## Technical Support

Support that anticipates potential customer issues is how we stay a step ahead. Our 24/7 customer support team analyzes and mitigates potential user problems from the software installation to its optimization.



## Customized Onboarding Program

We understand that down time is lost time. Our commitment is to have your design factory fully operational through our comprehensive onboarding process, tailored to your needs and current bandwidth.

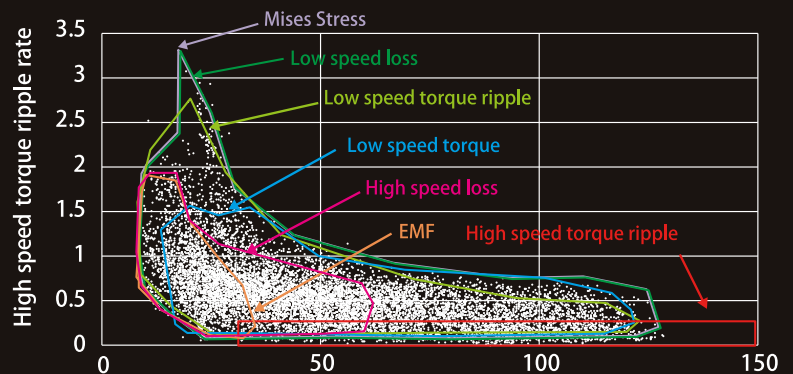
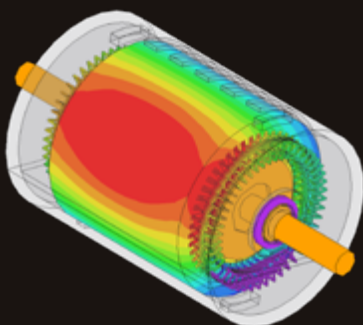
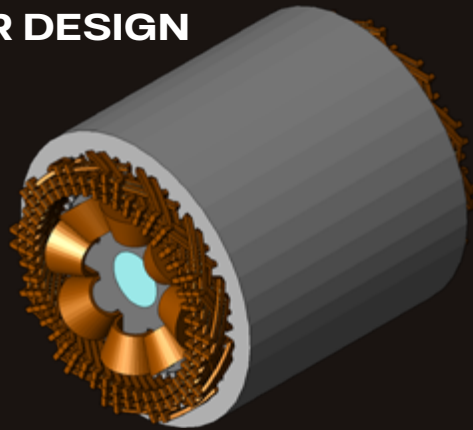




## Harmonize design with reality

Achieve a fully optimized electric propulsion system designs with our best-in-class multi-physics simulation platform. We've worked closely with our developers for two decades, improving simulation capability based on real clients' applications.

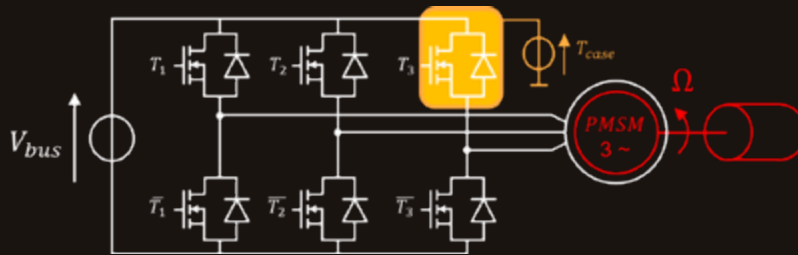
### E-MOTOR DESIGN







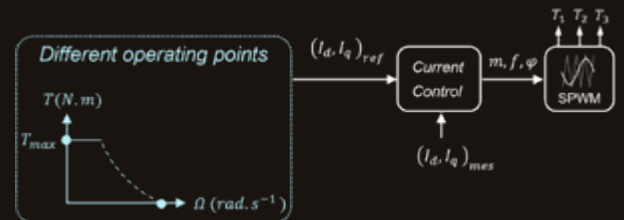
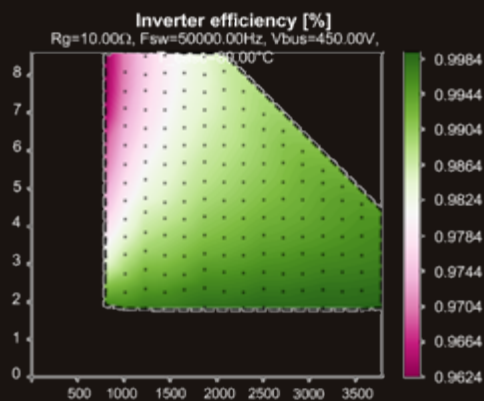
## CONVERTERS DESIGN



```
#####
# PYTHON SCRIPT: PARAMETERS #
#####
case_temperature= 40
Rg= 10
switching_frequency= 30000
bus_voltage= 400.0
max_speed_ref= 4000
max_current_ref= 10.0

number_of_speed_points= 15
number_of_current_points= 15
relative_minimum_speed= 0.2
relative_minimum_current= 0.2
simulation_time= 1

NPP= 5.0
PM_Wb= 0.0802
Ld_H= 14.0e3
Lq_H= 14.0e3
Rs= 0.814
```



## ACCURACY

Unmatched CAE algorithms are capable of calculating the most accurate Multiphysics, essentially affording engineers to see into the design future before enlisting any hardware.

## SPEED

Next-gen massive simulation software automates electromagnetic & power electronics workflow, guaranteed to achieve an optimized design.

## VIRTUAL PROTOTYPING

For both electric motors and power converters, large-scale 3D models address design details virtually, avoiding hardware testing and eliminating expensive correction loops in design cycles.

## EASE OF INTEGRATION

With e-mobility industries booming, we know there's a need to scale-up quickly. Our tools guarantee compatibility with industry standard CAE softwares.



# POWER COMPUTING



## **Solve simulations at lightning speed**

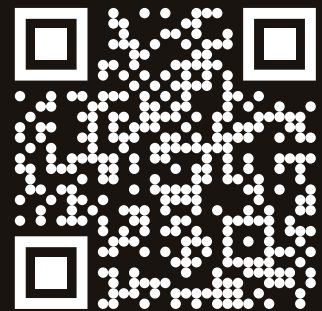
Unlimited parallel computing, Cost effective simulations.

Looking to reduce calculation time in complex, parametric simulations? Consider using parallel and distributed calculations on your cluster or opting for our high-performance computing solution to enhance design workflow efficiency.

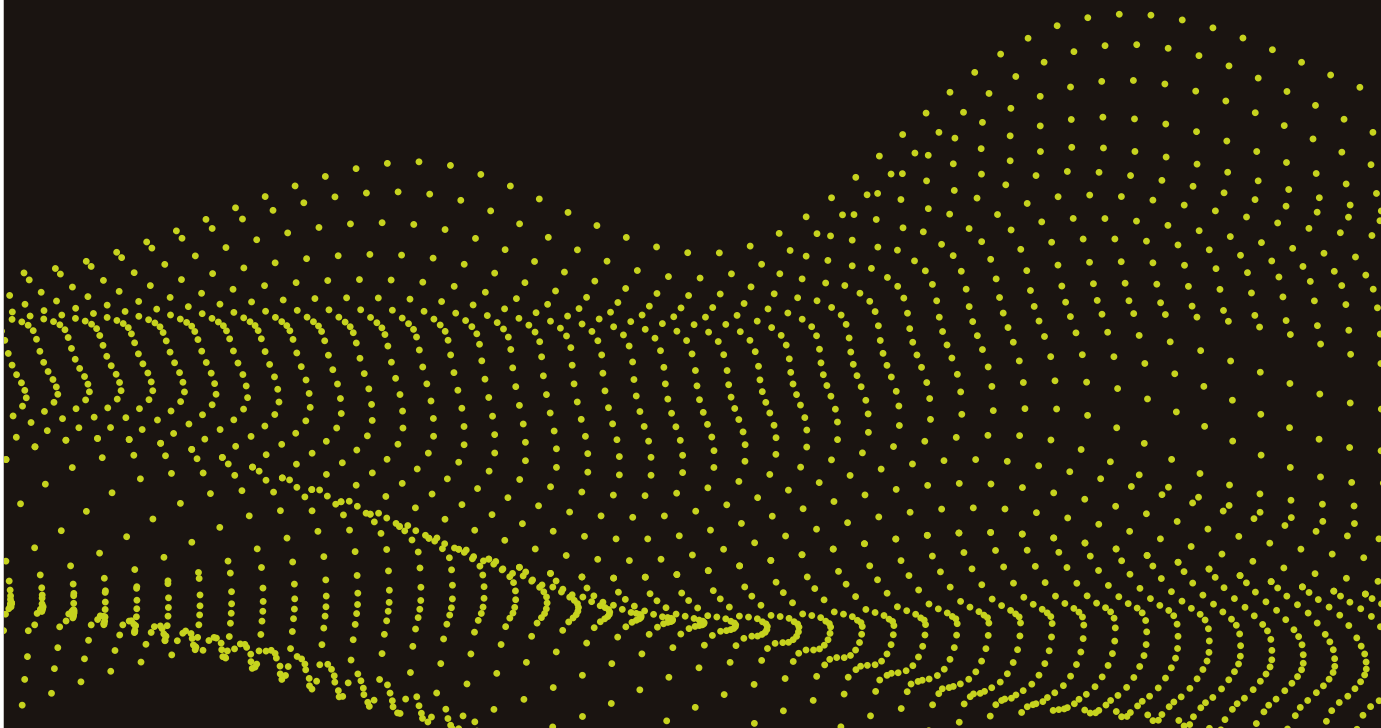


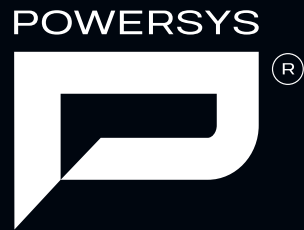
## STAY UP-TO-DATE

Powersys offers various learning opportunities through conferences, training sessions, and webinars. These events cover the design of e-motors and power converters and are designed to provide participants with insights into the latest technologies, industry trends, and best practices. With experienced instructors and engaging content, Powersys' learning opportunities offer valuable knowledge and networking opportunities to professionals in Electrical Vehicles and Charging/Infrastructure.



Visit our website [www.powersys-solutions.com](http://www.powersys-solutions.com) to know more!





## Ready to join the revolution? Contact us:

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