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# Cast Coils

## New technology for highly efficient electrical engines

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Please respect that in the following slides only rudimentary informations and no confidential detail. The content is only a first appetizer to intrigue you!

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# THE TEAM

- **Who are the people behind the project?**

A highly motivated team at IFAM consisting out of casting and electrical engine experts.

- **What are your professions and competencies?**

Deep knowledge about the technology, the market, international network, realisation about our own limits and needs.

- **What motivates you to found a startup?**

After the development and successfull case studies we are sure that it is possible to change the way of production of electric engines. With the knowlededge of IFAM and the IP-Portfolio it would be possible to give birth to a new global player in that field.

- **What are your roles once the spin-off has been created?**

Different options are possible from a leading role in the start up, shareholder or partner from side of the institute. A leading role in the start up is definitive desired.

# THE MARKET

- **What problem do you want to solve?**

Higher performance, higher efficiency, higher power density of electric motors combined with a new production and design method for electrical engines, followed by new possibilities of power and torque variants inside the same housing which offers a higher use of scale factors additional to the technology advantages.

- **Who are the most promising customer segments and how might the final product look like?**

Machine building, Automotive industry, aircraft and ship industry, automation industry, recreation industry .....

- **Do you already have paying customers/relevant pilot projects/additional evidence for a customer?**

YES

- **What might be a business model?**

Different options are given. Starting from a consulting agency to transfer the technology to provider of semi finished products or selling the complete product in cooperation with subcontractors up to a production and distribution company for complete systems

- **What are further fields of applications for our technology?**

Every field where electric engines or generators are needed.

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# THE TECHNOLOGY

- **Tell us about your technology!**

Conventional coils for electrical engines are wound out of wires. We are using casting technology to produce a coil with the result that we could rise up the filling factor from around 55% with conventional technology to nearly 90% with a casted coil in the same design room. That enables us to rise up power and torque density combined with a higher efficiency. Furthermore the higher filling factor enables us to substitute the conventional used wound copper coil with aluminium combined with higher torque, lower raw material cost and higher safety in raw material availability.

- **What makes our technology special and what might be a global unfair advantage?**

The conventional winding technology is reaching its limit and all kind of improvement offers only very small possibilities to get an advantage against competitors in combination with high costs. Cast Coils make a jump in the development which offers complete new options for engines and product families with high efficiency. The Cast Coil technology is the only technology which fulfills upcoming needs, standards and laws!

- **What is the TRL and how is the IP protected/protectable?**

TRL 6, IP is owned by IFAM

- **As of today how much has been invested in total into the technology?**

That is an internal information

- **How long will it take to get the technology market ready?**

Between one and two years!



# THE OFFER

- Who are you looking for? A full founding team, or a single pioneer complementing your team?

We are looking for additional members or a full founding team with special skills. Also a pioneer or partner could be interesting, depending on the resultant advantages for a quick market penetration.

- How do you want to incentivize the pioneer(s)?

That depends at the end on his input. It could be a position in the company, an option on the earnings, share in the business or in the company. - Let's go in discussion to explore possible ways for common success!

- What are expectations you have regarding the pioneer?

Open minded for new technologies, Market knowledge, Business development, readiness to assume a risk, marketing and distribution.