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A brand is no longer what we tell the consumer it is - it is what consumers tell each other it is. ”

- SCOTT COOK

Innovating to generate patents for Design Engineering Division of one of the worlds top 5 electric vehicle automakers

Case Studies of Company

The Ask

Generate patentable ideas for specific engineering challenges using a blend of Design thinking and Innovation TRIZ. The challenges are for electric vehicles being currently worked upon by the automobile design team.

Need and Problem Discovery

Ideation

Co-creation

Outcome





Need and Problem Discovery

- The E-vehicle design team had some specific design challenges to solve for. These were ideated using the regular technique which drew few solutions.
- The need was to generate out of the box solutions.
- QGlue Experts designed a DT and TRIZ innovation blended experience workshop specific to the challenges at hand
- These challenges looked specifically at -
 - Creating a new layout for the Electric drive power source so that it is able to manage all constraints.
 - To design a high reduction gear box with lesser components and smaller size for an electric vehicle.
 - Optimisation of battery cooling circuit.
 - Re-designing the protection frame for HV Battery

The teams were engaged prior to the session by QGlue experts to understand the technical challenges. These key insights were important to customise the one day Innovation sprint. The teams themselves investigated the technical challenges and framed the challenge area using the ISQ Framework.

They then participated in a one day Innovation sprint using the TRIZ and Design thinking tool set. Actual challenges and solutions were generated in a day.



Ideation

- Multiple ideas were generated using Function model, functional analysis and trimming techniques.
- The teams also created the contradiction matrix and generated ideas using 40 Innovation principles and resource thinking methods.
- A few of systematic inventive thinking techniques were also used by the teams
- This was followed up by application of SU field and 76 inventive standard techniques.
- Each team generated more than 30 practical ideas and blended them into solution concepts.

Co-creation

- Details concepts were rated as per the set technical selection criteria and solution sketches were created for 2 key concepts.
- The teams then went about creating a concept poster for each of the concepts
- The concepts were shared at the end of the session to the design leadership team members who critiqued the ideas and selected the high potential ones for further development and patents.

Outcome

- Initial trials and implementation is underway currently using simulation and prototyping techniques.
- New insights directions to follow for patents.



About QGLUE

QGLUE uses design-led practices to help businesses build services that people love and impact the world around us. Using a human centered approach, QGLUE equips people to solve wicked problems by helping them reach a solution that is not just right, but also desirable. We facilitate innovation that makes the world better designed and people happier.

QGLUE undertakes Design Coaching, Innovation on Demand, Briefings for Senior Management and Culture Change Workshops to equip businesses to become design-led.

LET'S CONNECT!

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