

Driving Performance

with Automotive Project Management.



Mi-GSO | PCU3ED



Introduction.

MI-GSO | PCUBED's roots come from the automotive industry, beginning in 1991 with Renault in France and Ford Motor Company in the United States. We have worked with the world's largest organizations, helping them successfully innovate and deliver their most complex and critical programs.

Over those 30 years, we helped our clients:

- » Launch countless vehicle programs.
- » Support the move to hybrid powertrains and in-vehicle software.
- » Shrink the automotive product development lifecycle by 30%.
- » Support numerous systems implementations, mergers, demergers, acquisitions, and joint ventures.

While it's been a wild and exciting ride, we are even more excited about the future.



Automotive's Future is **'CASE' Sensitive.**

There has been a constant pressure to reduce costs, increase efficiency, and do more with less. That hasn't changed in the last 30 years. Businesses need to shorten product life-cycles, optimize resources, and adhere to tighter and tighter regulations. They also need to create and promote sustainability, be more accountable and transparent, and support societal causes; all the while answering to market changes and customers' demands.

Four of the most demanding market forces brought about by changing customer habits are 'CASE' sensitive. The four themes defining the future of the auto industry are **Connectivity**, **Autonomous Vehicles**, **Shared Mobility**, and **Electrification**.

Connectivity.

The ability to bring a consistent user experience from our personal devices into our car, while also allowing for additional services and consumable content giving the driver back their time, while also providing them vehicle and environmental insights.

Autonomy.

The ability to reduce crashes with intelligent technology that senses hazards and makes decisions in a fraction of the time and allows drivers to become the passenger.

Shared Mobility.

The ability to reduce congestion with alternative means of transportation. Sharing rides also reduces costs of travel and vehicle ownership.

Electrification.

The ability to reduce emissions without the need for carbon fuel. Powered by electricity, cars can run on clean, renewable energy.

As these themes become more relevant and necessary for vehicle production, we see them called out as strategic drivers for each of the major automotive companies.

In January 2021, GM announced its path to an all electric future, inviting "[Everyone In](#)" to their vision of the future. GM will be investing more than \$27 billion in electric vehicle (EV) and autonomous vehicle (AV) development towards its goal of being all electric by 2035.

Ford, echoing the commitment, announced that they would be all electric in Europe by 2030. They are investing nearly \$29 billion in EV (Electric Vehicle) and AV (Autonomous Vehicle) development. Tesla, already crowned the electric vehicle leader, announced that they will have Full Self Driving level 5 autonomous vehicles by the end of 2021.

Renault unveiled their "[Renaulution](#)" plan, highlighting their strategy to move from a focus on volume to a focus on efficiency, speed, and customer value. Going further, Group CEO Luca de Meo signalled a move from "a car company working with tech to a tech company working with cars", [repositioning Renault not only as a tech company but an energy company as well.](#)

Continental, a global Tier 1 automotive supplier, has already rebranded itself as a technology company. The assisted and autonomous leader recently [invested heavily in the startup Recogni](#) furthering the development of chips for their high performance vehicle computers.

This is not the first signal that industry lanes are blurring. Today, the focus on the automobile is shifting towards 'mobility' where vehicle transportation is not limited to the car, and drivers are not focused solely on the road. For example, automotive and aerospace are converging as air taxis take mobility to the sky.

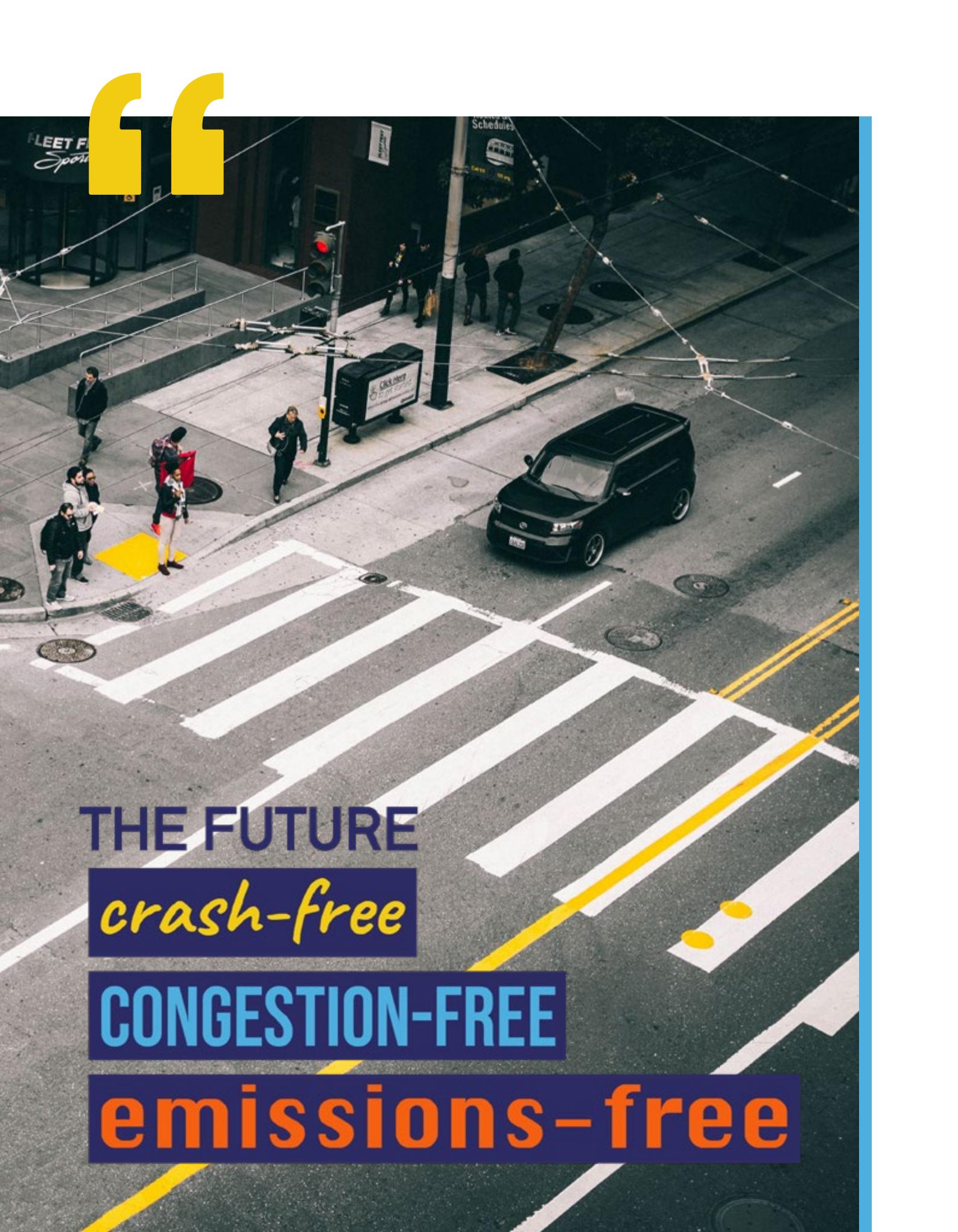
We also see tech companies taking part in the race for autonomous and electric vehicle advancements. Google is in the autonomous vehicle game with Waymo, releasing self driving taxis in Phoenix. Rumour also has it that Apple will release an autonomous vehicle in 2024, [partnering with Hyundai-Kia and LG Electronics](#). Who is going to win the race in Autonomy or Electrification is anyone's bet.

While the 'CASE' destination may be clear, how to get there is not. Original Equipment Manufacturers (OEMs) still need help with delivery. Many of their existing projects and programs are poorly coordinated and inefficiently executed.

Key challenges include:

- » Getting new and innovative ideas to market.
- » Reducing product development times.
- » Improving agility.
- » Managing vehicle complexity and dependencies.
- » Reducing costs and improving operational efficiency.

In order for our clients to live up to these requirements, they must be able to connect their strategy to execution - to drive performance while keeping an eye on competition.



THE FUTURE

crash-free

CONGESTION-FREE

emissions-free



**Who is going to
win the race:
Autonomy or
Electrification.**

Interviews with our Consultants.

“You could characterize [the future of the automotive industry] by significant change, more than the industry has seen in a while”, said Simon Enstone, Automotive Associate with MI-GSO | PCUBED UK.

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I used to work for an OEM with responsibility for vehicle connected services. From a program management perspective vehicle development was quite stable - there had been no major upset to the process and the timing of those programs for some time. Increasing levels of vehicle connectivity and services that were being offered prompted a dramatic change. Traditional vehicle development timing requires that certain things were fixed early on – sometimes nearly 3 years before launch. Well, with connected services you don't have visibility 3 years out. The software side evolves so rapidly, that to match its pace of change with electrical hardware development was challenging. You could easily find yourself in a situation where

the processing required to run the latest desired apps and features in the vehicle was much higher than what the hardware components were originally designed to deliver.

When you have an electrified vehicle that is autonomous, you basically have a computer on wheels instead of a car. That is a change in mindset. That's where the benefit of a project management partner can come in. We at MI-GSO | PCUBED work with our clients to introduce more Agile ways of working, dissociating the software development from the hardware, to increase organizational speed and flexibility.”

"I agree that there are a few things changing", said Dr Ingo Franke, Head of MI-GSO | PCUBED Germany.

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"I would call myself a petrol head. Does that translate? I was totally in love with cars in the past, you know with a gas engine. I have now downsized and am driving a full electric vehicle. You just plug it in the outlet at home and the next morning it is fully charged. It has the same acceleration, the same look and feel of the design. The difference is all in the amenities and electrical features.

Basically it's a PC with wheels and a steering column. This takes an entirely different view on how to build the car. Now you start with the software and build the car around it. The whole product development life cycle changes. This is one of the key areas that we are helping our clients in.

We are currently helping a global OEM to modify their product development methodology, looking not only at the logic within the schedules but their approach to systems engineering - to help reduce the overall development time and improve engineering efficiency. The goal is to develop hardware at the speed of software.

Looking beyond internal development, OEMs increasingly need to think of how to project manage outside of the company. Using the same example in electric vehicles, you used to only have to pay for gas. You now need to think of electrical charging infrastructure, how one accesses, pays for that - either in their phone, via their car, via a subscription service. You need to integrate with partners that have nothing to do with building a car - public sector, real estate, IT companies, engineering companies.

To reduce the burden of managing all this complexity, organizations need to be able to turn to highly specialized and qualified partners who can supplement their project management capability. Again, that is an area where we are coming in to help.

Our expertise in PMO setup and project controls helps clients to mobilize and ultimately succeed in their completely green field environment.”

Agile Mindset Towards Product Development Lifecycle Transformation.

CHALLENGE

MI-GSO | PCUBED helped a Global Automotive Manufacturer manage an Agile PMO, responsible for managing their digital transformation. To stay competitive the client needed a faster and more cost effective approach to their product development processes used by more than 25,000 employees.

SOLUTION

If the lifecycle was to become more agile, the team should as well. The team quickly mobilized and established the Scaled Agile Framework (SAFe) as the methodology to manage the incremental development, rollout and adoption of key features and enablers by the vehicle program teams. Segmenting the enablers into Agile Release Trains allowed the teams to match delivery to various program timings. The team then developed a schedule to rollout training just in time across the organization.

The MI-GSO | PCUBED PMO supported the client with Agile training, Coaches and Scrum Masters, and Agile Release Train Engineers on their transformation to new ways of working. Additionally, the PMO developed several Digital Dashboards providing enhanced visibility around key program metrics.

BENEFITS

In conjunction with the Scaled Agile methodology, the Agile PMO set the basis for the team to deliver incrementally with quality and improved adaptability to change. The agile mindset was a key enabler to deliver faster and more cost effective vehicle programs to come.

“There are so many dependencies now to manage between the OEM and their suppliers.”, said Adel Khalil - Business Manager Paris.

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The complexity has increased exponentially. It is very hard to do this without an army of engineers or consultants. Our teams are continually looking at ways to streamline and increase efficiency. With a consistent set of lean, streamlined processes, all teams can work together in a coordinated fashion. This has become even more important working with remote and hybrid teams.

Second, it is important to have clear and measurable key performance indicators or KPIs. Our teams regularly invest time in digitization or dashboard development, as well as the automation of these dashboards across our PMOs - providing visible controls to the client as well as moving away from manual data entry to data analysis and prediction. We are always looking for ways to deliver more value.”





“All of those challenges in implementing Connectivity, Autonomous Vehicles, Mobility, and Electrification - they turn into strategic projects which turn into features and enablers that our clients have to execute” said Dermot Brannock, General Manager MI-GSO | PCUBED USA.

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“While the vision of an autonomous or electrified future is key, OEMs are still regulated companies who have to deliver on time and on quality. They still have to think about their key stakeholders, whether shareholders, or customers, or both. They also have to think about budget.

Some companies have set targets to reduce costs by 40%, reduce development lead times by 25%, and to become fully Agile. Achieving these goals is what we help them do. We take control of the project management side, delivering performance amongst their teams so they can focus on engineering and their business.”

Key Recommendations To Gain Control Of Automotive's New Future.

01 Establish a Performance Management Office.

A Performance Management Office is a PMO that is focused on driving value or critical outcomes for an organization. As we highlighted in our [what is a PMO guide](#), it is imperative that the PMO be aligned to the strategic objectives of the organization. Your Performance Management Office will then use those defined strategic drivers, such as reducing development lead times by 25%, to lead teams forward. While many new initiatives may seem necessary they may not be aligned to strategy. It's important for the PMO to stay laser focused on the intended outcome - asking for any new project "Will it help us achieve our goal? or Will it distract us from our vision?".

02 Define streamlined repeatable processes for efficient delivery.

Second - there is a waging war on talent within the automotive industry. Highly skilled resources are being wooed

away to new startups and technology companies. To compound, many employees are still working remotely, meaning knowledge around the ways of getting work done are not as easily transferred. Today you don't just walk over to someone's desk for an informal, "Hey can you show me..." or "Do you know who..." To get work done and have your teams moving as efficiently as possible, it is important to detail out the key processes end to end and define who is doing what. Then using techniques like Lean Innovation, organizations can add value by reducing redundant work and automating processes, resulting in even faster delivery.



03 Establish visible controls.

Once everyone is moving in the right direction and working on the right tasks, it's important to establish visible controls. Measured key performance indicators (KPIs) will allow you to assess early on if you are on track to meet your goals. This is accomplished through the help of [digital dashboards](#), where you have access to the right information at the right time to make critical decisions.

04 Establish regular governance.

With all this change in the automotive industry there is one thing we can all count on - more change. Whether it is new market entrants, or issues with supply - it's important to establish regular checkpoints where you can assess the performance of your projects or programs, not only against their KPIs, but rolling them up against the strategic objectives of the organization. It's here where a Performance Management Office can help you to realign, pivot, and adapt to ensure your projects and programs are both highly coordinated and efficiently executed - achieving the high-level outcomes you need to compete.



How we help.

PM Delivery

PMO Setup and Delivery

Agile Transformation

Dashboard Development

Business Process Improvement

PM / PMO as a Service

Portfolio Management

Change Management

Cost Management

Program Recovery and Improvement

[**>>> Learn more about our services**](#)



CONNECTIVITY PMO for Improved Connectivity.

Saved the client time and reduced costly errors previously caused by misscommunications between various stakeholder groups.

CHALLENGE

The development of connected devices in vehicles introduces new challenges to the automotive industry. Our client, a global automotive manufacturer, struggled merging their traditional methods for hardware manufacturing with Agile software development. They needed a team to coordinate activities, improve communications, and reduce inefficiencies across the incredibly complex program.

SOLUTION

The MI-GSO | PCUBED team, made up of a team of project managers and operational specialists, set up a PMO for the client's automotive Connectivity program. Ultimately, the PMO was responsible for planning, reporting, governance, data analysis, process improvement, and cross-functional support. The PMO acted as the central hub connecting and integrating each project and stakeholder group - including software companies, Tier 1 suppliers and other agencies - to improve visibility and transparency for the client team.

BENEFITS

Our team implemented an effective PMO that enabled Agile practices within the organization while also setting up digital dashboards for enhanced reporting. By facilitating communications and coordinating activities across different teams, departments, and vendors, the MI-P team saved the client time and reduced costly errors previously caused by miscommunications between the various stakeholder groups. Improved connectivity for improved automotive connectivity.

AUTONOMOUS Advanced PMO for Agility.

Using a mantra of **deliver small, deliver fast**; the Advanced PMO team was able to make a **rapid impact on the client organization**.

CHALLENGE

MI-GSO | PCUBED helped a global automotive manufacturer set up an Advanced PMO whose goal was to support enhanced consistency, transparency, and predictability across their feature development teams. New features were being developed to provide customers with the ability to take their hands off the wheel on certain sections of highways. Challenges the client faced included visibility into project status, the ability to forecast and prioritize work, and an understanding of key processes required by the team.

SOLUTION

Our PM team set out to remove silos across different workstreams, establish a PMO roadmap, integrate Agile tools, and establish a report cadence. To manage the varying types of projects and tasks most efficiently, the PMO leveraged a combination of Waterfall Project Management for high level planning, and Agile Project Management, for tasks managed by the software teams. Using this combination of methodologies gave the client control of the program, allowed development to move quickly, and helped them deal with the uncertainties of advanced technology research and development.

BENEFITS

Using a mantra of **deliver small, deliver fast**; the Advanced PMO team made a rapid impact on the client organization. The team conducts monthly retrospectives to understand not only successes but opportunities for improvement. Additionally, the PMO holds a daily standup to share daily progress and provide an ability to raise concerns. These daily standups keep the teams in line and heading in the same direction. The key benefits cited by the program included enhanced consistency, transparency, and predictability.

SUBSCRIPTION / SHARING

Lean Project Management for Shared Mobility.

They reduced prototype vehicle needs by 90% by applying Lean Project Management practices.

CHALLENGE

Our client, a leading ride sharing platform, needed to implement a tailored automotive development lifecycle solution. The methodology needed to align with both their fast-paced organization's needs and culture and the more traditional culture of their suppliers.

SOLUTION

The MI-GSO | PCUBED team quickly assessed the current process landscape to determine a roadmap for adjusting their existing ad hoc PM delivery methodology to operate in a highly Adaptive mode. They needed to get the organization, which was operating at a fast pace, all moving in the same direction.

The team defined more flexible processes for this highly responsive organization. Carefully selecting the necessary Lean PMO building blocks - program planning, bill of material management, supplier selection, vehicle test specification management, and applying Agile Project Management principles towards delivery management, enabled the client to both act faster and deliver more efficiently.

BENEFITS

The client could recover and achieve their initial design release milestone with 100% on time delivery. They reduced prototype vehicle needs by 90% by applying Lean Project Management practices fit for their "startup" environment.

ELECTRIFICATION

Mobility Services

Ramp-up.

We
successfully
built up
the client
program
organization
- starting
from zero
employees.

CHALLENGE

Our client, an international joint venture of prominent OEMs set out to increase the adoption of electromobility across Europe by building a network of reliable high powered charging stations. As a start-up in mobility services and a collaboration of several organizations, the client faced integrating partners with different cultures and business backgrounds while establishing a program management structure from scratch. They also needed to define the program governance with reporting cycles and escalation pathways, all with minimal ramp-up time.

SOLUTION

MI-GSO | PCUBED engaged a team of project managers to establish program structures in a high tech start-up environment. We provided access to skilled resources as “incubators”, supplied templates and know-how for program and PMO establishment, and worked with the client to innovate and drive optimal team performance.

BENEFITS

We successfully built up the client program organization from ground zero, including governance, roles, program controls, risk management, and reporting. Our team defined and managed the interface between the various joint venture partners, each with different cultures and operating systems. Through our solution framework, the client was able to successfully kick off their charging station development program.

Conclusion.

With over 30 years of experience in the auto industry and as experts in project, program, and portfolio management, MI-GSO | PCUBED has successfully rolled out programs for the world's most competitive automotive companies.

Our teams of specialized consultants have delivered on a massive range of engagements - from local projects to global organizational programs and across the entire spectrum of project management, including PM delivery, agile transformation, business process improvement, and change management. As the leading global project management consultancy, we focus on increasing business agility, lean innovation and driving digitization to bring about change and speed, saving our clients both time and money.

Interested in speaking to one of our Automotive specialists? Find out how our experience in managing complexity can help you gain a competitive advantage while also growing your team's internal capabilities.

CONTACT US: 
info@migso-pcubed.com

more on www.migso-pcubed.com

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