BMW GROUP + QUT DESIGN ACADEMY

DECEMBER 2020

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_ NEWSLETTER



WELCOME



As the Founder and Head of the BMW Group + QUT Design Academy I am proud to launch our inaugural newsletter. Although delayed due to this unprecedented year I am excited to be finally kicking it off. Our newsletters will catalogue our journey on a monthly basis including our PROGRAMS, FEATURE articles and BRIEFINGS on accomplishments, events, collaborations and BMW Group partner update.

This year has been exceptional for our collaboration with BMW Group (covid-related issues aside). We began 2020 with the launch of the <u>BMW Group + QUT Design Academy</u> and we cap it off with the founding of <u>idealworks</u>, a new BMW Group company, which emerged from one of the cornerstone projects the QUT team has been working on. Throughout, there have been many successes from our design interns in Germany, our colleagues at BMW Group and our team here at QUT, Brisbane.

It is difficult to express how proud I am to lead such an exclusive partnership. BMW Group is one of the most prestigious companies in the world and I am constantly amazed at the exclusive projects we have the opportunity to work on. The partnership has been many years in the making - but we have many more to go!

We hope you enjoy the newsletter and the curated content we have in store for you. Don't forget to check out our <u>website</u> and follow us on <u>LinkedIn</u> and <u>Instagram!</u>

All the best,

Dr Rafael Gomez Founder & Academy Lead

PROGRAMS



INTERNSHIPS

The Internship program focuses on Fostering Design Excellence. It offers high-performing QUT design students an opportunity to advance their learning through real-world projects, and provides a pathway for paid internship placements at BMW Group in Munich, Germany.

BMW Group Internship

At the beginning of 2020, we confirmed our largest ever cohort of interns to travel to Germany to work at BMW Group. Eight QUT Industrial Design students were approved including Veronica Hunjas, Sam Holz, Timothy Lim, Epi Pereira, Jacob Rankin, Matthew Smith, Sebastian Tan Castello and Rebecca Wickham. Unfortunately due to covid-related complications with travel restrictions four students eventually traveled to Germany (Timothy, Epi, Jacob and Rebecca).

The BMW Group interns have been working on several projects with a focus on supporting the team with the launch of BMW Group's new daughter company; idealworks.

Work Integrated Learning Internship

In August we welcomed our first ever interns at the academy including Emily Boehmer, Damian Noviello, Ellie McBain and David Quick. These aspiring professional designers completed a Work Integrated Learning internship at the academy. Each of our interns elected to complete the '3D Asset Creation' project. This project challenged them to model and texture three assets of their choice, then present their work in a VR scene.









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The advanced 3D modeling and visualisation skills that they learned, along with the Virtual Reality experience, is applicable to the cutting-edge projects at BMW Group in Germany, along with their university projects. Ultimately it helps to put them one step ahead of the competition.

Check out the BMW Group + QUT Design Academy Instagram page to explore images of the process and final outcomes of what our interns have created during their internship at the Academy.

RESEARCH

The Research program centers on Exploring Knowledge Horizons. We have initiated a progressive research agenda for PhD and MPhil students to conduct world-class research through the Academy.

We are very excited to have initiated two fully funded scholarships, both starting in 2021. This includes one Doctor of Philosophy (Phd) research project on Exploring the Role of Industrial Design Expertise in Multinational Corporates and one Masters of Philosophy (MPhil) on Advances in Human-Robot Interfaces for Logistics Applications. Both will be based at the Academy and the selected research students will be mentored and supervised by Academy founder and leader, Dr Rafael Gomez. We look forward to confirming the successful applicants are and having them join the Academy in 2021.

We are also establishing further research collaborations in groundbreaking new areas with other key labs and academies across QUT and BMW Group. Although we can't discuss details at the moment it is a sign that the research agenda established by the Academy is gaining strength.

SPECIAL PROJECTS

The Special Projects program pioneers world-first projects by Advancing Cutting-Edge Technologies. It is tailored for professional design graduates to work on advanced R+D projects for real-world applications. These projects are established by BMW Group in Munich and are supported by the Special Projects team at the academy.

It was very exciting to employ our first ever Design Associates, Michael Williams and Jordan Domjahn, who are QUT alumni and ex BMW Group employees. Throughout the year they have been working closely with BMW Group Munich staff on two special projects since returning in early 2020 to Australia. The first project is part of the BMW x Nvidia collaboration, while the second project is focused on the BMW STR (Smart Transport Robot) - which has resulted in significant impacts for BMW Group (more on this in our next newsletter). Our Design Associates have played a major role in both of these projects and as specialised designers, continue to positively impact real-world R+D collaborations with BMW Group.

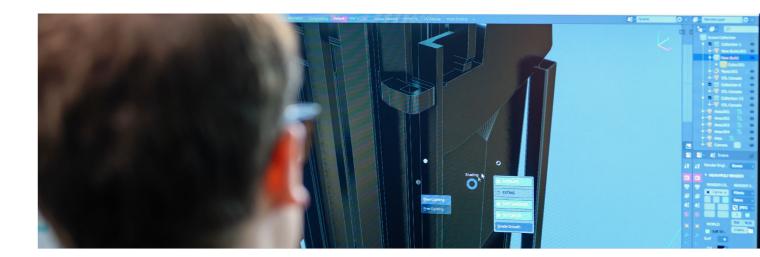
Michael has recently left the Academy to persue other opportunities, however he will support the Academy and their programs remotely when required.







FEATURE



THE POWER OF DESIGN

For the inaugural feature article I wanted to provide insights and perspectives on why Industrial Designers have been so successful and had such an impact at BMW over the past few years.

QUT Industrial Design Education: An all-around skill-set

At QUT we teach what we define as generalists designers. That is, we focus on providing a broad set of competencies that promotes both technical skills alongside personal attributes.

Technical skills include design research, process, visualisation, user-centered design, ergonomics, usability, prototyping, user experience, interaction, manufacturing, technology, service and systems thinking. Many of these skills require learning specialised software such as SolidWorks, Fusion 360, Rhinoceros 3D, Adobe Suite among others.

There is also the personal attributes we imbue and foster in our students - which fosters a particular mindset about who they are as professionals. This includes a strong culture of exploration, experimentation and iteration, a tendency to explore through physical prototyping, high level of communication, being comfortable with ambiguity, problems-solving as well as opportunity identification, detailed and contextual thinking, inclination for applied research and adept at rapidly identifying suitable solutions from a broad range of possibilities. We also aspire to instills passion, independence, self-motivation and leadership skills throughout their education.

Although the core competencies are incredibly important as a foundation, it is these personal attributes that are what have seen as most relevant for the success of our graduates at BMW Group. By ingraining these





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attributes in our graduates, we have developed designers that can handle complexity in a variety of contexts, behave with appropriate confidence, and aspire to be leaders in their professions. It is these aspects that helps them manage and deal with, and thrive, during the challenges they are faced with at a global corporate such as BMW Group.

Process: The framework

The way designers approach any given problem can be varied and unique. The design process we teach is somewhat standard though and usually follows one of two processes. The first is the <u>Double Diamond design model</u> (Fig. 1) published by the British Design Council in 2005. This model is broken into 4 stages including Discover (research and exploration), Define (developing insights), Develop (identifying potential solutions) and Deliver (make and resolve final design). The second is the <u>Stanford d.school Design Thinking Process</u> (Fig. 2) consisting of empathise (understand), define (insights), ideate (conceptualise), prototype (make) and test (refine). Within both of these methods there is constant iteration, making, researching and re-thinking. These methods and frameworks are not the answers to all possible problems, but they provide designers a scaffold to help them tackle a multitiude of problems, both simple and complex.

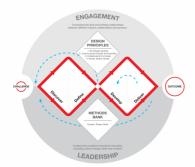


Fig 1. Design Council's Evolved Double Diamond Method, 2020

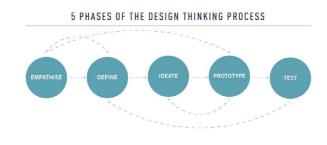


Fig. 2 What Is Design Thinking? A Comprehensive Beginner's Guide, 2020

How Designers Think: The magic

Although the skillsets and processes mentioned above are incredibly important one of the most crucial aspects is how designers think 'in-between' applying skills and employing frameoworks. The manner in which they deal with and solve problems, identify opportunities, respond to iterative processes, understand research and information, manage ambuguity and uncertainty, envision possible futures, wield divergent and convergent thinking and perceive both micro and macro information is very unique. It is also a very powerful part of what helps them succeed when dealing with complex, future-focused and ill-defined challenges - such as those faced by multinational corporates dealing with disruptive and emerging technologies.

We are currently in the midst of developing a strong research agenda focused on better understanding how Industrial Designers, and designers in general, can have positive impacts in corporate contexts especially those dealign with disruptive and emerging technologies. We have already initiatied a PhD exploring this explicit research domain. We are looking forward to expanding this area of exploration and are actively looking for collaborative partners including Universities, industry partners and research labs. We hope this area of study will promote our understanding of design thinking, design expertise and design reasoning and ultimately advance the field of design for the 21st century and beyond.







BRIEFINGS



ACHIEVEMENTS

February

Since officially launching in February this year, we have reached a number of milestones and achievements. Some of the highlights are:

February BMW Group + QUT Design Academy official launch event

April BMW Group + QUT Design Academy appoint first ever Design Associates

May Academy website plus Instagram and LinkedIn accounts launched

2020 Interns travel to Munich, Germany to begin work placement

May

BMW Group announce partnership with NVIDIA which Academy is a central part ofw

June

BMW Group + QUT Design Academy given a special mention as QUT is named Australia's

top young University for 2020

June 'Inside the BMW Group + QUT Design Academy' promotional video published online

June Fully funded scholarship applications opened for one MPhil and one PhD student, commencing

early 2021

August First ever BMW Group + QUT Design Academy interns start their Semester 2 Work Integrated

Learning internships

October Completion of Academy WIL internships

December Idealworks announced by BMW Group. Academy is a core part of the development team.

December Rafael Gomez awarded the Vice-Chancellors Award for Partnership and Engagements, for the

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BMW GROUP PARTNER UPDATE

2020 has been a big year for our BMW Group partners and colleagues. We will highlight a few of the successes in this section as a summary from this year.

Early on in 2019 Dylan Sheppard, a QUT Industrial Design alumni who was awarded a lifetime contract at BMW Group in early 2019, was featured in a QUT media story that catalogued the rise of his design career since his initial internship in 2016 at BMW Group. Everyone working at the BMW Group + QUT Design Academy liaise regularly with Dylan especially our Design Associates, Michael and Jordan, who work closely with him and his team through the Special Projects Program. Likewise many of our QUT design interns at BMW Group in recent years have been placed in Dylan's team, working on a range of cutting-edge projects.

In May it was exciting to finally be able to talk about one of the Special Projects we've been working on over many years. BMW Group announce that it had selected NVIDIA as its key partner to work with in a large project to <u>redefine its future factory logistic operations</u>. The partnership was also announced by NVIDIA's CEO, Jensen Huang, during <u>NVIDIA's GTC conference in 2020</u>.

As a result of the momentum built through this partnership, at the end of the year BMW Group launched its latest daughter company, <u>idealworks</u>. This was a significant investment for BMW Group and a huge step forward for the project our colleagues were working on. It is also incredibly exciting to know that the team at BMW Group + QUT Design Academy including our Design Associates, our QUT alumni and our industrial design interns have been at the center of this project and played a key role in helping it flourish into what it is today.

We look forward to 2021 and all the interesting projects, collaborations, initiatives and partnerships in the works with BMW Group and idealworks. For now, congratulations to all the team at BMW Group and idealworks - fun times ahead!





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