

EPO innovation case studies

Lightyear

November 2025



Lightyear

Lightyear – from solar cars to technology licensing: transformation through IP

Abstract

Lightyear's pioneering efforts on the World Solar Challenge and the Lightyear 0 solar car model gave them a substantial lead over the competencies and IPR portfolios of established car manufacturers at a time when they were not even thinking about solar cars.

The company's comprehensive system understanding, technical expertise in constructing pure solar cars, and its substantial patent portfolio in particular, facilitated

a nearly seamless transition following the bankruptcy of the former automotive manufacturing entity. The company has evolved into a globally leading supplier of solar-based solutions for established car manufacturers. Leveraging their proficiency, vision, and robust IP portfolio, they have secured approximately EUR 200m in funding and garnered the ongoing support of investors to continue targeting the automotive industry with innovative solar technology solutions.

Figure 1: Lightyear One – a solar powered electric car



The quest for sustainable mobility



Figure 2: A solar car from Eindhoven University of Technology competes in the World Solar Challenge.

The story of Lightyear begins with a team of students from the Technical University of Eindhoven in the Netherlands participating in a 3 000 km race through the Australian outback. Notably, they did not use a conventional racing car, but a vehicle solely powered by sunlight. The team competed in the biennial Bridgestone World Solar Challenge and achieved victory on four consecutive occasions.

In 2016 the core team decided to expand their horizons and develop a mass-produced solar-powered electric vehicle designed for daily use by families and largely independent from charging infrastructure. This initiative led to the establishment of Lightyear, a company founded by Lex Hoefsloot (CEO until 2023), Arjo van der Ham (CTO), Martijn Lammers, Koen van Ham and Qurein Biewenga.

The team drew on the collective knowledge gained from four World Solar Challenges to design a vehicle optimised for maximum solar-powered driving. A pivotal business question soon arose: should they manufacture the entire vehicle, or focus on developing key components such as specialised solar panels? Initially, they decided to develop a complete high-end vehicle, as the founders recognised the importance of demonstrating the feasibility of solar cars, designing components that would optimally fit together, and retaining the option to produce a lower-priced, high-volume car at a later stage. They assumed

that a business focused exclusively on components would face challenges in achieving rapid growth and would not generate a comparable impact on the automotive sector. This was due to the fact that established car manufacturers (OEMs) had not yet considered solar car technology as a viable alternative. Most importantly, they soon learned that the ability to present a complete car was highly attractive to investors.

In early 2017 the team took their five-seat Stella Lux, developed with support from the Technical University of Eindhoven and winner of the World Solar Challenge that year, to Silicon Valley for a week-long visit to gauge interest and secure high-level political endorsements. During the same year, the team managed to get their solar car street-approved and obtained a real registration plate in the Netherlands.

In 2019 the Lightyear One prototype was unveiled at a significant event held at the company's facility in the Netherlands, where production lines were scheduled to be installed. The vehicle featured a 5 m² proprietary solar roof, an aerodynamic design, optimised batteries, and a state-of-the-art energy management and drivetrain system incorporating in-wheel motors. It was capable of travelling over 600 km on a single charge of the 60 kWh battery, with an additional 12 km per hour of solar charging. A driver travelling 40 km per day could potentially cover the entire summer season without requiring access to the grid, relying exclusively on solar power.¹

From this moment on, pre-orders for the production model Lightyear 0 were possible, with a down-payment of EUR 150 000; 150 such orders were received. The plan was to produce about 1 000 cars of this first generation, with a selling price of EUR 250 000. A second model, Lightyear 2, was planned to go into mass production at a partner in Finland in 2025 and would cost only EUR 30 000. By 2022, 10 000 orders had been received for the Lightyear 2.

1. [Why Lightyear Could Be The Most Game-Changing Car Company On the Planet](#)



Figure 3: Lightyear 0 at the Golden Gate bridge in San Francisco, wide doors from side view, streamlined rear design with integrated solar cells (from left, clockwise)

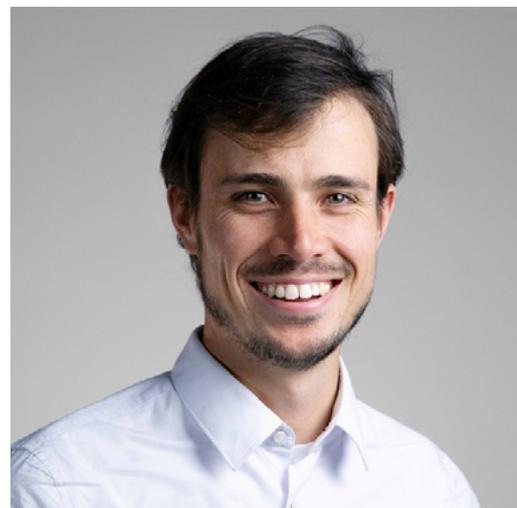
Vision, creativity and expertise enabled strong IP

Lightyear’s unique design approach and technical excellence were the result of eight years of experience participating in and winning the World Solar Challenge. The team’s holistic systems approach to optimising the car’s design incorporated extensive models and simulation tools to understand the reciprocal impact of all design choices. For instance, optimised aerodynamics reduced the energy consumption per kilometre, allowing for a reduction in battery capacity without compromising range, and consequently lowering the overall weight of the vehicle, thereby reducing energy requirements. In-wheel motors not only mitigated transmission losses, but also reduced the weight of the drivetrain, further decreasing energy usage.

The founders of Lightyear understood early on that to achieve their vision of becoming a leading technology company, they would need “10x experts,” or top-tier specialists capable of enhancing their core technology beyond what is currently available on the market. They recognised that “10x better” represented a significant leap forward, rather than incremental improvements. For Lightyear, the primary target was to achieve a 10x reduction in charging time. While not every component could be 10x better, every piece contributed to the target for total system improvement. Hiring a “10x expert” was a key step in achieving this. The first person to be hired for the role was for solar panel development, followed by experts for in-wheel motors, electronics and other key technology fields.

“True innovation is driven by world-class engineers, bold ambition and robust intellectual property. Embracing risk is essential for achieving breakthroughs, as well-worn paths often lead to stagnation.”

Lex Hoefsloot, Founder and former CEO, Lightyear



In addition, Lightyear pursued a strategy of collaboration with industry leaders, including the Turin-based design firm Gran-Studio, Bridgestone (a tyre specialist), Elaphe (an in-wheel motor expert), and TNO (Organization for Applied Scientific Research) – a Dutch public research institution. These strategic partnerships enabled Lightyear to augment its in-house expertise in areas where it lacked specialisation and leverage its partners’ domain knowledge.

TAKEAWAY

IP in partnerships

When collaborating with industry partners, make sure to establish clear agreements in advance on already available background IP and ownership of newly created foreground IP.

Most of these partnerships were structured as “work-for-hire” agreements, ensuring that Lightyear obtained ownership of the resulting IP for technologies considered core to the company. Lightyear also maintained freedom-to-operate for the background technology of its R&D partners. In general, Lightyear refrained from outsourcing

key innovations. While outsourcing may seem to be an easy route, it implies giving up control over engineering decisions and IP rights.

TAKEAWAY

Keep control over core IP rights

Retaining control over IP rights and engineering decisions, including when collaborating with partners, is crucial for maintaining the competitive advantage of deep tech startups.

A strong IP portfolio from the start

The founders’ strong innovation focus naturally led to the development of a patent portfolio from the outset. They began filing patent applications one year after founding the company. Initially, the objective was to protect their innovation against copy-cats, but they soon realised that an IP portfolio is crucial for fundraising, too.

The “10x experts” were responsible for ensuring a comprehensive understanding of the technology options available, including their benefits and risks. Through regular evaluations of these options, the company was able to make calculated risks in its technological trajectories. Rather than minimising risks by opting for sub-optimal technical solutions or outsourcing core technology development, the company focused on developing the best possible solutions, allowing strong patent applications to be filed.

A key success factor was the establishment of a culture that encouraged generating ideas and patents, and celebrating achievements. This included the flexibility for engineers to prioritise innovations and patentable inventions over their daily work, if it was in the best interests of the company. Weekly “all-hands” meetings were held to emphasise the importance of innovation and filing of patent applications, securing trade secrets and confidentiality.

Lightyear’s early strategic decision to hire a senior IP specialist with a strong corporate background who was about to retire but motivated to leverage his experience for the young company was a bold move. While the initial rationale was that hiring this expert was less expensive than outsourcing filing and managing patent applications, such in-house know-how soon proved a valuable asset for developing a strong IP strategy and portfolio.

The founders and investors recognised that mass production of a complete car as an OEM would be a high-risk/high-reward endeavour. Therefore, the IP strategy was devised with the possibility of Lightyear operating as a component or technology supplier to other OEMs in mind. Lightyear also made sure to patent innovative components, such as in-wheel motors or connectors, in such a way that they could also be licensed to other OEMs.

“At the time of our initial investment, Lightyear had two major IP families in their portfolio, one related to the solar roof and the other to in-wheel motors. They then recognised the potential interest of other car OEMs in their technology and began developing their IP portfolio and preparing to valorise it for third-party use. We encouraged them to do so and establish a secondary revenue stream.”

Willem van Esch, Investment Manager, LIOF

TAKEAWAY

Build an IP portfolio early

Building a strong IP portfolio early requires experts with the autonomy to invent, a long-term vision for your market’s technological evolution and a culture that nurtures innovation and IP.

Box 1: Consider the value chain when combining trade secrets and patents

A combination of patents and trade secrets can offer a competitive advantage for a young company, but how do you decide which protection measures to use in a specific case? Trade secrets can be more suitable than patents when enforcement is difficult, such as with production processes where the innovation is not visible in the end-product and therefore infringement cannot easily be proved. Also, patent-infringing features in small components (such as connectors) that are integrated in larger parts might be hard to detect. Being upstream in the value chain, for example as a Tier 1 or Tier 2 supplier in a B2B market, means there is a greater likelihood that

solutions will relate to material composition or manufacturing processes, or be embedded within larger components where detecting use of patents can be more difficult. The preferable strategy in this situation is to consider trade secrets for specific technologies or parts of technologies. However, decisions on protecting trade secrets must be made on a case-by-case basis, because there are other important factors to consider, such as the risk of reverse engineering or managing confidentiality. This is especially important in situations where there is a risk of information leaking, such as when working with partners.

The decision to file a patent application for an invention and/or treat it as a trade secret was largely driven by the need to move quickly. Technical solutions that were less likely to fulfil the patentability criteria or potentially take longer to be successfully patented were considered trade secrets. Lightyear has faced an ongoing challenge in striking a balance between the speed of product development and the time it takes to file patent applications. However, the management’s long-term vision has prevented too much short-term focus on the

product, leading to a strong patent portfolio that helped the company to raise funds and subsequently pivot to a new business model.

The geographical scope of patent applications was largely determined by the risk of being copied in certain regions, either by OEMs or component suppliers. Lightyear would typically file a priority filing in the Netherlands, and later expand the geographical scope through the international PCT route.

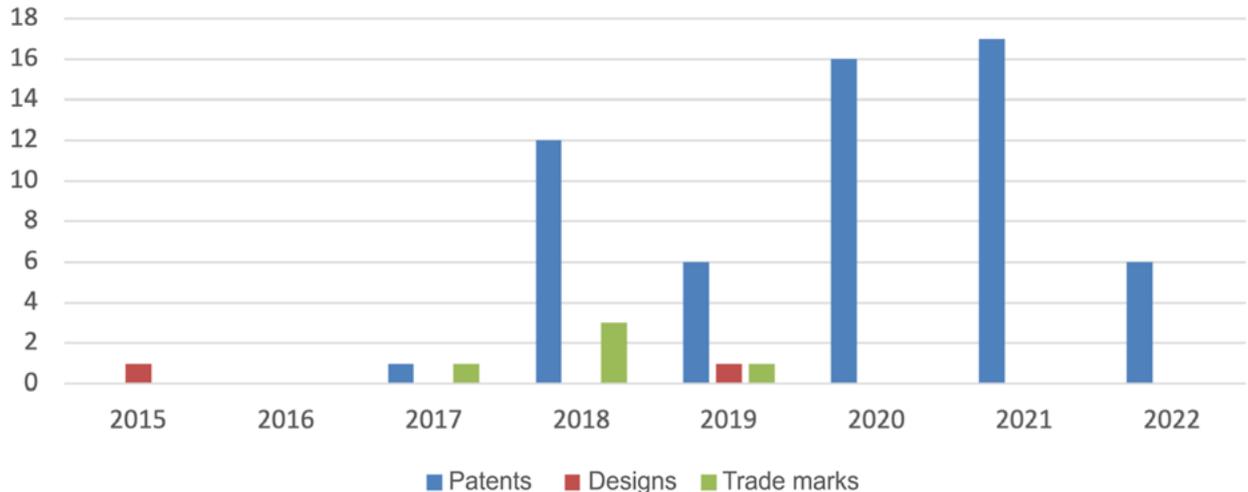


Figure 4: Lightyear’s IP portfolio - number of applications

Successful fundraising

Lightyear started in March 2017 with a very small budget of EUR 100 000, which came from friends and family who had already supported them in the World Solar Race. By the end of that year they had started pre-selling cars, which gained a great deal of attention from the media. This was very important in getting investors, partners and employees interested. A Swiss family office and several other investors invested EUR 2.5m in early 2018, in the form of loans that could be converted into equity.

TAKEAWAY

The ingredients for startup success

For a deeptech startup to get funding and grow it has to have a strong team, a good business idea and a high level of technical expertise that meets market needs.

BOX 2: Convertible loans

Convertible loan agreements (CLAs) are normally used for early-stage funding or to provide money between major funding rounds. A convertible loan is basically a normal loan repaid with interest within a certain number of years. However, it is agreed that the loan will be converted into shares in the company, for example as soon as a substantial next (“qualifying”) financing round takes place. How many shares the loan provider gets for its money depends on the valuation of the company in that

round. An investor who takes a risk earlier gets more shares for each euro invested than one who joins in later rounds. This is usually defined by a “discount” or “cap” – the maximum company valuation used to calculate the conversion. One important feature of CLA agreements is that the valuation is not decided until the next investment round, so the conversion rate is also decided at that point.

A second round of funding took place in 2019, just after the Lightyear One design was revealed to the public. This raised EUR 5m from private investors and several grants

from public bodies, including a EUR 2.5m grant from Horizon 2020 EIC. It was at this stage that the Impact Investor Group which would later play a key role joined.

As part of these fundraising efforts investors identified technology components, such as special solar panels and in-wheel motors, as the most promising sources of revenue and profit in the near term. The sale of complete solar cars was regarded as a significant, albeit less likely, bonus opportunity. The Lightyear team understood the potential consequences of this rationale from the outset and so were prepared for what they saw as “Plan B” (selling technology components), in addition to Plan A (manufacturing and selling a revolutionary solar car). Their strong IP portfolio was targeted to support both plans.

“In 95% of cases we want a company to have a solid IP portfolio, including patents that provide strong protection, before we invest in it.”

Willem van Esch, Investment Manager, LIOF

In discussions with investors, Lightyear found that IP is a key component in gaining recognition as a technology company. It is regarded as the primary asset for downside protection, i.e. the potential for investors to recoup their investment should a venture fail. To formalise this protection, Lightyear even securitised its patents and designs for some investors, ensuring proceeds from the IP would flow to the investors if the company were dissolved. Securitisation is particularly beneficial for investors considering a convertible loan investment structure, as it provides additional safeguards during the period after they have lent money but before they have become shareholders. It offers a recovery mechanism if the venture fails.

Securitising IP proved a key factor in successfully closing

a vital funding round, while also enabling the company to place greater emphasis on patents. This, in turn, led to the establishment of a robust IP pipeline. However, the approach also had the effect of making it more challenging to secure subsequent funding rounds, as earlier investors were reluctant to share their collateral with new investors. As a result, there was less flexibility to restart the company.

TAKEAWAY

IP securitisation

Securitising IP can facilitate fundraising, but it may also introduce complexities in future funding or a company restart.

Maintaining the right balance between the quantity and quality of patents is a key concern for any technology company. While the number of patents is important for investors, their strength in terms of scope of protection, how well they cover the technology and how well they align with the business goals will be assessed in due diligence processes by more tech-savvy investors. This is especially the case in later investment rounds, which often involve external IP specialists. However, most initial investors were primarily interested in understanding the technological differentiators, i.e. competitive advantage, of Lightyear, rather than assessing the strength of the filed patent applications.

TAKEAWAY

Strong patent protection

In the early stages of a company, patent applications alone can attract investors; but in later stages, the quality of patent protection becomes more important. Patents serve as both a shield for the company against competitors and insurance for investors against business failure.²

2. The free EPO [IPscore tool](#) can help assess the strengths and weaknesses of patents.

By 2020 Lightyear had grown to a team of 100 people. However, the onset of the pandemic led to a slowdown in development and fundraising activities. This included the cancellation of a promising fundraising tour in Silicon Valley. Fortunately, the Dutch government provided a EUR 1.5 m financial injection, which helped to bridge the gap to larger investment rounds.

In 2021 several investors, including the sustainability-oriented Dutch insurance company DELA and multinational trading group SHV, invested over USD 110m. In 2022 Lightyear received a further USD 80m from a consortium of the publicly funded Invest-NL and two Dutch regional development agencies: BOM and LIOF. LIOF is one of eight regional development agencies in the Netherlands, responsible for sustainable growth in the province of Limburg. In addition to advising businesses in the region, it also acts as an investor in startups and growth companies, with the aim of generating financial returns, reinvesting in the region, and generating social returns by developing regional business and employment. The organisation focuses on four transitions: energy, circularity, digitalisation and healthcare.

A forced but successful restart

“The IP portfolio was the sole reason a restart was interesting for investors.”

Lex Hoefsloot, Founder and former CEO, Lightyear

Following a substantial capital injection in 2022, Lightyear was able to commence actual car production in November of that year with its manufacturing partner in Finland. However, further capital was required to start real volume production, which proved challenging to secure in the aftermath of the venture capital downturn during the pandemic. Valuations of late-stage ventures declined 24-50% between Q4 2021 and Q2 2022, while annual deal volume declined 36% from 2021 to 2022.³ As a consequence, in January 2023 Atlas Technologies, the operating legal entity of Lightyear, had to file for bankruptcy.

However, in April that same year the company underwent a restructuring, adopting the new name Lightyear HoldCo with two subsidiaries: Lightyear Technologies and Lightyear Layer. Lightyear Layer has its strategic focus on supplying innovative solar charging solutions to established car manufacturers, while Lightyear Technologies is dedicated to other vehicle technologies—including in-wheel motors, braking systems, and various

BOM and LIOF recognised the potential of Lightyear’s technology to enhance the attractiveness of electric vehicles through solar roofs, while reducing the public investment required in charging infrastructure. They therefore saw significant potential in Lightyear, both as an investment and as a means to stimulate the regional economy in the southern Netherlands. This region hosts the NedCar automotive manufacturing plant, which had recently been experiencing challenges in securing new projects. In this round, the quality of the IP portfolio was scrutinised in detail. The investors hired a specialised company to evaluate the quality of the patent portfolio, the number of patents opposed by competitors, and especially whether the company had freedom to operate, i.e. a limited risk of being sued for patent infringement by other companies in the future. Although Lightyear ultimately decided to start series production at a contract manufacturer in Finland, the solar roof modules were produced in the south of the Netherlands and thus contributed to regional economic development.

aerodynamic and efficiency innovations. This marked a significant shift from the original plan of manufacturing complete vehicles to Plan B, which was possible thanks to a strong IP portfolio.

TAKEAWAY

Future-proof the IP portfolio

A robust IP portfolio is instrumental in facilitating business development, strategic pivots and, in certain circumstances, the complete restart of a company. This in turn enhances the attractiveness of a company to potential investors.

At its peak Lightyear employed 600 individuals and had secured EUR 200m of investment from various sources. The successor company commenced operations with a team of 70 professionals, predominantly world-class technical specialists. These individuals were tasked with valorising the strong patent portfolio that had been acquired from the original company along with

3. CBInsights Tech Valuations Report – 2022 recap.

its solar cell manufacturing subsidiary, Lightyear Layer. The transfer was facilitated by the fact that all the IP was registered in the name of Atlas Holding, a company that did not enter bankruptcy at the same time as Atlas Technologies, but only later in April 2023, providing time to find a solution. Other assets, including several prototypes, were sold at auction by the liquidator. A key factor in the success of this restart was the support of early investors, led by the Impact Investor Group (IIG) and including SHV, DELA, Eikenbosch Holding, Invest-NL, BOM, and LIOF. Despite experiencing significant losses, these investors demonstrated their confidence in the team and the technology by providing new capital. Following the announcement of the restart, Lightyear successfully raised EUR 8m from loyal investors within a 24-hour period.

TAKEAWAY

protect the IP portfolio

When planning for success, it is essential to consider safeguarding your IP. One effective strategy is to hold it in a separate legal entity from the operational business. This can provide protection if the company has to shut down.

The transfer of the patent portfolio was a complex process, as it had been securitised and so was serving as collateral for some of the earlier investors. They had to agree to the transfer to the new company, in which most of them became shareholders again. After the successful restart, Lightyear received investments from two South Korean venture capital firms in November 2023: Lighthouse Combined Investment and Sunbo Angel Partners. An additional and larger investment round closed in April 2024, bringing in EUR 10m.

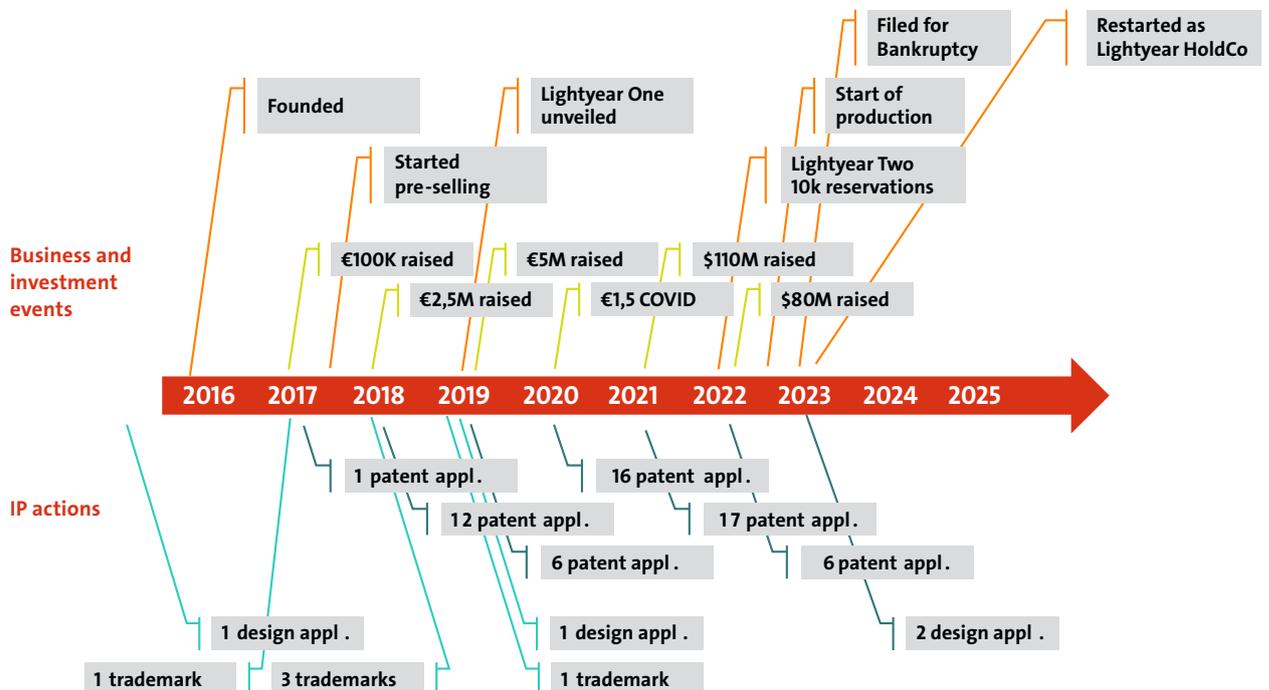


Figure 5: Timeline of business, investment and IP-related events

BOX 3: Adopting the IP strategy to the business model and its role in the value chain

A robust IP portfolio provides optionality, i.e. flexibility in adapting the target application and business model. When altering the business focus it is imperative to adjust the IP strategy too, as the alignment between the two is an iterative process. When formulating decisions on the IP strategy, it is crucial to consider the value chain, as this may influence the selection of different IP rights to protect the technology.

The importance of trade marks and designs may also be subject to change once the business model has been modified, and the priorities for requesting protection in different jurisdictions may be subject to alteration. If the focus shifts towards different or more specific technical domains, the need for certain patents within the existing portfolio may be reduced. If so, licensing or selling these could generate additional cash flow for the company.

A successful pivot thanks to a visionary IP portfolio

Following the restart, the company concentrated on expanding its IP portfolio in its core field, defined as solar charging systems, consisting of solar modules, electronics and a user interface and data platform. Concurrently, the company initiated a review of the inherited IP rights in its portfolio in non-core fields, determining whether to proceed to the PCT stage and in which markets to protect and potential future monetisation opportunities, such as licensing.

The IP portfolio is continuously being expanded to include trade secrets, utility models and registered designs. As the new company is now a supplier to the global automotive industry, a key criterion for patent applications is their enforceability: can a potential patent infringement be traced, detected and proven? Regionally, the patenting focus is on countries where most car manufacturing takes place, such as China, Korea, Japan and Eastern Europe.

Employees are strongly encouraged to dedicate 20 minutes per week to documenting their ideas, which are then subjected to a systematic review process with the assistance of an external IP specialist. The current CEO, Bonna Newman, has an extensive technology background and IP expertise and serves as the de facto IP manager of the new company.

The company's IP portfolio was again instrumental in securing a small investment round with existing investors and kick-starting a larger round. The IP portfolio is regarded as a key asset in providing strategic options, primarily enabling the company to compete with Chinese suppliers and expand its manufacturing capabilities to secure a leadership position. Additionally, it can be used to license technology to third parties who prefer to manufacture components themselves.



Figure 6: Quality testing of Lightyear's solar panels.



“Startups have great plans, but may have to adjust them along the way. The better prepared for this they are, the more successful they will be in the end, and IP can be of great help.”

Willem van Esch, Investment Manager, LIOF

The company is currently engaged in pre-series development projects with car OEMs which generate project revenues and small unit sales. The mid-term business model primarily consists of selling hardware modules to the automotive industry as a Tier 2 supplier, with the potential for licensing a part of its core technologies at a later stage. In addition, Lightyear has started to explore opportunities to license some of its extensive IP portfolio, which encompasses non-core technologies, with the aim of generating additional revenues.

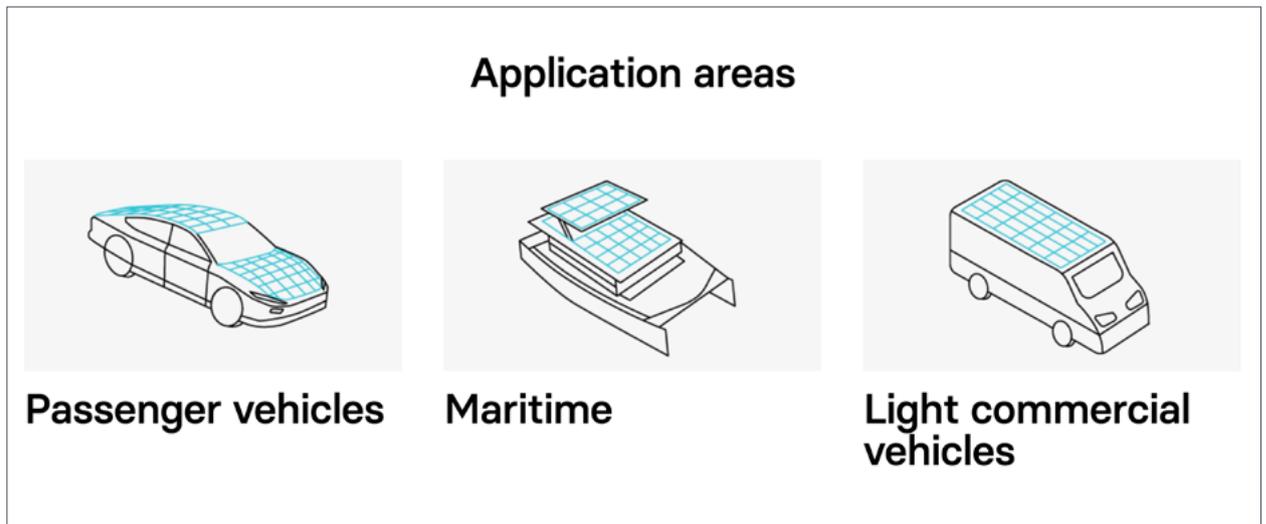


Figure 7: New application areas for Lightyear's technology

PROFILES

Lightyear

- Founded in 2016
- Employees in 2024: approximately 100
- Core technology: solar charging systems, integrating solar modules, power electronics, and a user interface with a data platform to optimise energy efficiency in electric vehicles.
- Product portfolio: solar roof technology and energy-efficient vehicle components.
- Business model: Lightyear transitioned from solar-electric vehicle production to supplying solar charging systems and licensing technology to automakers.
- Atlas Technologies, the operating legal entity of Lightyear, filed for bankruptcy in 2023. Operations restarted under new parent company Lightyear HoldCo and two subsidiaries: Lightyear Technologies and Lightyear Layer.

LIOF (Limburg Development and Investment Agency) and BOM (Brabant Development Agency)

- Dutch regional development organizations that invest in innovative and sustainable companies to drive economic growth and job creation.
- Provide advisory and investment support for startups and growth companies, aiming for financial returns, regional reinvestment, and social impact through business development and job creation.
- Co-funded, together with Invest-NL, €80M in 2022 to support Lightyear's growth.
- Participated in the €8M funding within 24 hours to support Lightyear's restart.

Impact Investor Group

- A collective of investors committed to funding ventures with positive social and environmental impact alongside financial returns.
- Invested early in Lightyear.
- Led the €8M funding round within 24 hours to help revive Lightyear.

Overview of Lightyear's IP rights

Trade marks

Title	Application date	European Union Trade Mark (EUTM) number
Lightyear	06/02/2017	1009819
Go free	19/06/2019	1397592
Lightyear. Go free	19/06/2019	1397594
Lightyear	15/02/2018	1419823
Lightyear One	23/12/2019	302019241319

Designs

Title	Filing year	Patent number
Solar cell patterns	2017	EM003991652
Vehicles; vehicles [toys]	2019	EM006489217
Cars driven electrically	2023	EM015008077

Patents

Title	Priority date	Patent number
Integrating a solar panel in a vehicle body part	17.06.2022	EP4540917A1
Active toe angle adjustment of a wheel of an electric vehicle	01.04.2022	WO2023186922A1
Control system for controlling a transistor, electric vehicle comprising the control system, method for controlling the transistor	29.03.2022	EP4500693A1
Battery management system, electric vehicle, method and control unit	03.02.2022	EP4472857A1
Electric vehicle, onboard charger, method and computer program	17.01.2022	EP4466156A1
Electrical device, computing device, vehicle, method and computer program	17.01.2022	WO2023135292A1
Solar panel using back-contacted solar cells	14.12.2021	EP4449504A1
Brake apparatus for a wheel of a vehicle	30.11.2021	EP4440889A1
Method for diagnosing an electronic vehicle brake system, computer program therefor and vehicle with brake diagnostics	30.11.2021	EP4440887A1

Title	Priority date	Patent number
Interior lighting system for vehicle	23.11.2021	EP4436837A1
Scalable multi-port converter for solar electric vehicles	29.06.2021	EP4364282A1
Seamless electrical integration of solar panels to the lowvoltage architecture of any ev	29.06.2021	EP4363255A1
Vehicle, method for controlling a brake system of a vehicle, and computer program	29.06.2021	EP4363283A1
Solar module with improved bonding	29.12.2022	EP4360144A1
Method for laminating solar cells	18.04.2021	EP4327371A1
Wheel cover holder for a wheel of a vehicle	24.03.2021	EP4313688A1
Foil for use with a double curved solar panel	17.02.2021	EP4295413A1
Electric power supply system, vehicle, electric power conversion system and method	26.01.2021	EP4284674A1
Heat exchange system, hvac-system and vehicle	14.12.2020	EP4271580B1
Bidirectional converter for a battery management system	02.12.2020	EP4271586A2
Solar panel with a composite laminate	25.11.2020	EP4272259A1
Wheel system for a vehicle, vehicle and wheel rim	03.11.2020	EP4271584A1
Bumper system for an automotive vehicle	15.09.2020	EP4214095B1
Vehicle cabin unit and vehicle	27.07.2020	EP4188747A1
Vehicle comprising a thermal conditioning system	02.07.2020	EP4175840B1
Vehicle brake system	24.06.2020	EP4172510A1
Vehicle with bottom structure for reducing aerodynamic resistance	22.06.2020	EP4168294A1
In-wheel motor and vehicle	09.04.2020	EP4132808B1
Wheel assembly, vehicle, and method of assembling	05.02.2020	EP4100272A1
Electric motor/generator, vehicle and wind turbine	06.11.2019	EP4013972A1
Electric or hybrid means of transport with a solar panel	13.05.2019	EP3969319A1
A method of producing a solar panel curved in two directions	26.09.2019	EP3857613B1
A method for balancing a wheel with integrated electric motor	12.06.2018	EP3807609A1

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