



Agenda

Molecular Plasma Group - Summary -

Company History & Shareholder Structure

Technological Deep-Dive and 03 Advantages

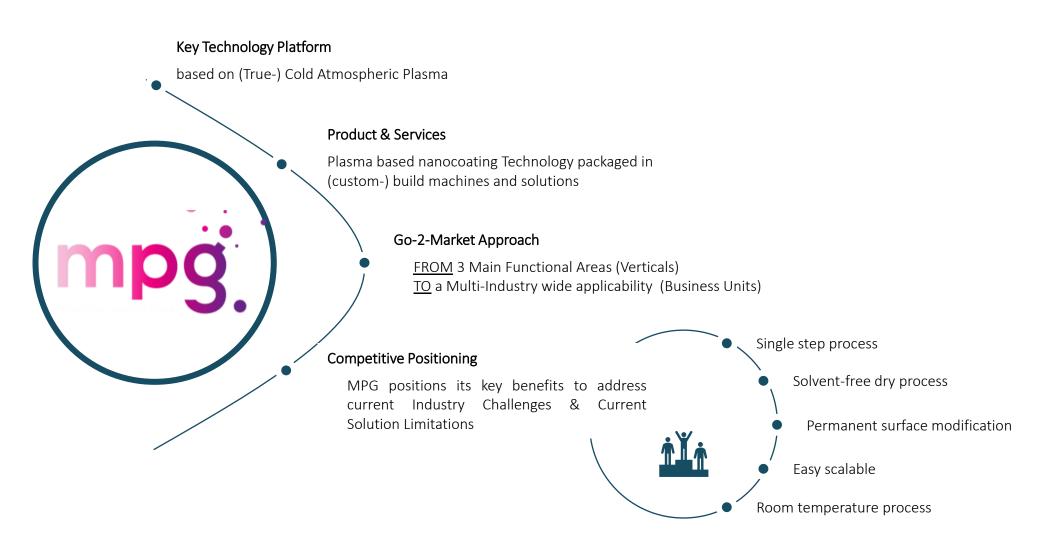
Financial Details

Sales Potential 05 **Evaluation & Planning**

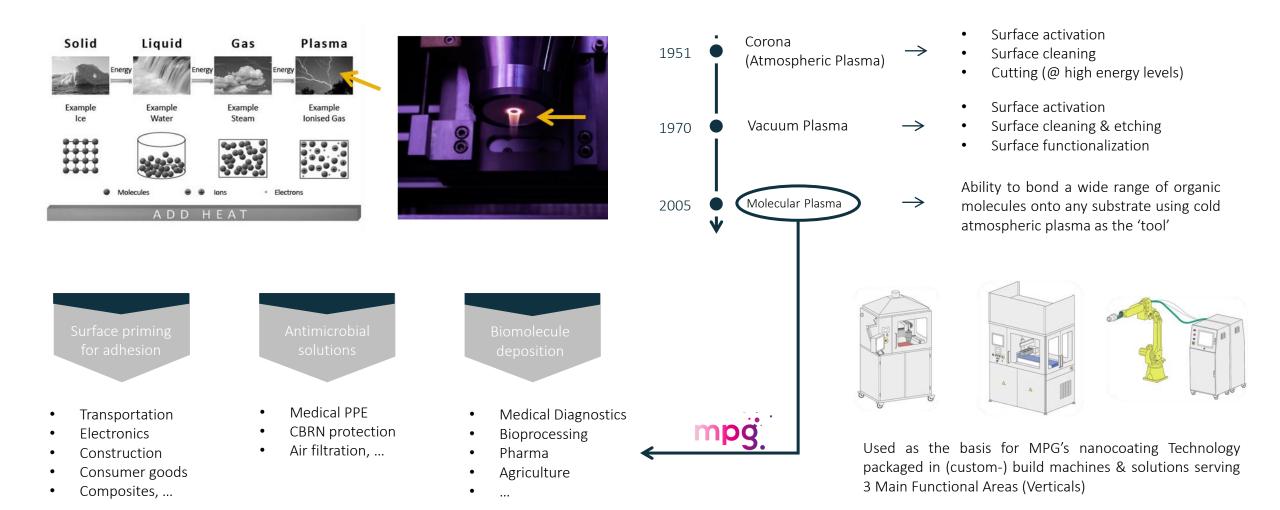


Molecular Plasma Group (MPG)
- Summary -

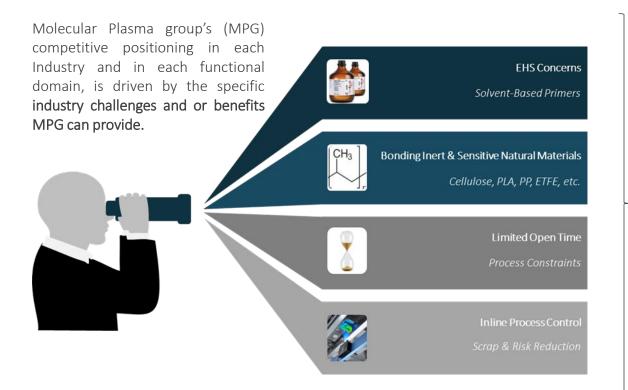
MPG Company Introduction



Technology, Products and Go-2-Market Approach



Competitive Positioning



Molecular Plasma group's (MPG) **competitive positioning in each Industry** and in each functional domain, is driven by the specific industry challenges and or benefits MPG can provide.

Direct Competition: Corona & other plasma technologies

For the large majority of the markets served by these technologies, MPG's solution would be an overkill and therefore not competitive.

MPG carefully aims to bring solutions to those markets that the traditional technologies cannot serve at all and where they have strong competitive advantages.

Indirect Competition: Wet chemical surface functionalisation

Within the domain of the Wet Chemicals, MPG's technology can be a disruptor. MPG can carefully aim for those market segments that are under REACH or other regulatory /environmental pressure.



MPG Growth Numbers

+41%

3Y Revenue CAGR

MPG realized a 41% CAGR growth since 2019 for the Consolidated Revenue, going from 1.6M EUR to 5.6M EUR in 2021. The direct revenue from sales followed a similar trend from 1.3M EUR to 3.9M EUR.

+78%

3Y Net Profit CAGR

MPG realized a 78% CAGR over the past 3 years. The Consolidated Net Profit increased from 52K EUR in 2019 to 300K EUR in 2021.

3 Countries

Office Locations

MPG is active in Luxembourg (HQ, Machine & Technology Development); Belgium (RTO Business Development & Bio-Tech) and the United-Kingdom (RTO and Sales-office).

+ 20 FTE

Total Employees

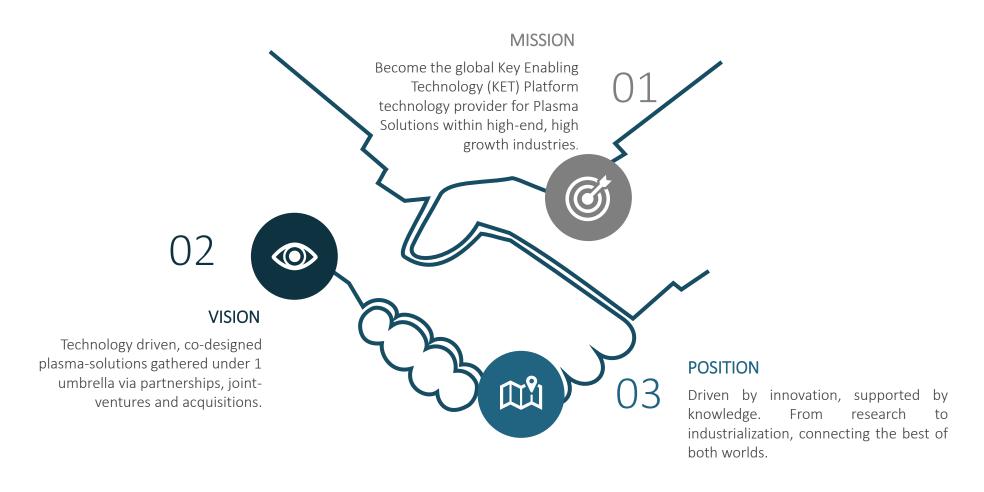
The total number of employees is exceeding 20, a number which is expected to grow strongly over the next years. To support the current growth levels, MPG will continue the hiring process.

Click <u>here</u> to navigate to the financial details

Click <u>here</u> to navigate to the company history overview and shareholder structure.



Mission, Vision & Position



Innovation gave birth to MPG, it's DNA continuous the search to new solutions.

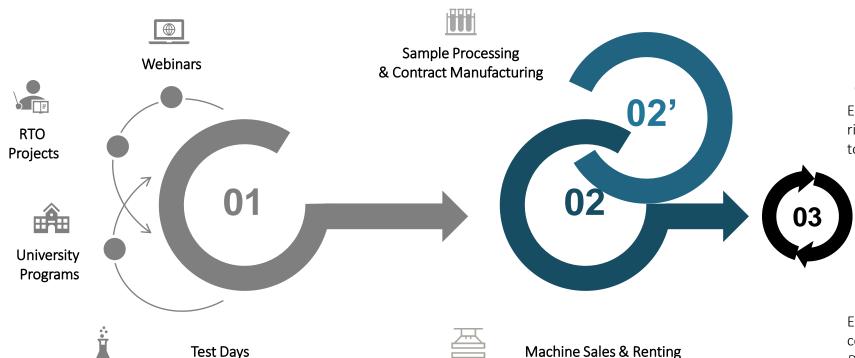
The company has a strong basis of knowledge in complex surface activation. Its technology, allowing the use of a multitude of different chemicals, allows to address a wide spectrum of Plasma Based Solutions.

Started from research and development, its DNA will drive MPG to novel partnerships for growth.

All together, this drives the Go-2-Market Model of MPG focusing both on the academics as well as Industry.



Revenue & Business Model



For 8.000 euros, a company can spend a day at MPG in order to validate the potential value of the technology.

Machine Sales & Renting

If the Innovation day is a success, a machine can be purchased (or leased).



Cartridge Sales (Consumables)

Each of the machines needs to be fed with the right chemical mix ("Consumables"). Which is key to Quality Assurance.



Maintenance Service

Each of the machines comes with a service contract (Including the option for Remote Diagnostics).



Business Model & Related Business Units

Potential Business Unit: Transportation

- Molecular Grip Technology
- · Automotive glass suppliers;
- · RFL replacement for tire reinforcement
- · Adhesion on inert substrates such as PP

Potential Business Unit: Manufactured Goods & Construction

- Molecular Grip Technology
- Adhesion as a replacement of Wet Primers and Solvents
- Improved Open-Time

Molecular Plasma Group SA: Centralization of IP, Knowhow and Technological Development Proprietation

Business Unit: Universities & RTOs

- Focused on:
 - Direct sales to Universities & RTOs
 - Subsidized Projects including industry partners.

Business Unit: Roll Goods

- Direct Result from Virucidal Mask Treatment.
- Focused on:
 - Nonwovens; Microporous Membranes;
 Fluorinated Films; Tapes

Potential Business Unit: Biomedical and Electronics

- New Diagnostic Technologies: Anti-biofouling functionality; Antibody deposition; Biomolecule linker layers
- Antimicrobial Solutions: Quaternary Ammonium-based solutions; Natural virucidal solutions; Bacteriophage-based solutions
- Bioprocessing Solutions: Functionalization of microporous membranes
- Electronics: (semi)Conductors and other electronic components -Sealing & delamination

Business Unit: Plasma Based Particle Engineering

- Joint-Venture with Procept. (50/50 Joint-Venture).
- Focused on: Pharma; 3D printing; Advanced composites; etc.



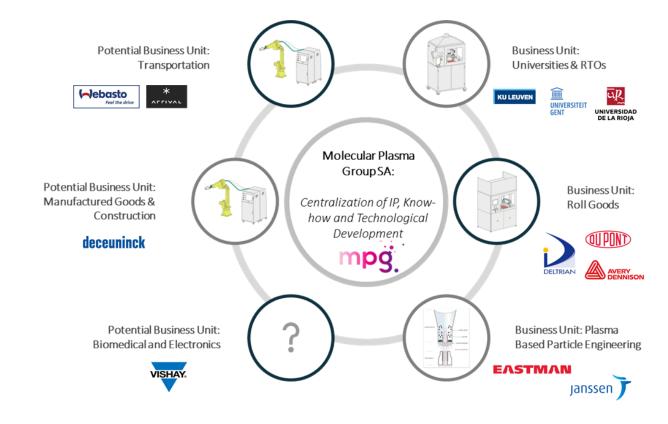
Business Model & Related Business Units

MPG's 5 Year Sales Plan is defined based on:

- Current client engagements;
- Extrapolated market potential based on the current client engagements.
- Assumptions for new domains in which MPG knows its technology could be leveraged, yet limited Business Development was done so far.

The defined sales-potential can only be unlocked in case MPG makes the required investments in geographical expansion, resources, customer support, and IT. This all together led to MPG's 5 Year Business Plan:







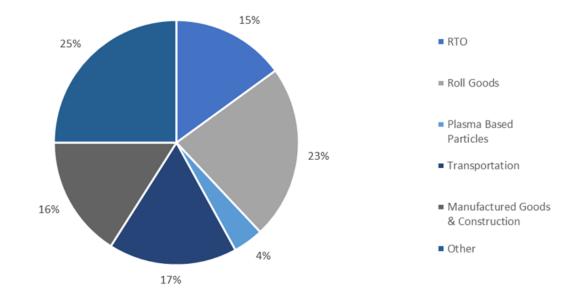
Business Model & Related Business Units



Click <u>here</u> to navigate to the Sales Potential Evaluation & Planning

Click <u>here</u> to navigate to Cash Planning & Profitability Analysis

Business Unit Contribution



Business Unit
Development
Machine Sales
Machine Rentals
Consumables / Cartridge Service
Machine Spare Parts & Upgrades
Total

Total 2022	Total 2023	Total 2024	Total 2025	Total 2026
€1.263.850	€1.515.610	€1.787.171	€ 2.145.888	€ 2.630.477
€ 4.488.043	€ 6.985.000	€ 9.406.250	€13.170.313	€ 17.175.391
€358.000	€ 440.833	€641.042	€861.302	€1.106.628
€ 253.000	€ 382.500	€ 540.625	€935.938	€1.653.906
€142.688	€ 228.360	€ 380.040	€ 445.060	€ 580.090
€ 6.505.581	€9.552.303	€ 12.755.128	€17.558.500	€ 23.146.492



Company History & Shareholder Structure



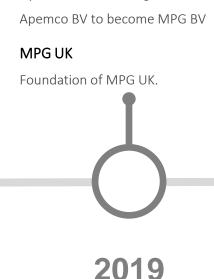
Capital Increase MPG BV

Company History

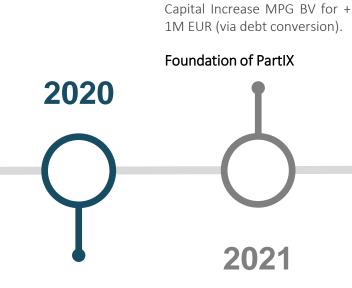
Foundation Belgian Entity Foundation of Apemco BV to support the Belgian activities of the Luxembourgish entity and continue the activities started by VITO.







Apemco BV to change name



Foundation Luxembourgish Entities

Creation of 3 entities: (1) Apemco SA - specialized in design, production, installation of atmospheric plasmabased solutions. (2) Funcoats SA - Development of surface treatment solutions. (3) Tailwind Lux - Investment vehicle and IP-powerhouse.

MPG SA to centralize all activities in Luxembourg

MPG SA absorbed Apemco, Funcoats and Tailwind Lux with a retroactive accounting effect as of January 1st, 2018.

SCSp – Limited Partnership

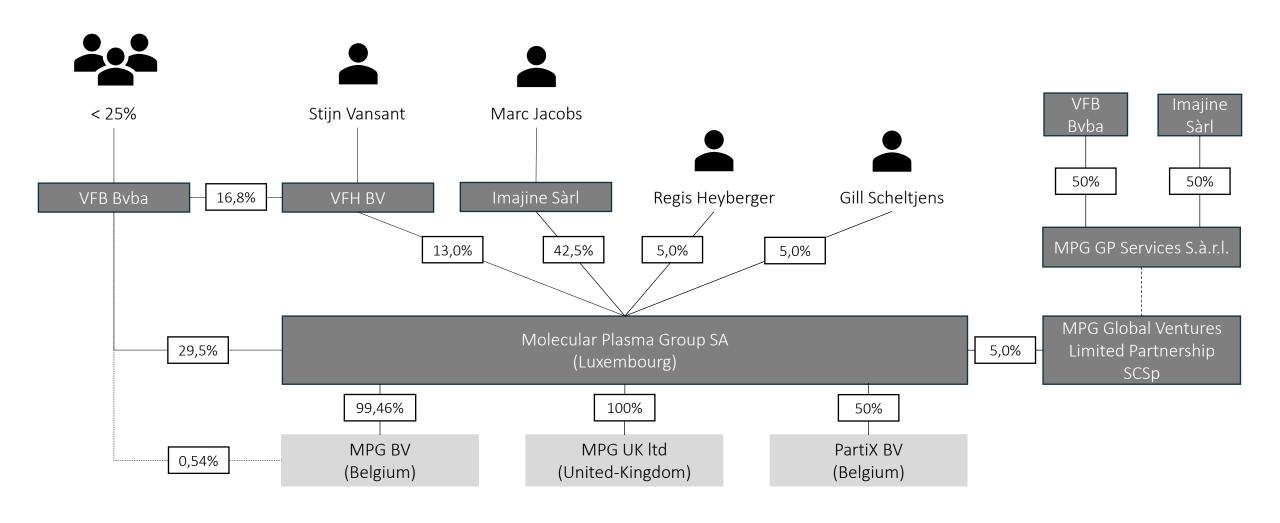
Legal entity to enable participations in different corporations, used as a vehicle to reward (shares & options) MPG's key personnel.

Capital Increase

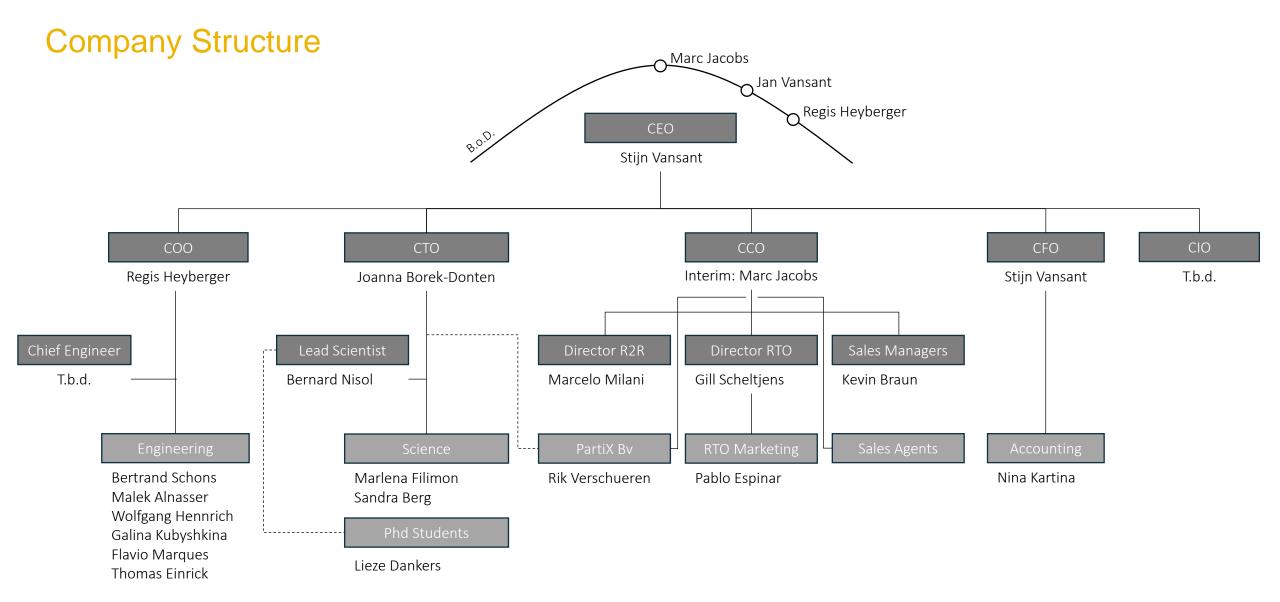
Capital Increase MPG SA: 400K EUR.



Shareholder Structure









Key Team



Stijn Vansant (CEO)

- Masters in Business Engineering (BE / CH)
- Management & Entrepreneurship experience as Associate Partner Life-Sciences IBM and Co-Founder of BounceWear Europe



Marc Jacobs (Chairman & CCO)

- Masters in Engineering
- Sloan Masters in Leadership & Strategy from LBS (UK)
- Experienced entrepreneur



Regis Heyberger (COO)

- UT in Mechanical Engineering
- PhD from the University of Strasbourg
- Masters in Quality and Innovation
- Expert in robust upscaling of innovative technologies



Joanna Borek-Donten (CTO)

- PhD Physical Chemistry
- University of Zurich and Edinbrugh
- Nanotechnology specialist
- Chief Technology Officer at Stat Steel



MARCELO MILANI (Director)

- Global Strategy Leader at Dupont with +20 years of experience in Roll-Goods & Bio-Medical.
- Flectronical and **Flectronics** Engineering – Sao Paulo.































Technological Deep-Dive and Advantages

mpg.



Technological Differentiator

Two main principles to generate Plasma:

(1) Vacuum Plasmas

- MAGNETRON SPUTTERING: deposition of metallic, inorganic or ceramic-type coatings.
- RADIOFREQUENCY (MHz) PLASMAS: activation and organic vapor deposition (PECVD)

(2) Atmospheric Pressure Plasmas

- CORONA PLASMAS: plasma cleaning and activation. Examples: Plasmatreat, Enercon.
- RADIOFREQUENCY (MHz) PLASMA JETS: activation and organic vapor deposition. Examples: SurfX technologies, Nadir-tech.
- JET FOR PLASMA MEDICINE NEOPLAS'S KINPEN: activation, decontamination, wound healing.

Concepts in the domain of Plasma

- Supporting Gas;
- Scalability (for industrial solutions);
- Temperature (True Cold Plasma?);

- Deposition:
 - Possibility
 - Quality

MPG uses an Atmospheric Plasma technology which can operate in nitrogen, argon, helium, air, and with gaseous dopants (ex: O_2 , CO_2).

It is unique in its ability to generate true cold, non-equilibrium plasmas (down to 35-40 °C). MPG's technology allows the company to work with ultra-low energy plasmas introducing the possibility to work with the most sensitive substrates, and the most sensitive chemicals.

MPG is well positioned compared to existing technologies currently on the market. But could benefit from their experience and network to scale and grow.



Technological Differentiator

	Vacuum Plasma*		Atmospheric Pressure Plasma			
	Magnetron Sputtering	Radiofrequency (MHz) Plasma	Corona Plasma	Radiofrequency (MHz) Plasma Jets	Jet for plasma Medicine (Kinpen)	MPG Technology
Plasmagen gas	Argon	No Limitation	Mostly in Air	Only in Argon & Helium	Argon, Helium, Nitrogen or Air	Nitrogen, Argon, Helium, Air, Gaseous dopants
Scalability	Limited	Limited	Easily	Limited	Limited (by design)	Easily
	No	Yes	No	No	Yes	Yes
"True" Cold Plasma**	Precursors are overly fragmented.	Truly cold discharges can be ignited.	Temperature & energy are concentrated in streamers (small arcs).	Do not generate true "glow discharges".		Truly cold, non-equilibrium plasmas; down to 35-40 °C
	Yes	Yes	No	Limited	N/A	Yes
Deposition	Only hard-coatings: optical & barrier coating (not possible with MPG technology)	Close to MPG's technology (Soft Interfacial Coatings). No possibility for living / bacterial deposition	Limited to Siloxanes – coating close to Magnetron Sputtering (Cleaning & activation)	Applied in Semiconductor industries where Corona Plasmas is too high in Energy. (Deposition is possible but lower quality compared to Vacuum Radiofrequency)	Medical applications	No finishing coatings, except for BioMed-coatings. Possibility for living / bacterial deposition
	Not Suitable	Suitable	Not Suitable	Suitable	N/A	Suitable
Organic Deposition		Limited to vapor deposition & thus low deposition rates.	Precursors are overly fragmented and oxidized.	Limited mostly to vapor deposition & thus low deposition rates.	Not suitable for deposition of coatings, by virtue of its design.	
Other	Sputtered material will deposit everywhere in the reactor.	Deposition occurs onto all surfaces, including reactor walls.	Effect of treatment vanishes in hours, days at most		Certified device for medical treatment of skin.	Ultra-low energy: working with the sensitive substrates.

^{*}all vacuum systems require specific chambers and pumping systems. Costly, and time-consuming (cleaning, maintenance, troubleshooting).

^{**} Will define whether you can operate with organic / sensitive disposition materials and whether there is a risk of damaging the treated surface.





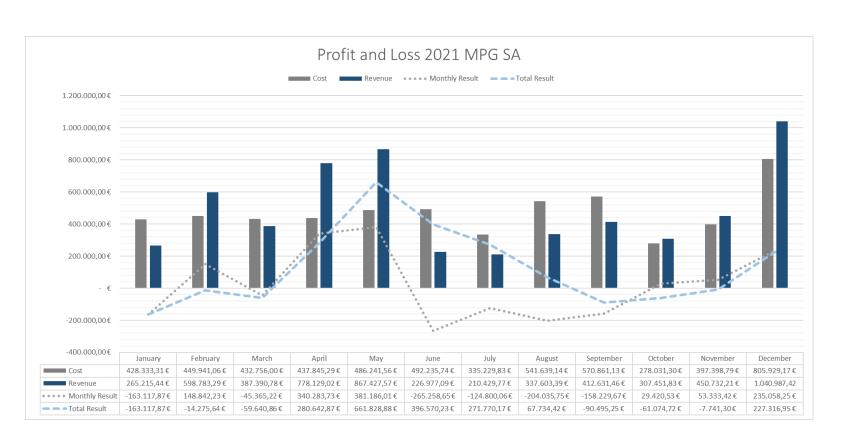
Company Financials

	Consonauted		
	2021	2020	2019
Total Revenue & Subsidies	5.625.850,38€	3.601.436,08€	1.638.610,74€
Total (Incl. Other)	6.524.086,26€	3.982.315,94€	2.321.450,71€
Revenue	3.919.691,67€	2.398.939,21€	1.299.855,15€
	70%	67%	79%
Subsidies	1.706.158,71€	1.202.496,87€	338.755,59€
	30%	33%	21%
Other (Stock & Assets)	737.053,45 €	19.209,60 €	232.863,20€
Other (Stock & Assets)	161.182,43 €	361.670,26 €	449.976,77€
Gross Profit	2.100.514,68€	1.300.981,55€	508.978,18€
Gross Profit	37 %	36%	31%
Material Cost	3.525.335,70€	2.300.454,53€	1.129.632,56€
	63%	64%	69%
Personnel Cost	1.337.054,53€	895.633,22€	490.360,52€
	24%	25%	30%
EBITDA	1.661.696,03€	786.228,19€	701.457,63€
EBITDA	30%	22%	43%
Value Correction	719.894,90€	551.105,42€	365.090,29€
Other Costs (VITO Prov)	580.228,11€	135.305,20€	260.126,30€
EBIT	361.573,02€	99.817,57€	76.241,04€
Net Income	297.560,85€	215.196,69€	52.452,38€

Consolidated



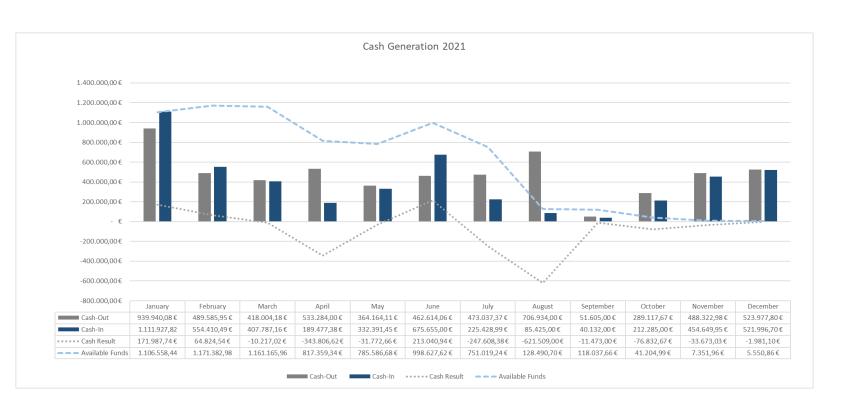
Company Financials



- Drop in sales in Q3 2021
 - Re-organization of the sales-organization
- Cost Increase driven by:
 - Strategic sourcing to strengthen the team
 - Virucidal (Retro-actively funded investment program with the Luxembourgish government)
- Recovery in Q4 2021
 - Signature of a key funded project with the Belgian Government (Vlajo)
 - Project closure by year-end
 - Taking the benefit of "remaining" budgets at client side to sign last engagements



Company Financials



- Drop in sales in Q3 2021
 - Translates itself in a drop in cash-generation around 30 Days later
- Cash-Planning impacted by a delay in the Virucidal Project submission 2
 - Independent Audit Request
 - End-of-Year availability
- Increased cash-out due to
 - Strategic sourcing to strengthen the team
 - Virucidal Project Related Cost
 - Foundation of the new company organization and strategic development



Company Financials

MPG is an innovative company. Due to its heavy investments in innovation and technologies, the company can gather funding via subsidized projects. It is important to understand the nature of these projects well, as they impact our cash-position, Profit / Loss (/ Provisions), and ability to continue the large investments. Some projects are prefinanced. Therefore, the impact on the cash position is rather positive. Other projects are Retro-Active. In this case, the cash needs to be spent, and can only be requested over time (and based on proof of payment). In this case, the cash impact is negative.

PLASMASOL

MPG BV

NOV 2019 - NOV 2023

<u>Total</u>: 0,703M EUR

Pre-Financed

Partners:

- Deceuninck
- Samsonite
- Soudal
- Fraxinus
- Centexbel
- Ughent
- Uantwerp

FUN(C)Y

MPG BV

NOV 2021 - NOV 2024

<u>Total</u>: 0,365K EUR

Pre-Financed

Partners:

- Eastman Chemical Technology
- Janssen
 - Pharmaceutica
- Ughent
- UAntwerp
- Uleuven
- Soudal
- Procept

Baekeland-Mandate

MPG BV

OCT 2021 – OCT 2025

<u>Total</u>: 0,283K EUR

Pre-Financed

Partners:

KULeuven (University)

PLASMADEMON

MPG SA

2020

<u>Total</u>: 0,183K EUR

Retro-Active

Partners:

- Santé-Service
- Softal

VIRUCIDAL

MPG SA

JUN 2020 - JUN 2022

Total: 2,00M EUR

Retro-Active

Partners:

- Santé-Service
- Softal



Company Financials

MPG is currently financed via Bank-Loans. Most of these loans are no investment loans but Overdraft Facilities. It is important for MPG to enable some long-term loan opportunities to reduce the cost of cash-availability and drive longer-term strategic initiatives.

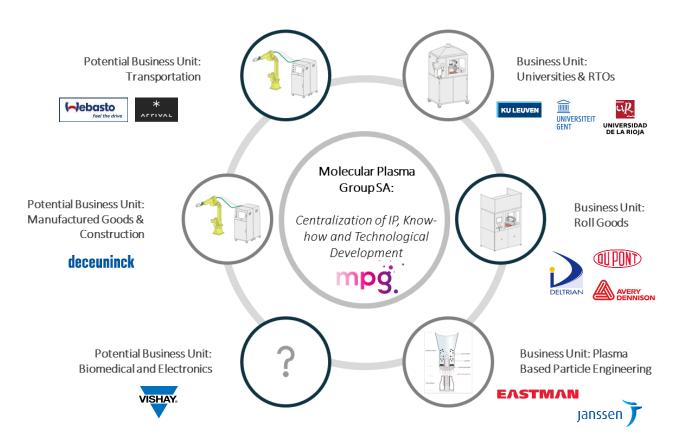
Entity	Investment Loan	Institution	Current Amount Outstanding (03/22)
MPG SA	Innovfin Investment Loan	BIL (Bank International Luxembourg)	60.849,52 EUR
MPG SA	Investment Loan State Guarantee 6Y	BIL (Bank International Luxembourg)	212.500,00 EUR

Entity	Investment Loan	Institution	Current Amount Outstanding
MPG SA	Overdraft 1	BIL (Bank International Luxembourg)	500.000 EUR
MPG SA	Overdraft 2	BIL (Bank International Luxembourg)	1.300.000 EUR
MPG BV	Pre-Finance Agreement	KBC BANK	250.000 EUR



Sales Potential Evaluation & Planning





MPG has developed a technology, which can address many markets and opportunities. The novelty makes it hard to grasp the full market potential and thus forecast the future sales potential.

Therefore, MPG decided to started from its **current engagements** and the **Test-Day track-record** from over the past 3 years. The defined client potential (in each of the business unites) is thereafter extrapolated based on the full **market potential** in order to define the sales potential in MPG's business plan.

In the next slides, MPG presents the use cases, the client potential and full market potential (from which MPG expects to win-over a certain percentage, depending on the consolidation of the market and barriers to enter). In order to unlock the sales potential, MPG will have to invest in resources, new locations and strategic services (supported by the required IT platforms).

Combining the expected sales with the required investments enabled MPG to complete its **5Y business and cash-plan** for which the summary is presented at the last slide of this section.







Overview

Dupont is a global player in high-end polymer films and membranes. Using their proprietary nanofiber membranes, their water filtration business offers solutions for membrane chromatography filtration used in the manufacturing process of therapeutic substances such as monoclonal antibodies. The membranes need to be functionalized with proteins to capture the specific therapeutic biomolecules.



Goals

- (1) Step 1 : Graft a linking layer onto the membrane for further functionalization with a protein.
- (2) Market introduction in Q4/2022
- (3) Step 2: Further develop the technology to directly graft the required protein(s) onto the nano-fiber membrane.

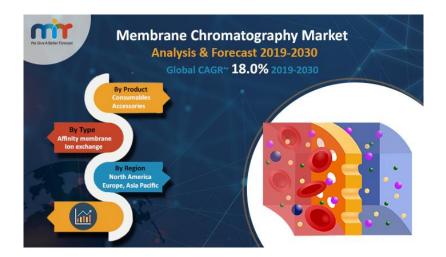
 Timing: 2024



Results & project status

- (1) Technical functionality of solution fully validated on lab scale
- (2) We are now scaling the solution onto our Plasmaline 400 production platform
- (3) First production runs scheduled for Q3/2022





Potential:

Dupont is a relatively small player in the field of membrane chromatography. The total market is currently estimated at 316 million USD with a CAGR between 10,3 and 18 % depending on the reports. https://bit.ly/3qZfdEU. https://bit.ly/3qZfdEU. https://bit.ly/3gZfdEU. <a href="https://bit

Traditional wet chemical functionalization technologies tend to block the pores of nano-porous membranes so the key to success in this market is the ability to functionalize them with a DRY process which is exactly what we can uniquely do. With our Plasmaline 400 platform, we already have the production system needed to quickly enter this market.

Client Value

1.5M EUR

Global Market Value

50M EUR

Time Horizon

2 - 10 Y







Overview

Deltrian is a Belgium-based manufacturer of air filtration technology. They invested in face mask production coupled with our virucidal technology. They are now expanding our virucidal technology into air filtration products as well.

See testimonial of the CEO: https://www.youtube.com/watch?v=pc-o37jnZIU



Goals

- (1) Expand the virucidal technology for face masks into the wider field of air filtration products
- (2) Potential partnership with Deltrian for application of our technology for multiple applications in the air filtration business



Results & project status

- (1) Production line installed @ Deltrian & virucidal face masks in the market since Q1/2021
- (2) Virucidal air filters in the market since Q4/2021.Awaiting market take-up prior to installing a big line (value 1.500 k€)
- (3) Discussions ongoing for commercial partnership in air filtration market.



DeltriSafe LE PROCÉDÉ ANTIVIRAL INNOVANT QUI PERMET DE LUTTER CONTRE LA PROPAGATION DES VIRUS!



Potential:

Apart from Deltrian, 3 more industrial production lines are installed in Europe for virucidal face masks. As the big market for face masks is in the Far East, we are now moving into China together with our parent organization VITO. First orders for test quantities (60 k€) are being delivered. *The www.theglobalfund.org* and the www.who.org are very interested to roll this technology out globally.

The global market for HVAC air filters is estimated at 13,68 billion U\$ in 2022 and projected to grow at a CAGR of 7,2% with a strong focus on improving the quality of air. https://www.fortunebusinessinsights.com/industry-reports/air-filters-market-101676

Client Value

2,5M EUR

Global Market Value

50M EUR

Time Horizon

2 - 10 Y

https://www.deltrian.com/nwesplus/ https://health.deltrian.com/fr/masques/30-deltrisafe-virucide-5700105.html







Overview

PartiX is a Joint-Venture between MPG and ProCepT. The focus of the Joint-Venture is on its combined technology for 'Cold Plasma Fluid Bed Functionalization of Particles' and scale this technology to batch and continuous processes.

The joint-venture will house the IP on the combined technologies of the PROCEPT particle process technologies with the MPG Cold Plasma technology.



Goals

The goal of PartiX is develop a "solvent free" coating / functionalization which has a major advantage compared with the current "wet coating processes" used in the industry (No solvent emission; No need for recondensation, scrubbing, active carbon absorbance; Energy and CAPEX savings and shortening of process time.

The Cold Plasma Functionalization offers a new surface chemistry technique for particles, opening doors to new applications which are currently not possible with the wet coating techniques.



Status

It is hard to define the true market value and the hurdles to overcome to address the market needs. Therefore, a funded ICON Project was kicked-off with the following aim:

- Knowledge build-up on functionalization of powder particles with diverse industrial implementation potential. Specifically, the market of measuring tests for substance detection, and use this new knowledge as a steppingstone towards applications in Pharma and biosensor applications in Life Sciences.
- Reduce the R&D pathway for new customers, develop an industrial implementation which will increase the confidence of new customers to invest into the equipment.

"Partix' atmospheric plasma technology offers an innovative approach to more sustainable surface treatments by injection of simple chemical building blocks into a reactive plasma environment, eliminating the use of solvents and drastically reducing the number of processing steps. The research at VITO is focusing on surface modifications of materials for batteries. Results are great and will be published soon!"

Dr. Dirk Vangeneugden – Flemish Institute for Technological Research (VITO)



"The short set-up time for performing experiments coupled with the high processing speed allows to study a large number of conditions, and gather a considerable amount of results. Using Partix' platform technology will significantly reduce the time required for R&D of new materials."

Prof. Dr. Rudy J. Koopmans - Plastics Innovation

Competence Center (PICC)

Client Value (Icon Project)

0.34M €

Global Market Value

10M €

Time Horizon

5 - 10 Y









Overview

Deceuninck is market leader in UPVC window frames with headquarters in Belgium. Main markets are Europe, North America, Turkey & emerging markets. Its global market share is estimated at 1.6 %

Deceuninck has been looking for many years for a cost-effective replacement of the solvent-based primer used to 'prime' PVC window profiles to enable lamination with decorative foil. (the foiling operation)



Goals

- (1) Cost-effective replacement of a conventional primer currently used in the (hot melt) gluing process between PVC/aluminum profiles and decorative foils. This in order to stop using the wet primer while (Ideally) not replacing the hot melt glue.
- (2) For recycled PVC, the current solution (wet primer) is not working, impacting the use-case of moving to recycled PVC.



Results & project status

- (1) PVC:
 - Solution has **overtaken performance** of the current primer-based solution by up to 50% with the same hot melt glue.
- (2) Aluminum:
 - Results in line with PVC.
- (3) Recycled PVC:
- Testing & Analysis to be started.
- (4) Finalizing business case for a first pilot line. Order expected in Q4 2022



Potential:

Deceuninck will benefit from solvent-free solutions, resulting in a safer workspace and lower emissions. The jointly created business case with the Deceuninck covers up to 40 active lamination lines located in their different facilities. The potential solutions are Plasma Coating systems (hybrid PlasmaLine/PlasmaSpot solution). The need for this solution is 'general' and we are now engaging with other players in the market.

Client Value

15M EUR

Global Market Value

900M EUR

Time Horizon

2 - 10 Y







Overview

Avery Dennison Corporation is a multinational manufacturer and distributor of pressure-sensitive adhesive materials, apparel branding labels and tags, RFID inlays, and specialty medical products. The company is a member of the Fortune 500 and is headquartered in Glendale, California.

They are looking for scalable environmentally friendly solutions for surface functionalization for all there business units



Goals

- (1) Simplification and cost reduction of manufacturing processes
- (2) Developing silicone-free release solutions for the label business
- (3) Adhesion solutions for their RFID business



Results

- (1) After successful Proof of Concepts performed at MPG's lab, AD decided in 2021 to 'onboard' the technology and invested in a lab system for their R&D center in the Netherlands. Many applications are being developed which we will scale to industrial solutions
- (2) For the medical specialty division, we developed an adhesion solution for bandages. The solution is fully validated in 2021 and the investment decision for a Plasmaline 400 was delayed by 12 months due to Covid related supply chain issues and is now expected for Q4/2022



Potential:

We have been on a development trajectory with AD for 4 years now. Very early on, they recognized the potential of the technology and continued investing despite not having a clear path to scalability in the first 2 – 3 years.

The key to success with them and others in similar fields is our ability to scale the technology which we have proven in 2021 with our Plasmaline 400 production system. For many applications, they need larger widths which we now also offer with our Plasmaline 1600.

The global pressure sensitive label market is estimated at approx. 100 billion USD with a CAGR of 4,26 %. https://www.mordorintelligence.com/industry-reports/pressure-labels-market AD's market share is approx. 5,5 % (source: 2021 annual report)

Client Value

10M EUR

Market Value

200M EUR

Time Horizon

2 - 10 Y







Overview

Webasto is a TIER 1 automotive supplier of sunroof subassemblies with a global market share of +/- 30 %. The first application for our technology is priming of the rim of glass sunroofs to enable reliable bonding with PU glue.

Webasto had a major product recall in the USA in with Daimler due to bonding issues between the glass and the PU = significant liability issue

The automotive sunroof market is forecasted to have an CAGR of 9 %



Goals

- (1) Develop a robust solution that offers:
- In-line quality control of the priming operation
- Full traceability
- Is fully automated
- Is totally solvent-free
- (1) If successful expand the technology to batteries for electric vehicles, electric charging systems and thermal heating systems for vehicles



Results & project status

- (1) Technical functionality of solution fully validated on lab scale
- (2) Functionality of in-line inspection system validated and being fine-tuned.
- (3) Pilot line (on robot) delivered to Webasto in Q4/2021
- (4) Webasto is now validating the performance of the pilot line with ongoing support from MPG



Potential:

Webasto will benefit from a solution that meets ALL their needs. The potential for this specific use case within Webasto is approx. 40 robot systems at a unit value of 150K each + services. Total potential for our technology within Webasto is estimated at 3-5 times the value of this initial project.

The need for this solution is 'general' and we are now engaging with other players in adjacent markets.

Client Value

8M EUR

Global Market Value

20M EUR

Time Horizon

2 - 10 Y







Overview

Vishay Intertechnology, Inc. is an American manufacturer of discrete semiconductors and passive electronic components with an annual turnover of 3,2 billion U\$.

In several of their business Units they face sealing/delamination problems resulting in high cost of non-quality.

The CTO is convinced our technology is the key to solving their problems.



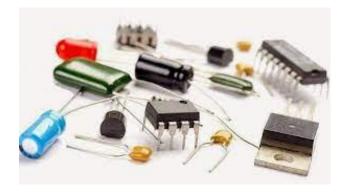
Goals

- (1) Reduce cost of non-quality by improving adhesion between different layers of the components they manufacture
- (2) Develop & scale the process for a first application to be installed in their MOSFET factory in Shanghai
- (3) Roll out the technology to other Business Units in the group



Results

- (1) Successful proof of concept in Q4/2021
- (2) Q2/2022: scaling the process from our lab system to the Plasmaline production platform
- (3) Discussions started for production equipment engineering PO expected for Q3/2022 with delivery of a system in Q4/2022



Potential:

Sealing & delamination issues are a common challenge in the semiconductor / electronic components industry. Because of the sensitivity of many of the components only a limited number of surface functionalization technologies are suitable. With our 'super soft' technology we have a significant competitive edge in this industry.

The total cost of ownership for our solution is negligeable compared to the cost of non-quality.

Client Value

5M EUR

Market Value

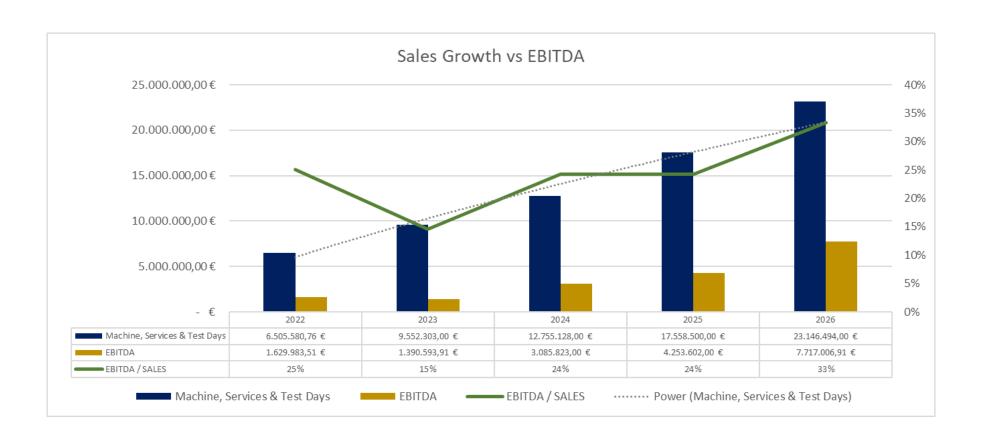
100M EUR

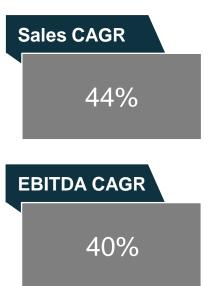
Time Horizon

2 - 10 Y



Conclusion







Required investments

Sales CAGR
44%

EBITDA CAGR
40%

The growth is enabled via 3 key strategic initiatives.

Invest largely in growing the sales and technical support teams to speed-up sales

The roll-out of a
"Client Portal"
which is IOT, and Al
enabled in order to
provide the best
services & grow the
support revenue

Client Portal

Address key markets outside the EU in order to generate a wider adoption of the technology

Office (Re)Location

Capex Increase 2026

+OM EUR

Opex Increase 2026

+2.2M EUR

Capex Increase 2026

+0,55M EUR

Opex Increase 2026

+0.42M EUR

Capex Increase 2026

+1,9M EUR

Opex Increase 2026

+0.45M EUR