



GPV annual

2018

MAGAZINE

The hardware of the digital world

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GPV in numbers

Highlights and facts
from 2017

a year in review

Editorial

The building blocks of the digital world

For GPV, 2017 was an extraordinary year - with growth on many levels - not least driven by an increase in finished products and box-build solutions. Both we, and our customers, saw a higher demand than expected, so, it is fair to say that our business model has been tested and has proved its strength. Certain things could have been done even better, and we are very aware that we must continue to develop our setup to meet expectations like capacity requirements, etc.

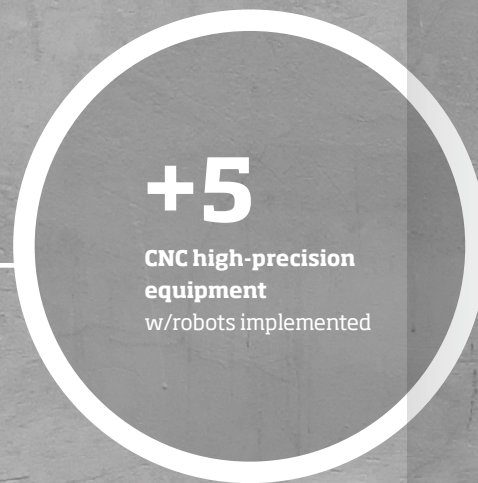
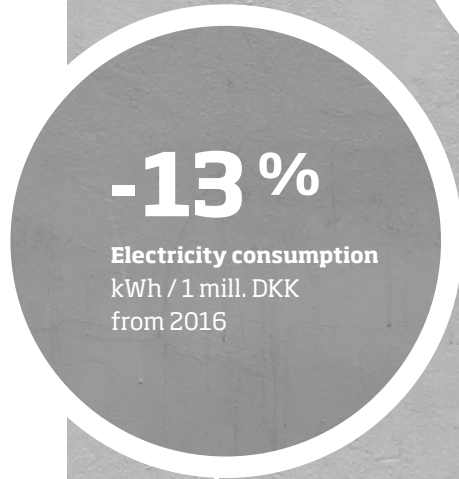
To be able to service our existing and new customers, we will continue to invest in capacity. In 2017, we invested to keep up with the high demand. In 2018, we are investing to be prepared for future growth and to stay ahead. In fact, we have revised our 2020 Growth Plan and are now working on an Ambition 2022, in which capacity, digitalisation, and overall efficiency are key elements.

At GPV, digitalisation is a tool to ensure scalability and drive effectiveness. But we also see digitalisation as physical products within electronics, mechanics and mechatronics that enable our customers to digitalize their business. We take pride in the fact that our work helps transform digital ambitions into real, tangible, practical value.

In a busy year, sometimes we forget to thank those around us. I would like to extend a warm thank you to our skilled employees for their hard work and dedication - and not least a warm thank you to our customers for putting your trust and products in our hands. We know that 2017 has been a productive and demanding year - and we move forward with the clear ambition to help you accomplish even more in 2018.

Sincerely

Bo Lybæk
CEO, GPV International



Breaking down a business in a few numbers does not necessarily reveal the entire truth.

But it becomes clear - by looking at the sheer data - that we have reached a new level at GPV - in terms of employees, capacity, technical advancements, and finances. We have in 2017 achieved a revenue growth of 31% - totaling DKK 1,148 million, and continued our solid traction, enabling us to continue to develop GPV - whether it is through investments in reducing our environmental footprint or in more efficient equipment. Growth is only a success indicator when it goes hand in hand with the value delivered to our customers and other stakeholders. Therefore, we will continue to use our progress to improve the everyday experience for the customers who trust us with their products and cooperation.



2022

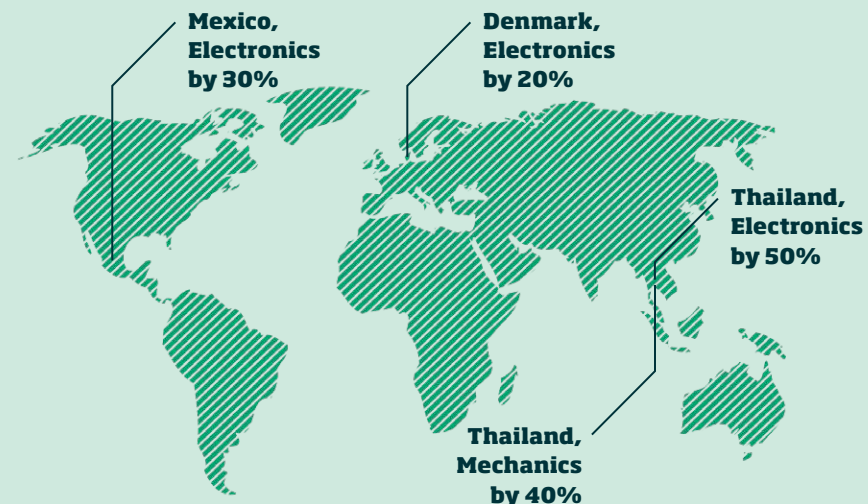
the ambition to reach higher

but still keep our feet on the ground

The 2022 ambition highlights

- > Deepen relationship with existing customers and attract new customers globally
- > Double the global production capacity with the latest technology
- > Execute on the active M&A agenda in our home region, Central and Eastern Europe as well as the Americas, if the opportunities emerge
- > Continuously strengthen our organisation with regard to skilled employees, increasing the ability to deliver on even higher levels

Increase facilities in:



In 2017, we experienced high growth - coming from both existing and new customers - and we were faced with capacity issues that we gave our full attention.

We have met these increasing demands by expanding our capacity through investments in production equipment as well as an expansion and upskilling of our staff of employees. We have learned, we have executed, and we have improved.

Looking ahead, we are aiming even higher to deliver Service Excellence: Our capacity is to double, our quality and service level should be even higher, and we will support

more customers globally. As a result, we are introducing a new 2022 Ambition where the ambitions are high, but our feet are still firmly on the ground.

Our core focus is still on products within high-mix / low-medium volume production, which is a business where every cent counts. We know that our offerings fit well with customers that depend on technical advanced products, assemblies (box build) and a global setup with a strong presence in Asia, Europe and the Americas - and this will enable us to enrich relationships with existing customers and attract new customers by ensuring that they will all accomplish more.

» **The need for high-precision mechanics continues to be on the rise. We are not looking at a revolution, but a speedy evolution,” says Jørgen Holm, Head of Group Sales at GPV. “In our digital world, more and more electronic products are produced, and the requirements towards e.g. frequencies and noise are becoming stricter - and obviously, this also applies to mechanics that is integrated with the electronic parts. ◀**

Head of Group Sales at GPV,
Jørgen Holm

Small is the big thing

Miniaturisation is still one of the larger trends with physical products becoming smaller. With smaller products comes the need for high-precision mechanics that have high demands on tolerances and can e.g. help transport heat away to avoid stressing or destroying circuit boards. Jack Rausing, Key Account Management, explains: “We use SPC-charts (Statistical Process Control) and GPS-measuring (Geometrical Product Specification) on drawings and work with extremely low tolerances. Our advantage is that we work in both the electronic and mechanical fields, which allows us to counsel our customers and create clever solutions that work together.”

Smart people. Smart machinery

Most production companies face the challenge of supplying their markets with new products that must outperform previous products. Many choose to outsource the entire production to EMS-partners like GPV to save resources, sharpen focus, and heighten efficiency. “Today, you need smart people and smart

machinery. GPV has invested heavily in high-precision mechanics, e.g. 7- and 5-axis machining and robotics, and our capacity has doubled in the last 18 months, with more to come. Additionally, we employ specialists that master high-precision mechanics as well as electronics - and these skills are quite rare,” says Jørgen Holm.

A technology road map

GPV follows a technology road map that ensures the same type of machines and robots across production sites to secure scale and uniform precision. Jørgen Holm says: “Proximity is important to our customers and we use our setup to e.g. prototype a solution in Europe and manufacture it in low-cost countries. This transition can be done very easily thanks to our shared setup across sites.” Jack Rausing elaborates: “It also adds great safety to our customers that we can make a business continuity plan - not just in general, but for each item produced. A potential machine breakdown is not equal to a production stop because we work on the same setup in other of our factories.”

What's next?

GPV is following new technologies such as 3D printing with great interest. While these can work well in mock-ups and prototyping, more maturation and development is needed before they can be seen as a substitute in series production.



High precision mechanics

A speedy evolution

Digital trust

What is a key factor in bringing digitalisation to life?

In Germany, one answer is digital trust

Dr Klaus Mittelbach

Chairman of the Board at ZVEI, Germany. As head of the main organisation for the electronics industry, Dr Mittelbach represents over 1,600 companies, which together employ 90% of the people working in electronics manufacturing in Germany - an industry with a turnover of more than EUR 190 billion in 2017 and 870,000 employees.



Photo credits: ZVEI.

'Plattform Industrie 4.0' - turning a vision into reality

"ZVEI promotes the joint interests of Germany's electrical and electronics manufacturing industry at national and international level. Our work is based on an exchange between the members' experiences and views on the current technical, legal and socio-political aspects of the electrical and electronics manufacturing industry," Dr Mittelbach explains.

The organisation supports market-based development of norms and standards at international level. By proposing policies in the areas of research, technology, environmental protection, education and science, ZVEI helps set the pace for technological progress.

"A specific and highly successful example of the support we offer our members is 'Industrie 4.0'. By 'digitally closing ranks' with two partner associations, ZVEI was part of preparing the ground for the work of 'Plattform Industrie 4.0' - turning a vision into reality," Dr Mittelbach explains.

Cyber security - a question of trust

Dr Mittelbach points out that one of the greatest challenges for the digital industry now and in the near future is cyber security and data protection, and he sees trust and cooperation to be one of the means to counter this threat.

"Only if we manage to create trust will we be able to seize the opportunities the digital world offers us," says Dr Mittelbach. Furthermore, a more in-depth discussion of the societal aspects of digitalisation is called for. This includes the new workplace or manifold questions of data protection."

At the forefront of developments

According to Dr Mittelbach, companies with the ambition to be at the forefront must be more willing to act quickly and courageously. They must also be willing to fail on occasion. It is his judgement that this is the only way to keep pace with increasingly accelerating global innovation cycles and to hold one's own in the marketplace. "Digitalisation is about achieving competitive advantages but it is also necessary for companies to learn and share ideas and knowledge from other companies and organisations to succeed," says Dr Mittelbach, continuing: "Cooperation across borders and among companies can bring advantages for everyone as digitalisation has turned value-creation chains into global networks of value creation."

Cannot be stopped by walls

To the question of whether there is a unique 'recipe for success' in northern countries, Dr Mittelbach finds no master plan for 'digital transformation' and again calls for the engagement of each and every company to be ready and willing to embrace innovation and change. "Combining individual strengths for everyone's benefit - this is what we should be aiming for. We can all learn, and in the end benefit, from each other. The goal is a win-win scenario for everyone involved," says Dr Mittelbach - stating a strong vision, and concluding: "Digitalisation knows no national borders and cannot be stopped by walls. This is why ZVEI supports the unification process at European level and a digital single market."

Lars Frelle-Petersen

CEO at DI Digital. DI Digital is the Danish ICT and Electronics Federation, under the Confederation of Danish Industries - representing companies in the IT, electronics, communications and telco industries - from dynamic entrepreneurs to leading global companies.

A customer perspective

"Digitalisation is growing in all types of businesses. The key is to understand your products in new ways - or more accurately - to understand your customers' perspective, and utilise the fact that digitalisation enables you to reach the entire world. The speed and versatility of the digital age challenges our conception of competitiveness and we must often look beyond our products to find true differentiation," says Frelle-Petersen.

While digitalisation is among the most important current corporate topics, Frelle-Petersen finds that it presents challenges for any company, including finding the right distribution channels, dealing with new platform economies, and attracting the right skill sets - and, like Dr Mittelbach, he sees one major threat: "In my opinion, cyber security is the single biggest challenge. Being at the technological forefront brings competitive advantages, but also involves an element of 'risk' - not just strategically, whether to be a leading innovator or a fast follower, for example - but also in facing potential threats with open eyes."

Sharing is key

Asked about top leaders' attitudes toward digitalisation, Frelle-Petersen emphasises that most CEOs know that they have to take the lead and change their company's mindset. However, they will approach the task in different ways.

"Some hold monthly inspiration meetings while others create a new company from scratch that is free to rival and rethink the existing business. The common denominator is that many companies are realising that collaboration and sharing solutions and ideas is key."

Frelle-Petersen uses distribution as an example. Let's say you need to distribute a piece of vacuum-packed meat, you need a strong collaboration between the chip producer, the meat producer, and not least the political system in terms of crafting the right legislation that enables smooth exchange of data and knowledge with as few barriers as possible. So, in many ways, digitalisation is a team sport, where it is important to find common goals and languages and recognise our own strengths and weaknesses."

He points out that this includes his organisation's members: "In Denmark, we are fortunate to have strong company cultures with skilled employees and short decision paths. On the other hand, we must never become complacent and think that we can succeed on our own. We must begin to realise that digital competencies are in extremely high demand."

A team sport

To succeed in a competitive landscape, Danish companies are realizing that digitalisation is a team sport



Robots in the canteen

Man and machine

There are new colleagues in town. As GPV surpassed revenues of DKK 1.15 billion in the 2017 calendar year, our two production sites in Denmark each welcomed a new colleague in the canteens: A Universal Robot that all employees were invited to freely programme to put forward new ideas on how to improve manufacturing processes.

It was a special day when the two robots arrived in our two danish sites, respectively, with employees lining up in the canteen to meet their new colleagues.

At GPV, robots have been used for many years, but with these collaborative robots, GPV not only wants to energise and inspire the employees but also to encourage them to invent new ways of automating processes in production to keep the company moving forwards. And the employees gave the initiative a warm welcome:

"I was thrilled when I found out we were having this new robot as it will help us shorten the leap from having a great idea to converting it into reality," explains Bjarne Jepsen, Programmer Supervisor at GPV Mechanics DK in Tarm.

The new robots are here to stay
Welcoming the two new collaborative robots has encouraged employees to propose several great ideas on how to use the robots in production - ideas that will now be implemented. This process involves selected employees examining the ideas to find out which ones will add the most value for GPV and the customers:

"With the new robots, we will be able to deliver an even better consistency and quality in our products. This is great, as it will help us be more competitive and improve our own and our customers' ability to accomplish more," Bjarne concludes.

It is fair to say that the collaborative initiative has been a success. Therefore, after implementing the two Universal Robots in production, GPV will bring in two new robots in the canteens in Aars and Tarm to invite employees to innovate more great ideas.

Innovation is in our DNA

At GPV, modern technology and innovation is in the DNA. Robots are already an integral part of the production process but the two new collaborative Universal Robots are the first of their kind to be used in an explorative and engaging way.

Programming the new robots is very intuitive, which makes it easy for employees to test ideas after just a short introduction. This comprehensibility has a positive impact on the ability to seize new, and so far undetected, opportunities:

"I think it is fantastic that all employees are involved in the continuing development of GPV. Because the production employees might recognize improvement opportunities from their everyday work procedures that engineers and specialists would not," explains Anette Jensen, AOI Operator of GPV Electronics DK in Aars.

➤ **The robots are like a new toy that not only adds extra spice to our working life but also helps every employee, and GPV as a whole, to learn new and valuable things.** ◀

AOI Operator at GPV Electronics DK in Aars,
Anette Jensen



Accomplish more

A unique customer perspective

GPV is an EMS-partner committed to working determinedly to ensure that our customers will accomplish more. We do this by building strong partnerships based on responsible and honest cooperation.

We acquire comprehensive insights into our customers' needs and industry, and manage advanced product processing - relying on our strong technological know-how.

Stable. Specialised. Global.

GPV is a global EMS-partner specialised within high-mix/low-medium volume EMS.

We are number three in the Nordics, and we have a strong box-build position in Europe. Our turnover in 2017 was DKK 1.15 billion / EUR 155 million / USD 190 million, and we employ more than 1,400 people divided between factories in Europe, the Americas and Asia.

Visit our website and learn more
> gpv-group.com



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