

Sander den Hoedt

CEO
Delmic

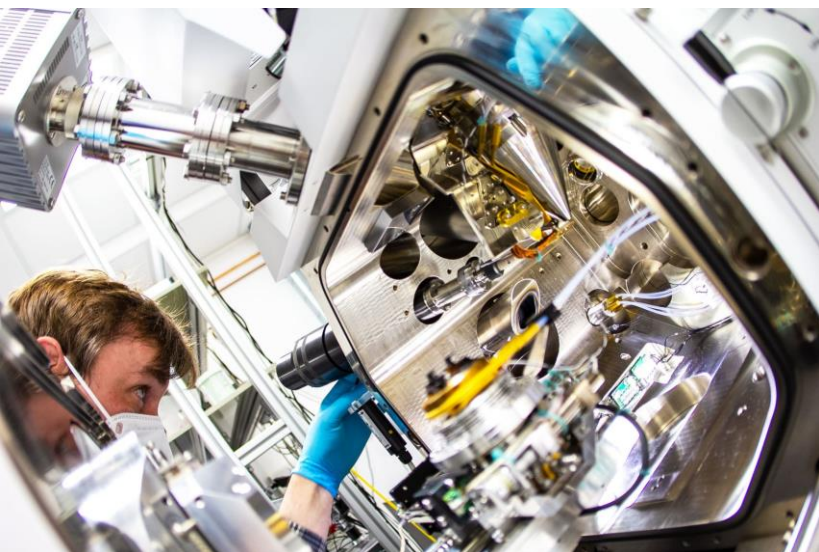


Image retrieved from: <https://www.delmic.com/en/>

COUNTY

The Netherlands

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DATE OF INTERVIEW

27.05.2021

METHOD

Zoom Interview

LENGTH

45 Minutes

INTERVIEWER

Amelie de Rooij

Delmic started operating in 2010 but was formally founded in 2011, and their goal ever since has been to create powerful and easy-to-use microscopy systems for researchers.

Sander started working in the company in late 2011. Before joining, the founding team was still working on several side projects and trying to make some money as they were coming straight out of university. In 2012, the team was devoted full time to growing Delmic, and they managed to hire their first employee through a small grant now known as the 'Take-off Grant' (previously known as the valorisation grant in the Netherlands).

From there, Delmic grew steadily until 2014 when a shareholder came on board. The team grew to about 15 people until about 2016 when the company struggled. Delmic had to let go of a lot of their R&D personnel and scaled down to about eight people. In 2018, Delmic pivoted and expanded after pitching potential direction for the company to their existing shareholders. Today the team has about 42 employees.

Understanding of Growth

To Sander, growth can primarily be defined in terms of revenue; the ability to sell with the option of scaling. Growth for Delmic could also be described in terms of organisational growth, where the company is scaling based on

investments. However, Sander's primary definition of growth is in the perspective of an attainable market.

NOTE

HEI = Higher education institution | SME = Small and medium-sized enterprise

Growth Strategies

As Sander describes, when the company started out, the team had little experience and understanding of market perspectives and growth strategy. They thought they would sell ten units of their product in the year and remain a small company. They started with a technology-driven mindset, simply thinking about selling their products somewhere. Only a few years after, they realised that if they strategically utilised their strengths, they could target a larger market.

Around 2014-2015, when the shareholder came on board, the company created a growth strategy plan looking at market perspective, new markets, value

proposition, product differentiation, and growth perspective, as the shareholder pushed them to be more ambitious.

For a long period of time, Sander felt that he was limited by the products and the market he was in. Having the shareholder on board helped him shift his mindset to be more creative and in realising that as a company, you can determine what you want to do and expand in any direction. Having the shareholder on board also helped with financing the growth and expansion plans, primarily, together with some grants, from the Dutch government and the EU.

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As a CEO, you need to be adaptive, but also invest in the company's sustainable organizational structure, as you cannot be involved in every project and decision making anymore.

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Transformation

According to Sander, the issue with growth is that the company continuously faces bigger challenges, such as managing a completely different and new team. As a CEO, you need to be adaptive and invest in the company's sustainable organizational structure, as you cannot be involved in every project and decision making anymore.

Simultaneously, the financial pressure becomes bigger, and the company requires additional investors. Hitting financial targets and other milestones become much more important as well.

Challenges from Growth

Through growth, the management team faces challenges almost across the board. In terms of suppliers, for instance, the company must make sure that they can suddenly increase their production volume and capacity, or increase their product quality.

But challenges also come at a personal level, where you need to ensure that you always think through everything the right way and that you can adapt to the needs of a changing organization.

Key Success Factors

For Sander, two factors are critical to the success of SMEs when experiencing fast growth. It is of paramount importance to have a team that is very adaptable and willing to constantly challenge the [industry] status quo. Such a team thinks about what needs to happen next and

what needs to be improved in the company.

The other key success factor is to have clear guidelines in place for the efficiency of procedures and processes.

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Main Needs

Sander describes that one of the main needs for SMEs during the phase of their growth lies in the quality of the training provided to the employees. For the Delmic team, courses that provide a broader perspective on scaling business and growth are particularly useful, especially those tailored to engineering and technology utilisation (not limited to software) for SME product development.

Courses on finance are equally important

for the Delmic team. Sander is interested in how to access enough capital liquidity, which is a big problem in the Netherlands.



Cooperation Partners

Delmic collaborates closely with AMOLF, an academic institute for fundamental physics in Amsterdam, the Delft University of Technology, and also has new collaborations in Germany, the US, and, to a lesser extent, China. These collaborations are very much embedded in the DNA of the company, as they almost primarily sell their products to academics.

On the other, Sander finds it harder nowadays to maintain such collaborations, as on one hand, he has less time to coordinate these collaborations, and on the other hand, the pace is different in academia, who tend to have a longer view.

Cooperation with Universities

Collaboration with academia is primarily on fundamental research, so a multi-year view on partnerships is typical for Delmic. However, funding is a challenge in academia. Since the company is not a small start-up anymore it receives less funding. In addition, a huge commitment is required from companies collaborating with academia, particularly in the Dutch system, where companies are regularly asked to put 100k euros into projects, but as a scale-up, the company does not yet have that kind of money.

Additionally, for Sander, the in-between phase of moving from a start-up to scale-up is challenging for SMEs. During this phase, SMEs are forced to collaborate with companies that would normally be considered as their competitors. The phase also makes it impossible for SMEs to collaborate in certain funding rounds for instance.

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The in-between phase of moving from a start-up to scale-up is challenging for SMEs; during this phase, SMEs are forced to collaborate with companies that would normally be considered as their competitors...

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Growth Training Needs

Digitalisation is not critical as most processes are scalable, and available through the cloud. In terms of training needs, besides scalability coaching, some networking sessions around a specific topic/challenge with a speaker could be beneficial; simply also making new friends as being an entrepreneur can be a very solitary exercise.

The SME grant - provided by the EU- provided coaching which has been beneficial as well.

Lucía Abad

IDIP Sales Manager
IDESA/IDIP



Image retrieved from: <https://www.idesa.net/>

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DATE OF INTERVIEW
11.06.2021

METHOD
Zoom Interview

LENGTH
45 Minutes

INTERVIEWER
A. de Rooij & M. Ceccarelli

IDIP was created in 2015 through the merging of two former departments of IDESA: Industrial Plants and Field Erections and Shutdowns (both created in 2012). Although a subsidiary of IDESA, IDIP had its own structure and management.

IDIP aimed at first to include Turnaround execution, Engineering Procurement and Construction (EPC) projects, and Multidisciplinary Engineering Projects in its services portfolio. Overtime, IDIP services and product portfolio evolved until the current situation, in which we can identify four main areas: (1) turnarounds, including execution, PMC services and supplies, (2) modules and skids, (3) construction services, including multidisciplinary projects, and equipment

termination and installation, and (4) tank singular projects.

IDP's growth trajectory has undergone a substantial increase since its creation in 2015, experiencing more than 400% growth during its first three years (2015-2017). Between 2016 and 2019, IDIP's absolute growth rate was set to 1254,7%, which allowed the company to be ranked 110th in the Financial Times' Top 1000 Ranking of the fastest-growing companies, and 7th in out of the 54 European companies that entered the ranking in Spain.

Understanding of Growth

IDIP understands growth as an organic and steady process that develops over time. The company aims to engage in more projects in the future and to have control over them. For IDIP, the goal is not to achieve great results one year but to be unable to grow from there, but rather become a key long-term partner for its customers. In Lucía's view, the

only way to achieve this is to steadily grow over the years. This means gradually increasing the number of projects and staff supporting IDIP projects and its clients, while not neglecting their quality standards and identity, to ultimately increase turnover.

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Similarly to other companies, the growth path of an engineering company depends more on its operating environment rather than its status as an engineering company. If the environment is active and financially stable, there will be more projects and these companies are expected to grow.

According to Lucía, there are five crucial aspects of SME growth. The first one entails the *adoption of an entrepreneurial mindset*. Developing an entrepreneurial mindset is necessary to achieve the goals set by the company. It is done by setting milestones, making decisions and identifying lessons learned. Next is an *innovation management scheme*. In order to grow, it is completely necessary to be trained in innovation management to develop new ideas that lead to new products, services and solutions. Third, *knowledge of how to access capital* is essential. For Lucía, SMEs usually have limited resources and thus, getting

knowledge on the different ways to access capital and financing is fundamental for being able to opt for larger projects that help to promote the growth of the Company. Fourth, it is essential for the *business model to embed innovation in its strategic goals* and follow the trends of the market? how clients modify their behaviour to identify new opportunities, and then adapt our business to the same. Finally, *internationalisation* is one of the most important factors in the growth of an SME, including awareness of opportunities on accessing finance and a skilled workforce. In most cases, growth is linked to broadening the action area of an SME and knowing the market you are entering, its legal framework, potential local partners, or how to establish (or not) in that market are key factors to define the roadmap to that growth.

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Finally, internationalisation is one of the most important factors in the growth of an SME, including awareness of opportunities on how to access finance and a skilled workforce.

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Growth Strategies

IDIP is the result of new market developments and diversification of IDESA. IDESA expanded its market after understanding that its clients are demanding not only vessels, but also additional services such as on-site installation, replacement during turnarounds or installments on skids, and connection to the plant. This was the reason why IDIP was born.

Additionally, IDIP is continuously seeking to increase its market share by increasing its action ratio. The company started with small projects in Spain and has expanded with projects in Europe, Asia, Africa and America. Product development is a constant in IDIP's sector. Looking at the future, the energy transition is a reality to which IDIP needs to adapt by entering new sectors such as hydrogen, CCS or LNG Bunkering.

Motivators & Challenges for Growth

IDIP wants to become a key player in the sector and continue providing solutions to its clients. IDIP follows the example of IDESA, which has become one of the most important suppliers of PV in the world since it was created in 1993.

The main challenges to growth include

financial challenges and the lack of human capital concerning the increasing demand of the company's services/products, clients' growth, the presence of competitors in the market, and the need to increase staff and to achieve a steady level of growth.

Transformation

IDIP strives for steady and controlled growth as it wants to avoid an escalation that would cause the company to lose control of quality of its services. The staff

has been increasing steadily through the years, allowing them to have the necessary time to understand the company's philosophy and culture.

Key Success Factors

Lucía claims that the key success factors are reflected in the company's values; client-orientated, innovative and technological capabilities, reliability, strict ethical conduct, safety compliance, respect for the environment and very high quality in the project's execution. IDIP does not exclusively pursue economic profit, as it also wants its clients to experience the

company's real performance and inspire trust for future projects. Furthermore, Lucía reminds us that steady and controlled growth is key success factor. Through the years, IDIP has not been trying to reach the 'next level' of business until growth has been consolidated. This allows the company to maintain the quality standard.

Main Needs

Undoubtedly, infrastructure, skills, management, access to finance are relevant needs for SMEs. It is the sum of these, among others (strength of the activity sector, industrial and labour policies, established supply chain, etc.), that allow an SME to grow continuously. In any sector of activity, but especially in one as critical as IDIP's sector, companies cannot afford to fail. It is the need to gain credibility that makes it possible for SMEs to grow in the client portfolio and

therefore increase sales. Once that dynamic has started, it must be accompanied by an increase of staff, resources and, depending on the type of growth, skills.

On the one hand, there is a need to increase sales by reaching more clients and expanding IDIP's action area which, on the other hand, needs to be accompanied by an increase of staff, resources and, depending on the type of growth, skills.

Business leader importance

According to Lucía, one of the qualities that contribute to her being a leader is her ability to *mobilise a network*, which depends on the company's reliability with customers, suppliers, employees, etc. Of course, maintaining IDIP's current network and continuing its expansion in the future is a key to its competitiveness and sustainability. Additionally, as a leader, it is *fundamental to identify opportunities* and also to define which ones can offer the best results to IDIP. Additionally, IDIP wants to identify opportunities that also offer relevant advantages to the IDESA Group, regarding the manufacture of certain supplies. IDIP believes in *team*

leadership and the sum of effort and teamwork. As Lucía states, true leadership lies in empowering each member of the organisation to feel useful and to act as leaders themselves in their daily tasks. The good of the whole must be above the benefit of the parties, and true leaders must avoid being protagonists, guiding the company's strategy in the medium and long term. Finally, *each member of the staff should be extremely competent*, which simplifies the decision making of the management team. They should also have unique abilities and experience, and the leader should be able to manage and coordinate them.

Cooperation Partners

The company has been very active in collaborations on all fronts. The collaborations established have been very positive for all parties, taking advantage of the best of each of the parties: industrial, scientific and university. More specifically, IDESA collaborated with Technological Centres, such as IDONIAL in Asturias, AIMEN in Galicia, and TECNALIA in País Vasco, as well as with company clusters, like METAINDUSTRY and SMART EUREKA CLUSTER.

Cooperation with Universities

IDESA (and IDIP) are collaborating with the local university by facilitating student internships at the company. The collaboration has historically been a success and helped a few people at the university to start their careers at IDESA. Additionally, the company collaborates with some international Universities based in Coimbra, Modena and Athens in several R&D projects.

Overall, cooperating with universities allows the group to have a different point of view. As the staff is involved daily in the industry, it has a more pragmatic approach to innovation. As Universities are more focused on theoretical aspects and research activities, collaborations lead to brand-new perspectives, which themselves lead to innovative solutions. In particular in collaboration with technological centres, they have developed new welding control processes, new solutions for coatings or optimisation of processes by means of digitalisation.

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Growth Training Needs

IDIP growth has been closely linked to the expansion of the company services portfolio. There was a clear need to train IDIP personnel in new skills relating to new IDIP activities, with special regards to on-site safety.

Furthermore, the company needs to be up to date on safety standards governing IDIP projects. For Lucía, the company also needs to be aware of market trends, being up to date with energy transition, and new technologies. In general, IDIP places special attention on multidisciplinary-skill training sessions, which enable problem-solving, decision making and self-management mentalities. The most needed trainings according to Lucía are for digitalisation skills, new technologies in the market, legal and management training, as well as international growth.

Joe English

Head of Enterprise
Meath County Council



Image retrieved from: <https://www.meath.ie/>

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DATE OF INTERVIEW
25.05.2021

METHOD
Zoom Interview

LENGTH
52 Minutes

INTERVIEWER
Cameron McCoy

Joe English has been the Head of Enterprise at Meath County Council since 2015. He is a small business, start-up, and development professional with wide experience in managing pan-European innovation projects.

Joe received his B.E. in Electronic Engineering in 1980 and his MSc in Innovation Management in 2015. Joe previously worked as a software engineer at a large multinational company, at a

start-up that created computing machines, and later co-founded his own company that produced automated vision inspection tools for industry.

After selling his company and moving back to Ireland, Joe's local government offered him a position helping start-ups in the county get on the route to growth. In his current role, he has also worked with the European Commission on small business development and small business growth.

Understanding of Growth

There are two ways of looking at SME growth: the government in Ireland defines SME growth as an increase in the number of employees, financial turnover, and potential for export.

Growth can also be described as SMEs growing their product line or their service to include either a wider product offering or a wider potential client base. This ensures that the SME is not only in a small niche market, giving the business some defence against risks and competition. This point of view looks at growth in terms of getting a company to a point where they can "survive and thrive".

In terms of government support for SME growth in Ireland, two funds can help SMEs grow: the Innovation Grant and Enterprise Ireland's Agile Innovation Fund. These funds supply both hard and soft support for businesses to help them get through the innovation process. Hard (financial) support is targeted at the smaller companies that lack the money and time to produce the innovation themselves. Joe identifies such companies that have the potential to develop and undergo an innovation process. SMEs with potential are helped to develop a realistic plan to get an innovative product to the market.

NOTE

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Alternatively, soft support provides training and short-term, one-to-one mentoring use experts in management and technology. These help the SMEs with any issues they are experiencing and allow them to be more targeted in their approach.

Additional support for SME growth is provided by Meath Local Enterprise Office, which offers more tailored training for SMEs.

Growth Strategies

According to Joe, engineering SME growth is about constantly looking to go further and do more. This includes looking for new products, services or clients.

Joe identifies two main growth strategies, the Meath Economic development strategy and the Local Enterprise Office's strategy. The Economic Development Strategy for Co. Meath aims to create 7500 new jobs in the city over the lifetime of the plan, and approximately 1000 new jobs a year. The economic strategy consists of three pillars-economics, spatial planning and marketing, to attract and support business in order to achieve the ambitious, yet achievable 7500-job target. In doing so, the Council is actively engaging with and building relationships with businesses that have a role in economic development, harnessing talent and creating attractive living environments.

Further, the Meath Local Enterprise Office (LEO) provides an information and advisory service to new and existing entrepreneurs on all aspects of setting up and running a business. The Meath LEO provides support and services for those looking to start, grow and develop a business in Meath. The office also acts as a source of information for all state enterprise agencies and other initiatives, providing information on enterprise incentives, business structures, taxation, regulatory obligations, market research, etc. Services to local businesses can include the provision of business information and advice; business skills training; mentoring support; financial assistance; and management development programmes. The LEO also spearheads various initiatives to encourage and promote enterprise across the County working with business groups, community groups, various other local and national bodies.

Motivators & Challenges for Growth

Businesses often decide to grow out of fear that they will lose their competitive edge.

Yet, fear can also be a demotivator of a small company. It is important to get the SME's owner-manager out of their comfort zone to think of possibilities for the future.

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Engineering SME growth is about constantly looking to go further and do more. This includes looking for new products, services or clients.

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Business leader importance

Having good leadership is a key success factor. Successful business leaders tend to have a good grasp of their industry. They have open personalities and are receptive to suggestions and ideas, especially from their employees and external contributors. They also have a strong sense of self-awareness and are open to admitting faults.

Cooperation Partners

The Meath Local Enterprise Office works with local chambers of commerce and the businesses in the region. Meath County Council also works with other government bodies, for example the tourism board to ensure that companies who are involved in tourist services or products get the support they need.

Cooperation with Universities:

Through Innovate Ireland's Agile Innovation Fund, which provides funding and training assistance, many experts are brought to help SMEs. These experts are either in the technology transfer office, or academics themselves. The Meath Local Enterprise Office makes SMEs aware of the help that they can get from universities, and also refer the SMEs that need advice to the relevant university staff members.

Opportunities for university-business cooperation

There are currently not enough major projects going on between universities and businesses. The different timelines that universities and SMEs have, and the amount of funding required, means that sometimes collaboration between the two can be difficult. Funds such as the Agile Innovation Fund can help bring necessary resources from the university to the company.

There are also possibilities for collaboration between universities and SMEs in education and training of SME employees. It is also useful to direct university resources to the business as a whole instead of a single person. Employees can receive short term trainings and courses that can be tailored to the needs of the business. It may also be beneficial to work with groups of owner-managers who are, for example, working in a particular technology field and create specialized trainings for them. Companies would be more interested if they see a direct benefit to further themselves.

When SMEs and universities do collaborate, it is important to set expectations early for a relationship. Meath Local Enterprise Office clients are made aware of university activities that could benefit their businesses.

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The different timelines that universities and SMEs have, and the amount of funding required means that sometimes collaboration between the two can be difficult

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Growth Training Needs

There may be a need for training of SMEs to be able to identify other businesses' needs. There is a growing opportunity for businesses to develop their own products and services to fit the needs of other companies.

There may be an opportunity where smaller businesses that have useful technology offer their knowledge services to other companies that do not have that knowledge or may not be able to afford to hire other experts in that area. An example of this may be ensuring that when an SME offers new technology, it also offers the backup service and support for the technology.

As technology gets more complex, and as manufacturing and services become more automated, there is going to be a different relationship between service providers, product providers and customers, one that is more than likely going to be longer-term. There is a great opportunity for the service provider to have a recurring revenue stream.

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There may be an opportunity where smaller businesses that have useful technology, offer their knowledge services to other companies that do not have that knowledge or may not be able to afford to hire other experts in that area.

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Álvaro Montero

Senior Innovation and Growth Specialist
Coventry University Enterprises



Image retrieved from: <https://www.coventry.ac.uk/business/our-services/>

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DATE OF INTERVIEW
27.05.2021

METHOD
Zoom Interview

LENGTH
45 Minutes

INTERVIEWER
A. Zinovyeva & J. Villagran

Alvaro has a mixed background that has granted him extensive international experience, having worked both in the United States and Europe. He is currently working in the UK, where he started working on Research and Development activities four years ago.

Alvaro provides innovation and growth services for SMEs that are mostly funded by Innovate UK, the national governmental body for innovation in the United Kingdom. Through these services, he helps

SMEs in their growth journeys that go further than just obtaining funding, covering other growth possibilities such as internationalisation, product commercialisation, collaboration opportunities or stakeholder's identification.

Alvaro also has experience in business development in different sectors, which he believes to be one of the key elements that every SME - with a certain degree of R&D in its model - needs to address.

Understanding of Growth

To Alvaro, growth means an increase in turnover, mostly revenue from sales, as well as experiencing an increase of resources to respond to those rising sales. There are, of course, other ways of growth that are not strictly on the financial side. For instance, adding new products and services to the company's portfolio or simply increasing the company's capabilities and the offering to their clients. In Alvaro's opinion, growth is more vertical than horizontal, and it affects sales and resources (people, equipment, etc.).

In terms of defining a timeline for growth, this is not an easy task to determine, as it depends very much on each company's goals. Some companies aim to increase their turnover by 15-20% a year, while other companies aim to scale and become a 300 person operation.

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Engineering SME Growth

Ways to engineer SME growth depends on the company. Established companies do not usually experience exponential growth, but rather rely on their clients and brands, and prefer a model that allows them to grow steadily. Start-ups, however, are more likely to experience exponential growth, since they get more funding and

take bigger risks.

Based on Alvaro's experience, he does not see rapid growth in engineering companies very often, and when he does, it is a product of innovation and tends to be linked to R&D grants.

Growth Strategies

Alvaro identified a number of growth strategies, including R&D grants, collaboration with other companies and organisations, internationalisation, and scaling by trying to reach new verticals with the same solution. For his latter

strategy he pinpointed that if a company has developed a solution for a specific sector and that solution applies to other areas, "why not pursue it?"

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It is important to understand the current situation of the company and to make sure, before undertaking a big project that there is capacity, skills, willingness, and vision to accomplish each goal.

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Transformation

To Alvaro, transformation potential is clearly a matter of resources.

Companies need to first look at their culture and their team to understand what they have and what they are lacking. "Does the company have the right people with the right skills in the team to move towards the agreed plan of growth? Does the company have a strong financial position to take certain risks to grow?" The list of questions goes on, he adds.

The second step would be, then, identifying who of their stakeholders the company should involve or rely on when trying to undertake its growth plan. Stakeholders will, of course, depend on the type of growth a company is trying to achieve.

Finally, if the growth is intended to happen through Innovation and R&D, then the

company needs to identify potential universities that could support it. Following this, the company could catalyse the creation of a network and find other relevant partners, clients or projects to add to this network.

In summary, it is important to understand the current situation of the company and to make sure, before undertaking a big project, that the capacity, skills, willingness, and vision exist to accomplish each goal. Alvaro puts the example of a 57-year-old member of the senior management team of a company who probably is not willing to adapt to the time difference in Australia. It needs to be a collaborative effort and the whole company needs to be ready for that, especially in terms of passion and energy.



Challenges from Growth

According to Alvaro, *before the transformation takes place*, a number of factors should be met, such as the financial capacity to face new risks; having a team that is ready to embark on the growth process; the identification of the profiles within the team that will drive the growth with passion; reliance on the stakeholders to support the company in the growth process; understanding and capacity to communicate the added value of the offered solution to whomever the company is talking to; flexibility, which is not always easy for a company with needs, tight deadlines, and other pressing forces; and maintenance of normal operations (clients, sales, bills, etc.) while you are preparing or moving towards a new stage of seeking growth and taking risk.

Subsequent to the transformation, the ability to consolidate and to re-structure the company based on that is a key factor. However, the process for that depends heavily on the main driver of growth. In particular, a company that has gone abroad and entered the international

market now must now deal with customs, different languages, cultures and time zones, new clients, etc. All those factors need to be understood and integrated within the operation of the company. Additionally, if the main driver of growth was R&D and a company has been working with a university, part of the knowledge needed for R&D sits at the university. The company might not have the full picture of the technology it wants to exploit, which means a team with the right knowledge is needed to really take advantage of the opportunity. Moreover, when talking about approaching new sectors, it might be worth it to bring business developers with 10-15 years of experience in those sectors to help the company consolidate its position in that market.

A general challenge, regardless of the driver, would be to understand the transformation and bring it “in-house” in order to reduce the number of third parties on which the company depends.

Key Success Factors

Digitalisation is clearly one of the key success factors for SMEs. Many digital tools improve performance and provide knowledge of the operation of a company, and not many firms use the tools. Looking at the funding that digitalisation-related initiatives get, both at the European and

national levels, one can see the importance of the topic. This is particularly true in the case of engineering, where many of these tools can help a company gain a competitive advantage in cost, productivity, and more.

“ ***Digitalisation is clearly one of the key success factors for SMEs; many digital tools improve performance and provide knowledge of the operation of a company, and not many of them use those tools.*** ”

Business leader importance

Successful business leaders tend to have a good grasp of their industry. They have open personalities and are receptive to suggestions and ideas, especially from their employees and external contributors. They also have a strong sense of self-awareness and are open to admitting faults.

Cooperation with Universities

Well established companies, especially those in the fields of aerospace and automotive engineering, tend to be more connected with universities. Alvaro mentioned that this is usually linked to grant schemes that companies have in their countries that “force” them to partner with universities to be eligible to receive funding.

Otherwise, it is very rare to see companies proactively approaching universities solely because they think that a partnership will help them evolve and grow. One exception to this would be companies who have senior management who come from academia and are more willing to bridge that gap or see fewer obstacles to do so. In his experience, people working in universities are usually focused on publications and research outcomes, and do not really understand the business side of things. Thus, the timing of a university might be very different from the timing of an SME, which is a major barrier for collaborations between universities and SMEs.

Opportunities for university-business cooperation

Grant funding is starting to disappear little by little and the world is moving from grants to loans or blended options. Alvaro thinks that commercialisation is going to take over R&D and grants, and now due to the pandemic everyone, including universities, is losing money. Therefore, universities should change their focus towards having a proposal where they cooperate with SMEs for a certain amount of money. The main obstacle here is to turn senior researchers who have spent their whole lives in university contexts into commercially driven researchers with the right mindset to work with SMEs.

If universities were able to undertake that transformation and offer R&D services to SMEs, new generations of researchers would benefit greatly from new incentives, including economic rewards or higher salaries. This would also create new intellectual property for the universities. Alvaro thinks that all universities should start moving to a more sustainable system where they do not rely on government funding and become more autonomous in their operations and actions. Thus, a change of mindset and culture within the university would be the key element of success for greater cooperation between universities and SMEs.

Another opportunity for collaboration has to do with the fact that SMEs are less aware of how to better exploit their IP. To exploit this IP, one of the key steps would be understanding what the current state-of-the-art of a certain technology is. Companies usually do not possess this understanding and they could potentially collaborate with universities, instead of hiring an IP attorney or a specialist in IP, to get advice on the potential development of their own products.

Also, many SMEs who struggle with finding the right profiles or do not have access to specialised candidates could see universities as talent pools. However, SMEs usually do not even think of approaching a university when looking to recruit. That would also be very beneficial for the universities, which would see their employability rates rising.