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Growth opportunities Strategies for Swiss manufacturing companies

A joint study by Deloitte and BAKBASEL
November 2015

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Introduction

Dear reader

The aim of *Growth opportunities – Strategies for Swiss manufacturing companies*, which has been produced jointly by Deloitte and BAKBASEL, is to give a detailed overview of the **opportunities and strategies for growth in Swiss manufacturing companies**.

With assistance from SWISSMEM, we surveyed around 400 companies in the Swiss mechanical engineering, electrical engineering and metalworking (MEM) industry, asking them about the opportunities they see for growth. Face-to-face interviews with representatives of the MEM industry and official agencies provided more in-depth information and validated our initial survey findings. We also analysed opportunities for growth at both macro and micro economic level. The strategies identified by the study represent companies' responses to a more constrained economic environment and global competition. They are intended as key starting points for you as decision-makers as you shape your company's future and chart your path to growth.

The study follows on from three previous Deloitte studies: the *White Paper on Swiss Manufacturing Industry* (2012), *Innovation reinvented* (2013) and *Industry 4.0* (2014). Innovation and the use of 'industry 4.0' solutions remain central to any discussion of growth.

Also central are the questions of how, where and when companies target growth. We have therefore formulated six key strategies that will enable your company to grow in the current economic climate. These six growth strategies are:

1. **Driving customer integration:** making customers' needs integral to corporate culture; developing customised products and services to generate competitive advantage.
2. **Going global:** identifying the sales markets that promise the greatest potential for growth for your company in relation to the risks they involve; localisation strategies for further growth.
3. **Developing new services:** developing additional services and a unique 'services business' with a growth path that encompasses both hardware and brainware; involving customers as partners as a way of differentiating your company from its competitors.
4. **Innovating beyond products:** developing new value propositions and disruptive innovations that go beyond the conventional understanding of product and process innovation; ways of innovating in earnings models, marketing and sales channels, and customer engagement.
5. **Growing inorganically:** developing a company-specific acquisition strategy to enable your company to access new markets, widen product ranges, and fill technology gaps or gaps in supply chains and production processes; acquiring vital market share by streamlining your portfolio or through joint ventures.
6. **Leveraging operational excellence:** driving the optimisation of operational processes and becoming global leaders in operational processes as the basis for growth; continuous improvement through adaptive organisation.

We hope that this study will be a major contribution to the discussions within your company and help you define your future growth path.

We would like to thank SWISSMEM, the representatives of official agencies and the management of the MEM companies that took part in our survey and interviews for their views and comments on opportunities for growth.

We hope you enjoy reading the study and look forward to your feedback.



Dr. Ralf C. Schlaepfer
Managing Partner
Head of Manufacturing Industry
Deloitte AG



Martin Eichler
Member of the Executive Board
Chief Economist
BAKBASEL

Executive summary

- **The business outlook:** The strong increase in the value of the Swiss Franc and companies' strategies for adapting to it are the main issues confronting Swiss manufacturing this year. The slowdown in economic growth in the major emerging economies is a further challenge for the sector. The MEM industry is now facing contraction, while manufacturing as a whole is holding its ground. The outlook for medium- and longer-term growth over the next ten years is brighter, however. Global growth prospects remain unaffected and, at +2.9% p.a., are in line with those for the last ten years. Swiss manufacturing is benefitting from this optimism and looks set to achieve average annual growth of 1.6%. The industrialised countries, whose economies are currently growing at 2.0% per year, are likely to return to making a major contribution to global economic growth over the next ten years. Considerably higher growth rates are expected in the US (+2.5% p.a.). The emerging economies also look set to achieve above-average growth over the next ten years (+4.3% p.a.), although that rate will be lower than the 6.0% annual growth achieved over the last ten years.
- **The strong Swiss Franc and volatility:** In its assessment of risks, Swiss manufacturing continues to focus on trends in exchange rates and the volatility of economic growth in its export markets. Swiss MEM companies have taken a range of measures to tackle the continuing strength of the Swiss Franc, including purchasing in the eurozone (77% of those surveyed), increasing process efficiency (70%), implementing rigorous product cost management (70%), cutting prices (69%) and accelerating innovation (63%). Almost half of those surveyed (46%) also report relocation and/or developing new business abroad as longer-term strategies. To enable us to quantify the extent of this volatility, we have calculated both a baseline scenario and a negative alternative scenario for economic growth over the next few years. Under the alternative scenario, which is based on substantially lower investment activity in the emerging economies, the rate of growth in the industrialised economies would slow markedly, with global growth of just 2.3% as against 2.9% under the baseline scenario. The alternative scenario would see Swiss GDP growing by 0.25 percentage points less per year than under the baseline scenario, producing a cumulative decline in GDP of around 3% by 2025. Switzerland's MEM industry would lose substantially more growth because of its high dependency on domestic investment and international demand.
- **Other factors hampering growth:** Alongside exchange rate implications and economic volatility, which currently dominate companies' concerns and are cited as risks by 67% and 54% respectively of those surveyed, Swiss MEM companies also perceive the global intensification of competition (53% of those surveyed), new competition from emerging economies (43%), a shortage of talent (32%) and geopolitical risk (32%) as factors likely to hamper growth over the next three years. Other risks cited include increasing barriers to trade and growing regulation of the domestic Swiss market. Implementation of the mass immigration referendum result and uncertainty surrounding the bilateral agreements with the EU are likely to exacerbate the existing skills shortage in the Swiss MEM industry. If further aspects of bilateral agreements are called into question, barriers will go back up, with a direct impact on competitiveness of the Swiss manufacturing industry.
- **Driving customer integration:** The Swiss MEM industry's core markets, including Germany, the US and China, still have the potential to grow and will continue to be crucial over the next ten years. Against this backdrop, 67% of those surveyed want to grow with their existing customers and support them as they expand into new export markets, while 83% also say they plan to step up efforts to acquire new customers. Sixty-three per cent see customisation and cooperation on product and services development as ways of involving customers and creating new opportunities for growth. Having a close relationship with customers, identifying their needs and preferences, and collaborating closely with them in the areas of development, production and downstream processes are elements in long-term company-wide efforts for generating competitive advantage.
- **Going global:** The growth potential of new geographical markets will become increasingly important. The euphoria about growth rates in Russia and Brazil that dominated companies' strategies just a few years ago has now faded markedly, and current prospects are disappointing. However, India, Indonesia, Turkey and Vietnam are forecast to continue to offer substantial potential for expansion. More than half (57%) of companies surveyed believe that expanding into new geographical markets will be a major factor in their own growth, while 20% expect product localisation to become increasingly important. Successful global expansion must be based on identifying the most attractive markets, knowing local needs and adopting the right market entry strategies, including forming strategic partnerships, running own marketing and sales companies, implementing mergers and acquisitions, and expanding manufacturing capacity.

- **Developing new services:** Almost half (47%) of those surveyed see the development and expansion of services business as a key growth strategy. Old service models, such as the commissioning, maintenance and repair of plant, will increasingly be replaced by new services. Meanwhile, add-on services (such as consultancy and customisation), condition monitoring and predictive maintenance, a move away from sales and towards “permission for use” (that is, a shift from CAPEX to OPEX), and new integrated service models will become increasingly important. Identifying the service needs of customers, working with customers on development, and providing the necessary finance, resources and skills for industry 4.0 services are some of the measures that will generate steady, long-term cash flow in a new services model.
- **Innovating beyond products:** Switzerland’s leading role in the field of innovation is not unassailable, and other countries are increasingly gaining the edge in innovative technologies because they are able to invest in greenfield sites. Swiss MEM companies are strongly export-oriented, and because wage and general costs are high in Switzerland, these companies face a huge challenge in strengthening a “created in Switzerland” brand. The country cannot compete on price and cost alone, even though increasing use of robots in factories has the capacity to help bring down costs. More innovation, and different kinds of innovation, may help here: 45% of those surveyed expect development of new value propositions to be a major factor in their future growth, with a particular focus on product and process innovation. Increasing emphasis is also being placed on innovation beyond the traditional areas, for example in services, marketing and distribution. Disruptive innovation and exponential technologies also play a key role. Deployment of the right finance, resources and skills, along with careful management of innovation, will determine the future success of innovation and global competitiveness.
- **Growing inorganically:** The strength of the Swiss Franc has to some extent put a brake on acquisition activities in the Swiss MEM industry and has reduced domestic transactions. However, the stability of the strong Franc has also boosted purchasing power abroad, making it more attractive to acquire foreign companies. Nearly a quarter (24%) of those surveyed believe that growth through mergers and acquisitions will be important in future, with a further 40% emphasising alliances and partnerships. The drivers for such activities include filling technology gaps, acquiring market share, and expanding into adjacent product areas and new geographical markets. The keys to inorganic growth include securing the right finance, resources and skills, identifying sector differentiation, having target-oriented acquisition strategies and objectives, and adopting clear implementation and integration processes.
- **Leveraging operational excellence:** The Swiss MEM industry continues to under-perform its international competitors in terms of labour productivity, leaving scope for improvement. Swiss MEM companies also have some catching up to do in terms of optimising their operational processes. Nearly a third (32%) of those surveyed acknowledge that creating solid platforms for operational excellence will be a major factor in achieving growth. Corporate programmes continue to focus on production, procurement/purchasing, and warehousing and logistics. Lean production, automation, outsourcing and offshoring/nearshoring are also strategically important. In the past, optimisation has specifically targeted blue-collar labour areas, but the focus is now shifting to white-collar areas. Identifying further potential for optimisation, reducing complexity, avoiding unnecessary activities and waste, and tackling areas that have traditionally been taboo – for example a willingness to slaughter some ‘sacred cows’ – are now essential to create a solid basis for further growth.

About the study

This study discusses the current challenges and the potential for growth within Swiss manufacturing and its companies. The study identifies risks and sets out strategies for company growth. It also illustrates how companies can build on their existing strengths to achieve long-term competitiveness in an environment often focussed solely on quarterly results.

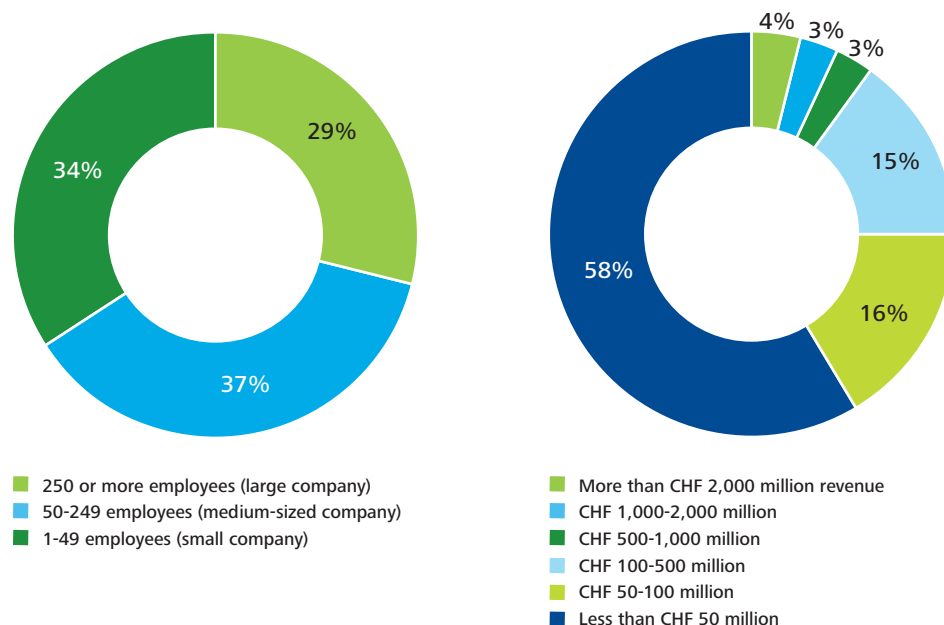
The focus of the study is Switzerland's mechanical engineering, electrical engineering and metalworking (MEM) industry, which is the largest industrial sector in the Swiss economy and accounts for almost half of what is generally understood as the Swiss manufacturing industry¹. The MEM industry includes metalworking, mechanical engineering, electrical engineering/electronics, precision instruments and vehicle manufacturing.

The study is based on three analytical components that generate the strategies for growth:

1. Macro and microeconomic analysis of the potential for growth within Swiss manufacturing generally and Swiss MEM companies more specifically
2. A survey of Swiss MEM companies' views of current risks and opportunities for growth
3. Face-to-face interviews with managers from companies in the MEM industry and representatives of official agencies.

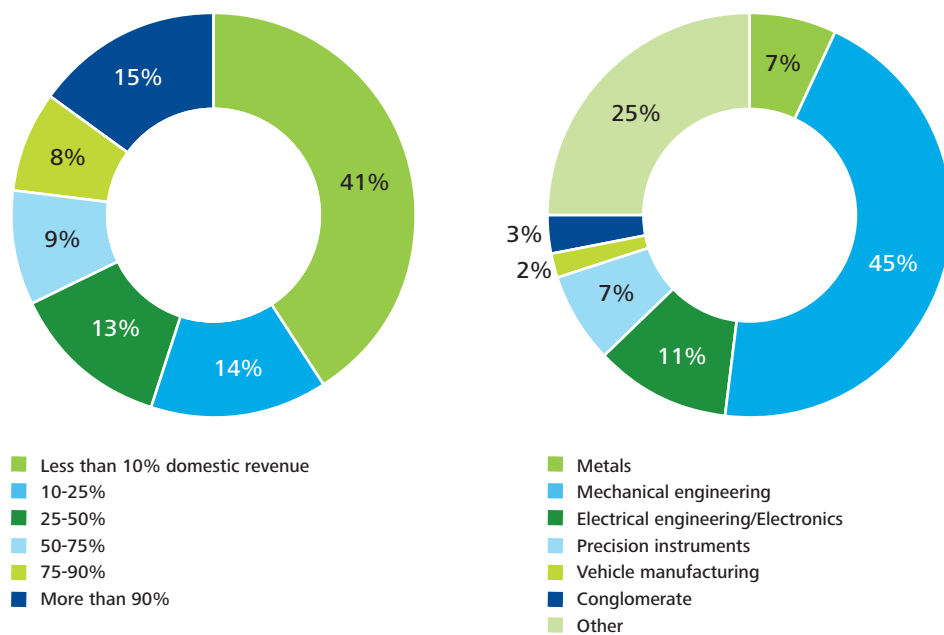
The survey was conducted in June and July 2015, with 393 Swiss MEM companies of differing sizes and from all sectors taking part. A little over two-thirds of the companies surveyed were small and medium-sized companies (SMEs), with large companies making up just under one-third (see Chart 1).

Chart 1. Swiss MEM companies surveyed, by size of workforce and revenue²



The majority of the MEM companies surveyed are strongly export oriented: 55% of them generate less than 25% of their revenue in Switzerland (see Chart 2). Companies from the mechanical engineering sector make up the largest group of respondents (45% of the sample), followed by electrical engineering/electronics (11%), metalworking (7%) and precision instruments (7%).

Chart 2. Swiss MEM companies surveyed, by domestic revenue and industrial sector³



Between August and October 2015, we also conducted face-to-face interviews with representatives of SWISSMEM, the Swiss federal government’s Commission for Technology and Innovation (CTI), the Swiss State Secretariat for Economic Affairs (SECO), and managers from ABB, Bühler, Robatech, Schlatter, Schmolz + Bickenbach, Schindler, Sulzer and other MEM companies. Statements made by representatives of MEM companies that did not wish to be named or to have statements attributed to them have been anonymised.

1. The background

1.1. Business outlook

We compiled our overview of the business outlook for the Swiss MEM industry from macroeconomic **models of economic growth** and a survey of the **general outlook for Swiss MEM companies**. A combined independent and self-assessment of this kind enables a comprehensive and accurate picture to be built up of the business outlook for the Swiss MEM industry.

Economic forecasts 2015/16

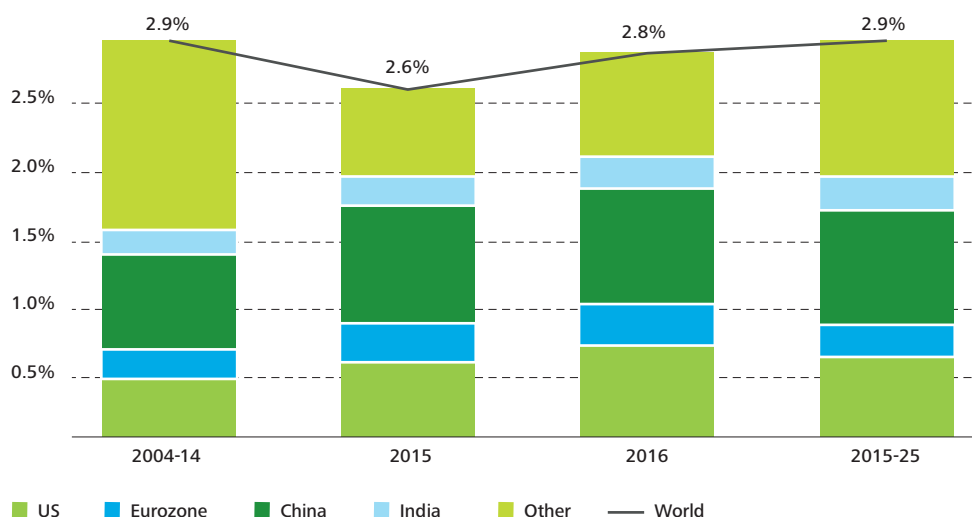
The **global economy** remained subdued in the first six months of 2015. There was a modest upturn in the eurozone, but exceptional factors in the US – including adverse weather conditions and protracted strike action by dockworkers – meant that growth slowed at the beginning of the year. The pace of growth in the major emerging economies has also slowed further.

The industrialised economies can expect economic growth to pick up over the next few quarters. The domestic economy in the US is now more robust and higher earnings should accelerate growth. There is also likely to be an upturn in the eurozone with increasing evidence that the recovery, which has so far been largely driven by consumer spending, is now also benefitting investment activity.

However, growth in the emerging economies is likely to be modest in both 2015 and 2016. One reason for this is the structural problems besetting many countries, including Brazil and Russia. China's new economic course, which shifts the focus away from investment-led growth and towards consumer-driven growth, is tending to hamper the growth potential of the economy. Over the last 20 years or so, growth was predominantly fuelled by investment, bringing higher earnings and substantially higher productivity.

Overall, we calculate that global economic growth will be 2.6% in 2015, rising slightly – to 2.8% – in 2016 (see Chart 3).

Chart 3. Contribution to global economic growth, by major economic region⁴
[2004-25, in %]



The marked rise in the value of the Swiss Franc hampered **growth in the Swiss economy** during the first six months of 2015. The shockwaves triggered by the Swiss National Bank's decision to remove the exchange rate floor against the euro on 15 January 2015 impacted particularly on foreign trade. Although Switzerland avoided a technical recession in the first half-year because domestic spending remained robust, the effects of the strong Franc continue to be felt. We have yet to see its impact on investment, so we are forecasting that growth in the Swiss economy will have stagnated in the second half-year.

Nevertheless, the economy looks set to recover gradually over the coming year, despite expected low levels of investment. Both the upturn in the industrialised economies and the assumed gradual fall in the value of the Swiss Franc should create a tailwind in 2016. Consumer spending also remains a key driver of economic growth. The overall forecast for GDP growth in Switzerland in 2015 is, therefore, 0.8%, rising to 1.2% in 2016.

Structural growth 2015-25

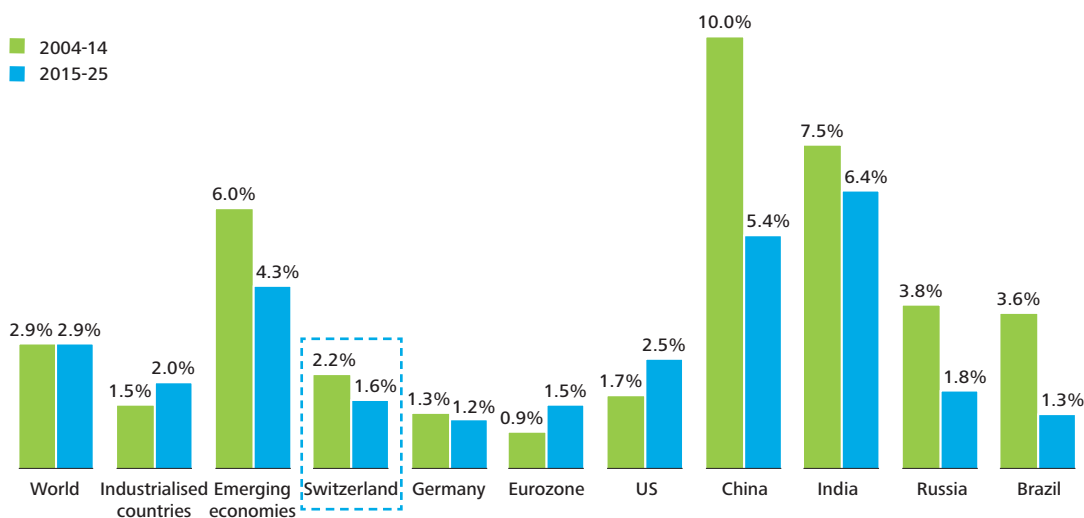
Cyclical fluctuations are less important than structural factors in forecasts up to 2025, since it is long-term structural factors that determine the growth path of an economy. Key factors here include advances in technological progress and productivity, socio-demographic trends, the institutional environment and location factors, as well as levels of debt.

The **global economy** is forecast to expand by an average of 2.9% each year between 2015 and 2025, matching global growth between 2004 and 2014 (see Chart 4).

The pace of growth in the industrialised economies looks set to pick up somewhat over the next few years. However, demographic trends differ widely within this group, so there are likely to be substantial differences in growth rates.

The working age population in the eurozone is set to fall slightly from 2017 as more of the baby boom generation reach retirement age. This will intensify cost pressures on social security schemes, restrict potential for growth and increase the risk of a skills shortage. Moreover, the debt reduction measures triggered by the global financial crisis and the euro crisis will continue to inhibit both consumer and government spending for some time to come.

Chart 4. Average rate of growth in real GDP, by economic region⁵
[2004-14 and 2015-25, annual, in %]



The impact of the euro crisis – largely confined to Europe – has begun to weaken, and the medium-term outlook for the US has also improved, although for different reasons. First, private sector debt levels have fallen back over recent years to their long-term average, creating a solid basis for strong, long-term growth in consumer spending. Second, US companies' substantial cash reserves and their high levels of competitiveness make it likely that investment activity will increase in the medium term. Moreover, demographic pressures in the US are not as intense as in the eurozone because of higher birth rates and rates of migration.

Although growth in the emerging economies looks set to be somewhat slower than over the last ten years, these economies – especially those in Asia – are still expected to grow more rapidly than the industrialised economies between now and 2025. The factors fuelling prospects of rapid growth include the reality that many emerging economies still have high rates of demographic growth and continue to lag significantly behind the west in terms of prosperity, producing an ongoing substantial convergence effect. Because global markets are so interconnected, the emerging economies are able to benefit from technology transfer from the industrialised economies and boosting their productivity growth.

The emerging economies are, however, unlikely to return to the rapid rates of growth they achieved between 2004 and 2014. In Russia and Brazil, for example, growth potential is being hampered particularly by the end of the commodity super-cycle, but also by a number of structural weaknesses in their economies. Meanwhile, as China shifts to a growth model based more on consumer spending (see above) and demographic pressures grow in the country, it too is likely to see growth rates fall. However, demographic trends in India are more favourable making it more likely than China to achieve higher rates of growth in the medium term.

In **Switzerland**, growth is likely to average 1.6% a year between 2015 and 2025. The impact of the removal of the exchange rate floor and the sharp rise in the value of the Swiss Franc will slow down growth in the short term, but growth looks likely to pick up again from 2017. Overall, growth over the next ten years is forecast to be lower than in the preceding ten-year period but somewhat higher than for the eurozone.

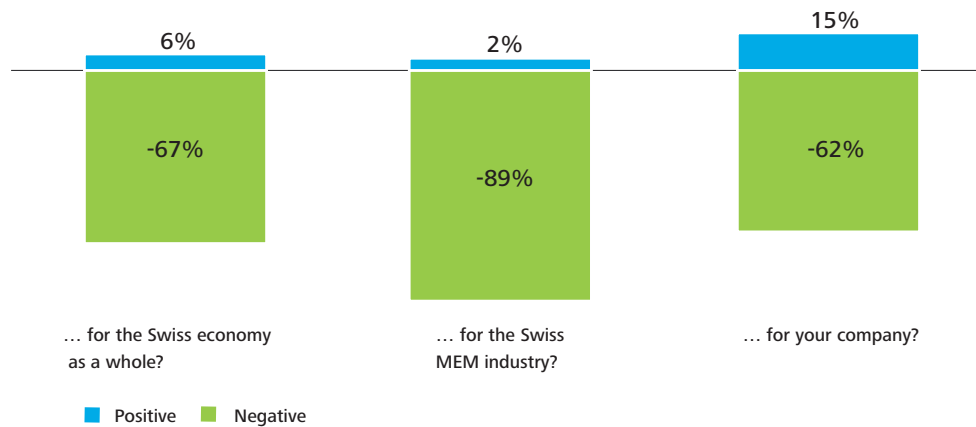
In the long term, the Swiss economy is likely to benefit from companies' high levels of innovativeness and competitiveness and from the advantages that the country offers as a business location, including its liberal labour market, low level of state indebtedness and low rates of taxation. Many Swiss export companies also enjoy a good market position in the emerging growth markets of Asia. The favourable business environment in Switzerland translates into a steady inflow of highly skilled workers to Switzerland, so the country faces somewhat less medium- and long-term demographic pressure than the eurozone. However, implementation of the mass immigration referendum result and their possible impact on bilateral agreements have created political uncertainty.

The views of Swiss MEM companies

The business outlook for most of the Swiss MEM companies involved in the study is currently dominated by the shockwaves caused by the Swiss National Bank's decision to remove the exchange rate floor against the euro in January 2015. The decision brought an abrupt end to the period of stability and planning security that MEM companies had enjoyed since the floor was introduced more than three years earlier, on 6 September 2011.

Against this backdrop, the vast majority of companies take a pessimistic view of business prospects over the next 12 months for the Swiss economy as a whole, for the MEM industry and for their own company (see Chart 5).

Chart 5. Survey results: How do you rate the prospects over the next 12 months ...⁶



A majority of Swiss MEM companies surveyed rate the prospects for their own company negatively (-62%), a finding more or less on a par with the percentage of respondents who rate the prospects for the economy as a whole negatively (-67%). Companies' views of the prospects for the MEM industry are even more pessimistic, at -89%. At the same time, 15% of MEM companies surveyed have a positive view of the prospects for their own company – more than double the proportion that rate the prospects for the economy as a whole positively (6%) – but only 2% take a positive view of the prospects for the MEM industry.

There is a similar discrepancy between these findings and those of the 2012 Deloitte *White Paper on Swiss Manufacturing Industry* as far as MEM companies' views of their own prospects and those of the MEM industry are concerned (see Chart 6)⁷. Their positive view of their own company's prospects points to a high level of confidence that the measures they have taken and the efforts they are making to tackle current challenges will produce success within their own company. Their more negative view of the prospects for the MEM industry as a whole, by contrast, is based solely on the scale of the challenges and not on the prospects of success of measures initiated by other MEM companies.

We cannot rule out the possibility that companies are overestimating the prospects for success of their own measures because of the optimism triggered by the measures taken or planned since January 2015 and that, by the same token, they are underestimating the measures being taken by other MEM companies because they do not have sufficient information about them.

Chart 6. Survey results: Comparison of business prospects in 2012 and 2015

[Large companies only, negative responses only]

How do you rate the prospects over the next 12 months ...	2012	2015	Percentage point (PP) change
... for the Swiss economy as a whole?	-46%	-74%	-28 PP
... for the Swiss MEM industry?	-77%	-93%	-16 PP
... for your company?	-27%	-59%	-32 PP

Comparing negative responses in 2015 with responses from the 2012 Deloitte *White Paper on Swiss Manufacturing Industry* (large companies only) reveals a similar discrepancy between MEM industry companies' rating of their own prospects and of those for the Swiss MEM industry.

There is also an even more negative baseline mood among MEM companies in 2015 than in 2012. In 2015, large companies rate the prospects for their own company 32 percentage points lower than in 2012 and the prospects for the Swiss economy as a whole 28 percentage points lower than in 2012. Their rating of the prospects for the Swiss MEM industry is also down from 2012, by 16 percentage points.

The Swiss National Bank's removal of the EUR/CHF exchange rate floor in January 2015 has substantially depressed Swiss MEM companies' view of the country's economic prospects.

“The strong Swiss Franc is also affecting Swiss companies that operate globally and no longer produce solely in Switzerland. Customers are now firmly convinced that Switzerland is an expensive country. Our competitors are quick to turn that to their advantage.”

Markus Pözl
Head of Commercial & Financials Grain Milling, Bühler

“Anyone still complaining about currencies has not done their homework over the past few years.”

Edwin Eichler
Chairman of the Board of Directors, Schmolz + Bickenbach

The period of stability enjoyed by MEM companies between 6 September 2011, when the EUR/CHF exchange rate floor came into force, and 15 January 2015, when it was removed, allowed many of them a breathing space and allowed many jobs to be protected in the manufacturing sector. Now that the value of the Swiss Franc has risen again, and against a backdrop of volatile global economic conditions, many Swiss MEM companies are once more coming under pressure and are having to make operational adjustments in an attempt to avoid a long-term decline in margins and loss of sales.

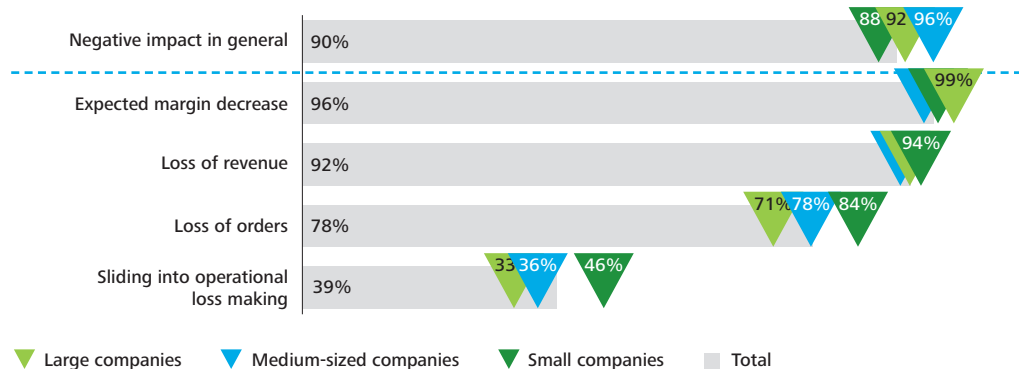
1.2. Risks associated with a strong Swiss Franc and volatility

The **strong Swiss Franc** and the **volatile global economic and business environment** emerge clearly from the survey findings as the two greatest risks with which Swiss MEM companies are currently grappling.

The risks of a strong Swiss Franc

Virtually all the MEM companies surveyed (90%) expect the sharp rise in the value of the Swiss Franc since January 2015 to **have a negative impact** on their own company (see Chart 7).

Chart 7. Survey results: Do you expect the strength of the Swiss Franc against the euro to have a negative impact on your business?⁸



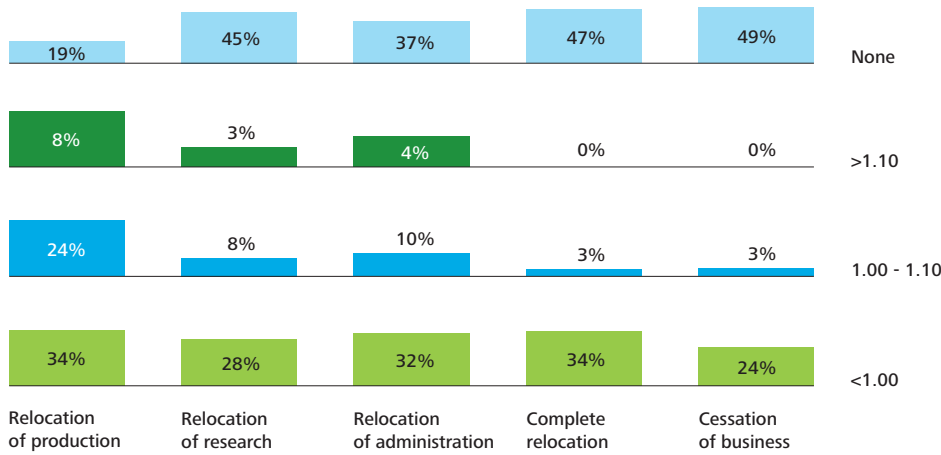
A breakdown of the findings by individual indicators shows that 96% of companies surveyed expect a **decline in margins**, 92% expect to **lose revenue**, 78% expect to **lose orders** and 39% expect to **slide into operational loss-making** (as measured by EBIT) in 2015.

Losing orders is a greater threat for small companies with 84% reporting this as a concern, than for large and medium-sized companies (71% and 78% respectively). Almost half of all small companies surveyed (46%) also fear sliding into operational loss-making as against one in three large and medium-sized companies. In contrast, virtually every single large company – 99% of those surveyed – expect their margins to decrease slightly more than SMEs do. There are no significant differences between small, medium-sized and large companies in terms of their concern about loss of revenue, however.

The effective strength of the Swiss Franc has also had a direct impact on corporate decision-making regarding relocation abroad of part or all of the value chain (see Chart 8).

In relation to decisions to **relocate production**, just 8% of the Swiss MEM companies surveyed say that they would be forced into such a move if the EUR/CHF exchange rate exceeded 1.10. However, 24% report that relocation would become inevitable if the exchange rate were in the 1.00 to 1.10 range, meaning that almost a third of respondents (32%) would see relocation as becoming necessary if the exchange rate exceeded 1.00. A further third of Swiss MEM companies (34%) report that they would relocate production if the EUR/CHF rate dipped below 1.00, taking the total proportion of companies making relocation decisions contingent on the exchange rate to 66%. The strength of the Swiss Franc has substantially increased the cost of manufacturing in Switzerland, and just 19% of companies surveyed believe that the strong Franc will have no impact on their decisions to relocate production.

Chart 8. Survey results: From your current perspective, what EUR/CHF exchange rate would make the following business decisions necessary?²⁹



Note: Each vertical column excludes 'Don't know' and 'No answer' responses, bringing the total for each column to 100%.

Just under half of MEM companies (45%) believe that the strong Swiss Franc plays no significant part in decisions to **relocate research and development (R&D)**. However, two out of five (39%) would feel they had to relocate their R&D activities if the EUR/CHF exchange rate fell below 1.00. The Swiss MEM industry has a long tradition of keeping research-intensive activities and development of new technologies within Switzerland to protect intellectual property and to deter businesses in new growth markets from pirating its products. R&D is not, therefore, necessarily one of the first stages in the value chain that companies would consider relocating abroad in response to greater pressure on costs.

A similar picture emerges with regard to **relocation of back-office functions**, although a fractionally higher proportion (46%) of companies would relocate these functions abroad if the EUR/CHF exchange rate dipped below 1.00. A substantial minority of companies surveyed (37%) would consider **relocating the full range of functions**, but only if the EUR/CHF exchange rate fell below 1.00. A substantial proportion of MEM companies – 27% in all – report that they would be forced to **cease trading altogether** if the exchange rate fell to that level.

Current measures to counter the strength of the Swiss Franc

Swiss MEM companies have been taking a range of measures since January 2015 to tackle the ongoing strength of the Swiss Franc (see Chart 9).

The most commonly reported measure is increasing **purchasing in the eurozone** (natural hedging), a step already taken by 77% of those surveyed. The strong Swiss Franc has boosted the popularity of sourcing from cheaper countries abroad, with large and medium-sized companies being slightly more likely than small companies to adopt this strategy. Many multinational companies and medium-sized companies with global operations have long since set up arrangements of this kind and made the necessary foreign contacts to benefit from more favourable purchasing conditions and to source materials globally. Small companies need to catch up with larger ones in this respect.

“Measures introduced three years ago, when the Swiss Franc was strong, are helping to tackle the current fallout from the removal of the exchange rate floor. SMEs that have taken the bold step of boosting their foreign business, for example, by developing customer service or procurement centres outside Switzerland, are now much better equipped to face the challenges.”

Martin Meier
CFO, Robatech

“Industries that are know-how driven are limited in their ability to relocate. If they produce customised machinery for customers for example, processes have to be kept close together with few interfaces to avoid inefficiency.”

Werner Schmidli
CEO, Schlatter

“Best-cost country sourcing has been on the agenda for a long time and is part of the general aims for operational excellence.”

Philipp Felber
Corporate M&A, Schindler

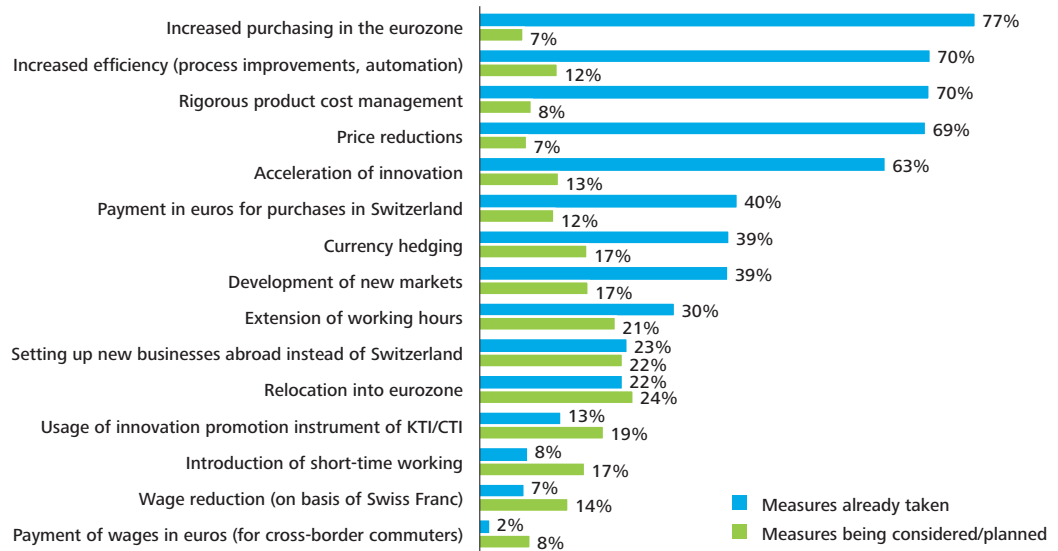
“The possibilities of automation have not yet been exhausted. There is still potential and scope for optimisation, in particular in terms of optimising interfaces and making databases consistent.”

Martin Meier
CFO, Robatech

“In the wake of shockwaves from exchange rate fluctuations, companies often make price concessions as an initial short-term response. However, such concessions put significant pressure on turnover and margins.”

Dr. Eric Scheidegger
Deputy Director of SECO,
Ambassador

Chart 9. Survey results: Which of the following measures have you taken since 15 January 2015 to tackle the strength of the Swiss Franc?¹⁰



The next most frequently cited measures are **increasing efficiency** (improving processes and automation) and **rigorous product cost management**. Both measures have already been introduced by 70% of the MEM companies surveyed, and both are slightly more common in large and medium-sized companies than in small companies. Many Swiss MEM companies have already automated production to a considerable extent and would find it difficult to improve on that position. However, there remains a need for lean production methods and process improvements through adoption of industry 4.0 solutions. There is also room for improvement in product cost management at the product development and product manufacturing stages. The focus of cost reductions is, however, on the entire life cycle of a product – that is, from development and manufacture right through to use, service and recycling.

The remaining measures making up the top five are **reducing prices** (cited by 69% of companies surveyed) and **accelerating innovation** (63%). SMEs are more likely than large companies to consider price reductions, while large companies tend to focus more on innovation. In the long term, price reductions reduce margins and hamper companies’ ability to invest, so they are often successful only as a short-term measure to protect competitiveness. Accelerating innovation offers greater potential for long-term success. SMEs are less likely than large companies to have the money and resources to accelerate their innovation processes, but financial reserves and resources alone do not always produce better innovation; the key to successful innovation lies, in fact, in making more targeted use of such resources¹¹. SMEs can, therefore, innovate just as successfully as large companies.

Comparing the measures being considered with those actually implemented since January 2015 produces a rather different picture. Among the measures under consideration, **relocating part or all of the value chain to the eurozone** was the most popular, with 24% of the MEM companies surveyed considering such a move. When taken together with the 22% of companies that have actually taken this step since the beginning of the year, this finding indicates a strong trend toward relocation as a response to the strength of the Swiss Franc. A further 22% of companies surveyed say that they plan to **move investment and the development of new business abroad**, the second most commonly reported response to the strength of the Swiss Franc.

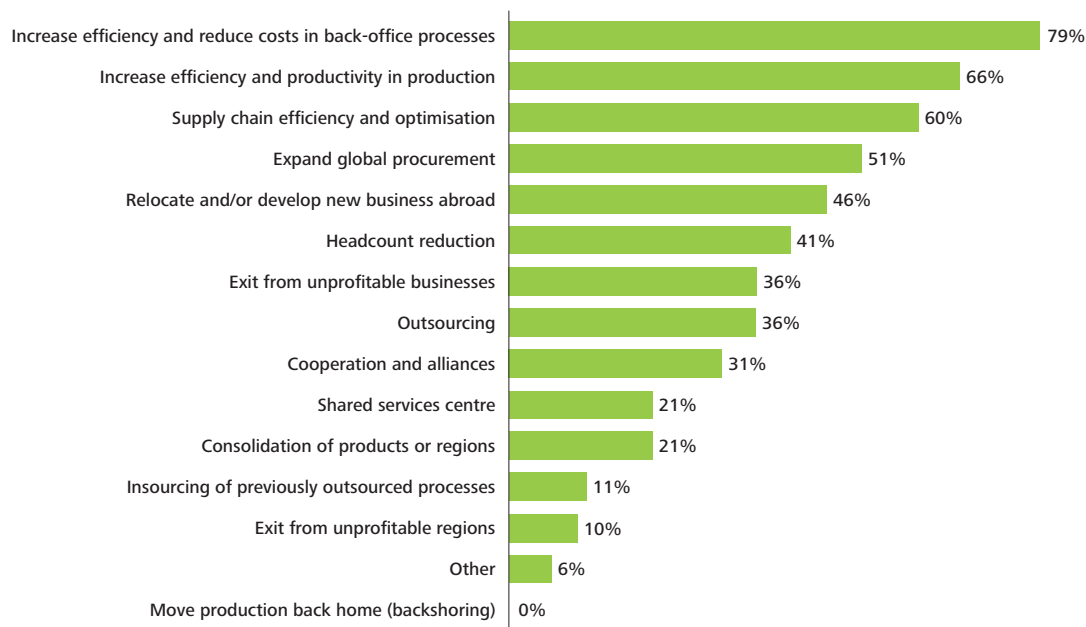
It should be noted here that the issue of relocation has a number of dimensions. Cost considerations are now informing larger relocation decisions more than just the relocation of individual steps in the value chain previously located within Switzerland. Our interviews with experts make it clear that companies are giving consideration from the outset to locating new steps in the value chain abroad, which would in the past automatically have been based in Switzerland. This means that more investment is going abroad, particularly investment in expanding production capacity.

Longer-term strategies to tackle the strength of the Swiss Franc

Almost half of the MEM companies surveyed (46%) also mention **relocating and/or developing new business abroad** as a key strategy to drive improvements in efficiency and reduce costs over the next 12 months in response to the strength of the Swiss Franc (see Chart 10).

Companies see relocation as a longer-term measure that cannot be put in place overnight. Many planned relocations were originally devised as a potential response to the strength of the Swiss Franc in the wake of the 2008/09 global financial crisis and recession, and some of these plans were put on ice once the EUR/CHF exchange rate floor was introduced in September 2011. However, now may be the time for them to be revisited and carried out.

Chart 10. Survey results: Which of the following strategies to increase efficiency and reduce costs will be the main focus for your company over the next 12 months?¹²



Also among the top five strategies are **focusing on efficiency in back-office processes** (79% of respondents), **increasing productivity in production** (66%), **optimising the supply chain** (60%) and **expanding global procurement** from the eurozone and dollar area (51%). Large companies have long focused on increasing efficiency and reducing costs in their back-office processes and in the supply chain, but SMEs are now also paying more attention to these areas. For example, efficiency in the supply chain can be achieved by bundling purchasing and suppliers and by improving planning.

Exiting from unprofitable business (36%), **headcount reductions** (41%) and **outsourcing** cost-intensive company functions (36%) are also cited by a significant number of companies. As with the trend towards relocation, all these measures have become significantly more important over the last three years (see Chart 11 for a comparison of the strategies adopted by Swiss MEM companies in 2012 and 2015).

It is interesting that over recent years, Swiss MEM companies' traditionally cautious attitude towards outsourcing – a stance rooted in their fear of poorer quality – has been relaxed considerably and these companies are now focusing more on outsourcing. Increased pressure on costs is currently prompting Swiss MEM companies to be more willing than in recent years to court greater risk and, in some cases (and in the short term), to accept lower quality.

“The shockwaves from the strong Swiss Franc have shifted the focus even more strongly on to innovation as a forward-looking strategy for companies. Since summer 2015, there has been a marked increase in applications for project funding from the Commission for Technology and Innovation.”

Walter Steinlin
President of the Swiss
Commission for Technology and
Innovation (CTI)

“The economic downturn is fundamentally more difficult to manage than the shockwaves from the removal of the exchange rate floor. Nevertheless, a clear focus on costs, processes and product innovation can help in the long term.”

Werner Schmidli
CEO, Schlatter

Chart 11. Survey results: Comparison of strategies for increasing efficiency and reducing costs, 2012 and 2015
[Large companies only]

Which of the following strategies to increase efficiency and reduce costs will be the main focus for your company over the next 12 months?

	2012	2015	Percentage point (PP) change
Increase efficiency and productivity in production	69%	81%	+12 PP
Increase efficiency and reduce costs in back-office processes	92%	79%	-13 PP
Supply chain efficiency and optimisation	69%	64%	-5 PP
Expand global procurement	77%	63%	-14 PP
Relocate and/or expand new business abroad	31%	63%	+32 PP
Headcount reduction	35%	45%	+10 PP
Outsourcing	19%	45%	+26 PP
Shared service centres	35%	31%	-4 PP
Cooperation and alliances	Not asked	30%	-
Consolidation of products or regions	12%	30%	+18 PP
Exit from unprofitable businesses	0%	30%	+30 PP
Exit from unprofitable regions	31%	12%	-19 PP
Insourcing of previously outsourced processes	15%	11%	-4 PP
Other	8%	7%	-1 PP
Move production back home (backshoring)	0%	1%	+1 PP

Comparing 2015 strategies to increase efficiency and reduce costs with those from the 2012 *Deloitte White Paper on Swiss Manufacturing Industry* (large companies only) reveals a stronger focus on **relocation** (+32 percentage points), on **exit from unprofitable businesses** (+30 percentage points) and on **outsourcing** (+26 percentage points). Other strategies cited more frequently in 2015 than in 2012 are consolidation, increasing productivity in production, and headcount reduction.

Large companies place less emphasis in 2015 than in 2012 on **exit from unprofitable regions** (-19 percentage points), expanding **global procurement** (-14 percentage points) or increasing efficiency in **back-office processes** (-13 percentage points). These are all strategies that large companies have been actively implementing over recent years and that have only limited capacity for achieving further change.

The risk posed by volatile global economic conditions

Alongside the strength of the Swiss Franc, which is currently dominating debate and will continue to be a major preoccupation, Swiss MEM companies are likely to be turning their attention in the long term to the risk posed by economic volatility. To enable us to evaluate the scale and potential of this volatility better, we have carried out calculations on the basis of both a baseline scenario and a negative alternative scenario for the next few years.

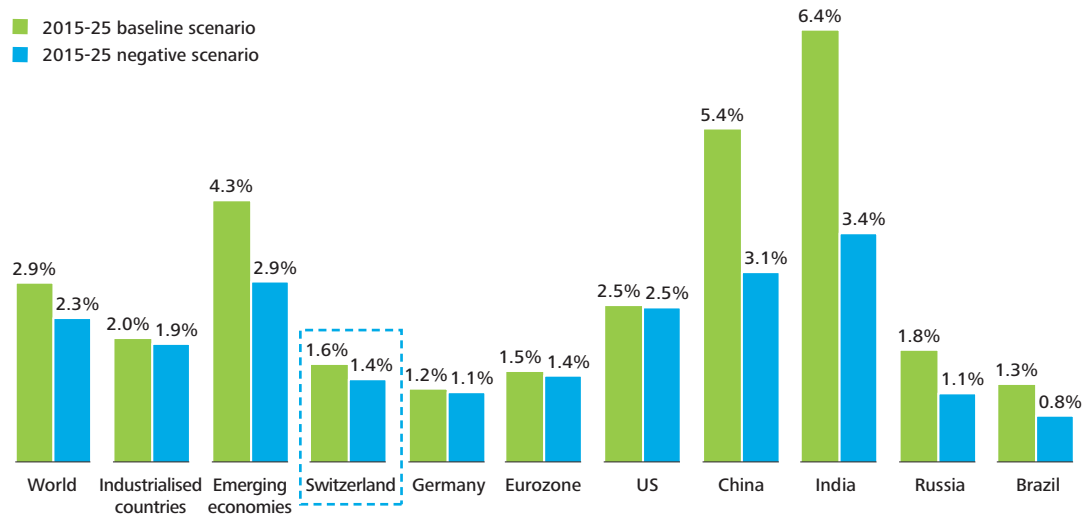
The **baseline scenario** is based on solid growth in the global economy between 2015 and 2025. This forecast is underpinned by the assumption that the emerging economies will remain an engine for growth in the global economy over the medium term. This assumption involves a number of risks, however, as many large emerging economies are currently facing severe challenges.

These challenges include the end of the commodity super-cycle and the looming change in interest rates in the US, both of which have led in recent quarters to outflows of capital from the emerging economies and currency devaluations. Political instability, unbalanced economic models based on the export of commodities, corruption, poor infrastructure, insufficient product market deregulation and, in some cases, protectionist tendencies are further factors holding back individual emerging economies and producing a negative impact on their structural growth.

In many countries, and particularly in China, levels of private sector debt have also risen sharply over recent years, increasing the risk of future financial crises. Meanwhile, many countries will find it difficult over the next few years to curb environmental pollution and switch to a more sustainable basis for growth. If the emerging economies cannot meet these challenges and overcome their current structural weaknesses, their pace of growth may slow rapidly in the medium term compared with current forecasts.

We have simulated these major risks in a **negative alternative scenario** to illustrate the impact of a sustained period of weaker economic growth in the emerging economies (see Chart 12). The central assumption of this negative scenario is that investment activity and potential growth in the largest emerging economies between 2015 and 2025 may be lower in the long term than is assumed in the baseline scenario. A further assumption is that while the emerging economies may suffer weak structural growth, this will not necessarily be accompanied by a major global financial crisis.

Chart 12. Alternative scenario for average real GDP growth rates¹³
[2015-25, annual basis, in %]



The assumption of weak structural growth in the emerging economies would significantly slow **global growth** between 2015 and 2025. In particular, the pace of growth in global trade would slow markedly. Overall, the average growth in GDP of the emerging economies would be 1.3 percentage points lower per year between 2015 and 2025 than under the baseline scenario.

The drop in demand from the BRIC countries would weaken growth in the industrialised countries over the long term. Real GDP in these countries would grow by 1.9% a year between 2015 and 2025, compared with 2.0% a year under the baseline scenario. Future rates of export growth would decline even by much more: overall, global economic growth would fall from an average of 2.9% a year between 2015 and 2025 to 2.3% a year under the negative scenario, taking global GDP in 2025 to 6% lower than under the baseline scenario.

As an open and export-oriented economy, **Switzerland**, too, would feel the effects of a long-term crisis in the major emerging economies. Falling international demand would slow down growth in the medium term, particularly in the country's foreign trade. Statistical modelling indicates that annual growth in Swiss exports between 2015 and 2025 would underperform the baseline scenario by 0.5 percentage points (2.6% per year as against 3.1%). Capital expenditure would also fall by a similar proportion. Under the alternative scenario, Swiss GDP would grow by 0.25 percentage points less each year than in the baseline scenario, producing a cumulative decline in GDP of around 3% by 2025. The Swiss MEM industry would lose even more in terms of growth because it is heavily dependent on domestic investment and international demand.

Over the next few years, Swiss MEM companies will have to contend with continued volatility in the global economy. Alongside such macroeconomic factors, which can slow down growth, there are additional risk factors that may also have a negative impact on the growth of Swiss MEM companies, including microeconomic, political, regulatory, social and technological risks.

“New compliance rules are creating a lot more work, driving up costs and reducing flexibility. And these rules will undoubtedly increase and become more complex in the future.”

Martin Meier
CFO, Robatech

“Bilateral agreements are important to keeping Swiss manufacturing industry attractive and competitive. Unrestricted access to the single European market enables many MEM companies to reduce their costs, boost their innovativeness, invest in Switzerland and secure jobs.”

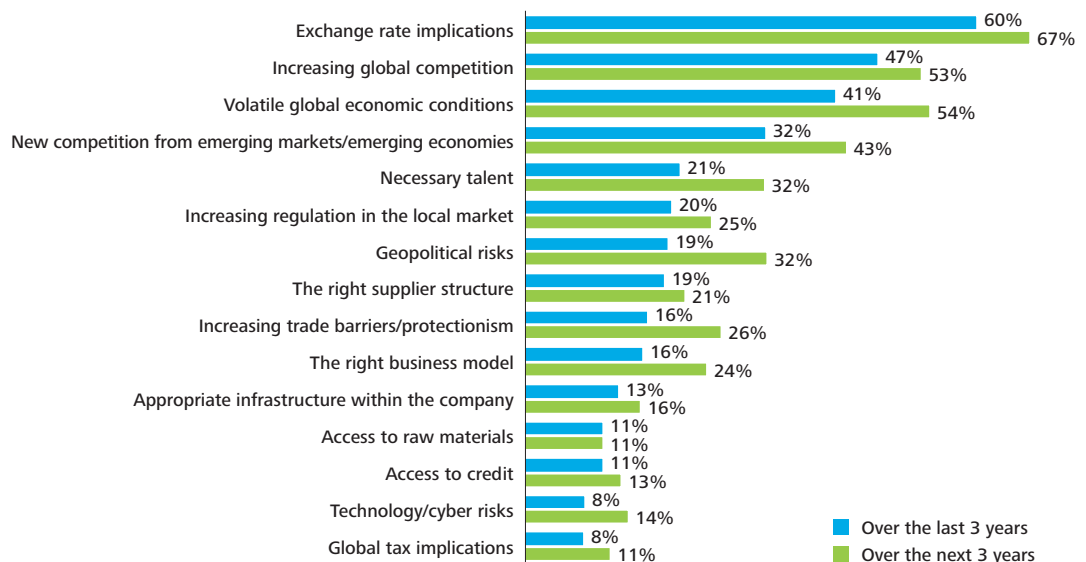
Peter Dietrich
Director, SWISSMEM

1.3. Further risks to growth

Among the major risk factors that have had a negative impact on growth over the last three years, Swiss MEM companies cite **exchange rate implications** as the most marked risk (60% of companies surveyed), followed by increasing **global competition** (47%) and **volatile global economic conditions** (41%) (see Chart 13).

In light of the ongoing volatility in economic growth (see Section 1.2.) and its impact on the prospects for the Swiss MEM industry's core markets, it is unsurprising that a majority of those surveyed also consider exchange rate implications and economic volatility as the most negative influences on growth in their own company over the next three years (67% and 54% respectively). Both risks are very current, so a majority of Swiss MEM companies see them as major factors likely to affect future growth.

Chart 13. Survey results: How negatively have the following risk factors affected growth over the last three years? And how negatively will they affect growth over the next three years?¹⁴



Further factors hampering growth over the next three years include **new competition from the emerging economies** (43% of companies surveyed), a **shortage of skills (talent)** (32%) and **geopolitical risks** (32%). Companies consider that all these factors will have a greater impact on growth over the next three years than over the last three years. Significant numbers of respondents also cite the risks of **increasing barriers to trade** (26% of companies), **regulation of the local market** (25%), identification of the **right business model** (24%) and the **right supplier structure** (21%).

Swiss MEM companies are now having to pay greater attention to geopolitical factors when deciding which global markets they wish to invest in and grow. In this context, securing uninterrupted access to raw materials and having a balanced global supplier structure is also important.

While globalisation can often reduce barriers to trade and protectionism, it can also strengthen them, increasing the cost of exporting goods to regions with trade barriers. If protectionist measures are already in place in countries where companies operate local production plants, this can also increase the cost of importing necessary primary and intermediate goods.

Additional regulation in the domestic Swiss market is also posing new challenges. Implementation of the mass immigration referendum result and uncertainty about bilateral agreements with the EU (including restrictions on the free movement of labour) are likely to exacerbate the existing skills shortage in the Swiss MEM industry. If further aspects of these agreements, such as the agreement on reducing technical barriers to trade by simplifying product approval or Switzerland's involvement in EU research programmes, are called into question barriers will go back up, with a direct impact on the competitiveness of Swiss manufacturing industry.

“Switzerland is a limited market for international talent.”

Ursula Soritsch-Renier
CIO, Sulzer

This risk factor – increasing regulation – will affect all MEM companies to the same extent, irrespective of size (see Chart 14).

However, large and medium-sized companies are more likely than small companies to cite increasing barriers to trade and restricted access to talent and skilled workers as risk factors that will impact negatively on growth over the next three years. Multinationals and large companies rely heavily on unrestricted access to a global talent pool and on free movement of labour. Where skills are not available in Switzerland, more teams and functions have to be moved across borders.

There are also differences by company size when it comes to such risk factors as exchange rate implications and volatile global economic conditions, with large and medium-sized companies more likely to cite both of these factors. Small companies, which manufacture largely for the local Swiss market, are less affected by these factors.

Chart 14. Survey results: Comparison of future risk factors by company size¹⁵

	Large companies	Medium-sized companies	Small companies	Total
Exchange rate implications	75%	71%	56%	67%
Volatile global economic conditions	52%	63%	48%	54%
Increasing global competition	47%	63%	50%	53%
New competition from emerging markets/emerging economies	44%	44%	43%	43%
Geopolitical risks	36%	34%	29%	32%
Necessary talent	40%	31%	28%	32%
Increasing trade barriers/protectionism	26%	32%	19%	26%
Increasing regulation in the local market	25%	24%	25%	25%
The right business model	22%	27%	25%	24%
The right supplier structure	19%	25%	20%	21%
Appropriate infrastructure within the company	13%	17%	17%	16%
Technology/cyber risks	14%	11%	18%	14%
Access to credit	3%	22%	13%	13%
Global tax implications	12%	13%	11%	11%
Access to raw materials	6%	13%	15%	11%

Weak negative impact



Strong negative impact

“Given the strength of the Swiss Franc, and in economically uncertain times, access to credit and good management of liquidity is much harder for SMEs than for large companies.”

Peter Dietrich
Director, SWISSMEM

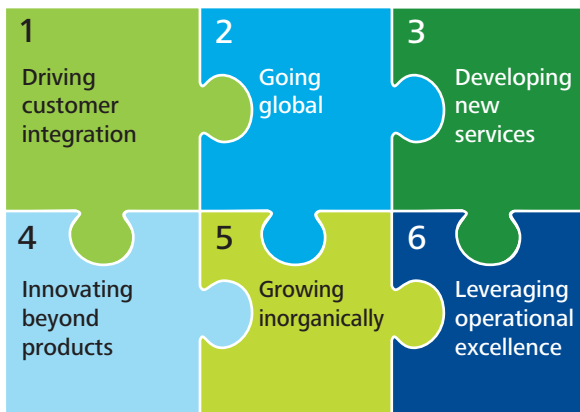
This does not mean, however, that SMEs are less vulnerable than internationally oriented large companies and multinationals to the pressures of global competition. In fact, the opposite is true for SMEs: they are under substantial competitive pressure because they are not sufficiently international in their outlook, and cheaper foreign competitors are making inroads into the Swiss market. Medium-sized and larger companies can get round this by buying their way into foreign markets, but this is not an option for the smallest companies, especially those at the bottom of the supplier chain.

Further risk factors that affect SMEs in particular, but are not a major issue for large companies, include access to credit and raw materials. In these areas, large companies have often built up better contacts and wider networks, which operate in bad, as well as good, economic times. Raising capital for growth projects or reorganising their access to raw materials is harder for SMEs when economic times are difficult.

2. Strategies for growth

Growth is essential if companies are to avoid a race to the bottom necessitating increasingly rapid and large reductions in costs. We have identified six strategies for growth that will enable Swiss MEM companies to keep moving forward in the current economic and risk climate. These strategies are: **driving customer integration, going global, developing new services, innovating beyond products, growing inorganically and leveraging operational excellence** (see Chart 15).

Chart 15. Six growth strategies



These six strategies for growth and their implications can be summarised as follows:

- 1. Driving customer integration** requires a shift in a company's orientation, from market 'push' (better products for customers) to customer 'pull' (a customised understanding of customers' needs and specialised industry-specific solutions). This means shifting company thinking away from better engineering and additional features to ways of maximising customer benefit. Customised products and services offer competitive advantage, particularly for new growth in core markets and for differentiation and acquisition of new customers, particularly in growth markets in emerging economies. The current trend in increasing customer integration is away from a purely engineering-driven approach and towards collaboration with customers (crowdsourcing). Knowledge of sales and analysis of customer data help companies to improve their products and find individual solutions. Across the industry, manufacturing companies whose employees apply their knowledge of customers' problems and preferences directly to research and development and work with customers to devise solutions not only perform better in the area of product innovation and improvement, but are also more successful at retaining their customers.
- 2. Going global** means early identification and evaluation of those sales markets that offer the potential to be new or future drivers of economic growth. Multinationals and large companies can afford to maintain a presence in many different locations, whereas small and medium-sized companies have to weigh up the risks before deciding on the emerging economy markets they wish to enter. Success in new growth markets in emerging economies is reliant on localisation of existing products and services. It is important that, before embarking on such strategies, companies decide whether their approach will be to produce globally ('global for local') or locally ('local for local' and 'local for global'): a balanced global footprint can help to minimise exchange rate risks and even out different rates of growth in established and new markets.
- 3. Developing new services** is important because global manufacturing is increasingly influenced by the trend to 'servitisation', in which industrial manufacturers increasingly also take on the role of comprehensive service providers. The old service model, based on plant maintenance, is being replaced by a new model with add-on services or even a 'services business' model offering integrated manufacturing solutions or new business models. Bundling higher-margin services with industrial products and/or introducing new, exclusive services creates competitive advantage and may generate a steady source of income in difficult economic times. Industry 4.0 solutions, such as digital condition monitoring and predictive maintenance, offer substantial potential here.

4. **Innovating beyond products** becomes important when, in light of the pressure on Swiss manufacturing companies to innovate, incremental improvements in existing goods and services are no longer enough and are frequently irrelevant to customers' needs. Companies need instead to develop new value propositions and disruptive innovations beyond the traditional limits of product and process innovation. The focus here is, for example, on innovation in profit models, services, sales channels and customer engagement. It is also important that exponential technologies are used to accelerate growth.
5. **Growing inorganically** accelerates growth through mergers and acquisitions. The strong Swiss Franc is boosting the foreign acquisitions activity of many Swiss manufacturing companies, enabling them to grow further. Expansion into new global markets and new product and service areas becomes possible, along with acquisition of market share and measures to fill technology gaps and secure supply chains. However, thought must also be given to divestment and to joint ventures.
6. **Leveraging operational excellence** is essential to achieving ongoing growth in a difficult economic environment in which it is very expensive to produce goods in Switzerland. Creating agile and flexible supply chains enables Swiss manufacturing companies to make the best use of new opportunities for growth. Shared services centres, outsourcing, offshoring and nearshoring, automation and lean production continue to offer further scope for keeping costs low and optimising processes, releasing new energy for further growth.

Pursuing these six strategies for growth consistently will enable companies not only to grow sustainably in a difficult economic and risk environment, but also to maintain their international competitiveness in the long term.



2.1. Driving customer integration

Assessing the **potential for growth in the Swiss MEM industry's core markets** is an important aspect of identifying potential for **growing existing customers**, opportunities for **acquiring new customers** and scope for increasing customer integration through **customised products and services**. Analysing export data is a good way of quantifying the growth potential of such markets.

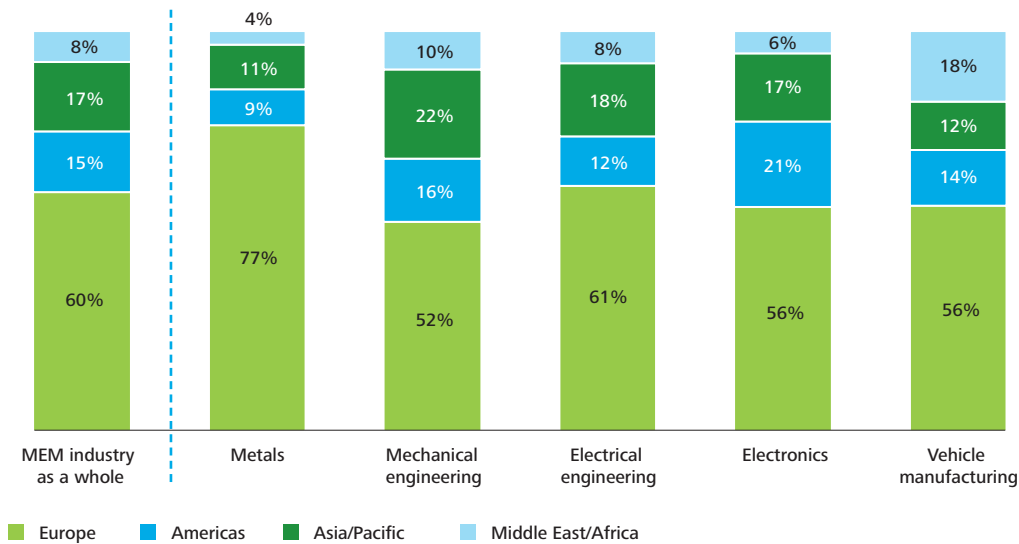
Potential for growth in the MEM industry's core markets

The Swiss MEM industry exports almost three-quarters of its total output. Europe is vital to the Swiss MEM industry and represents by far its largest market. Around 60% of all the MEM industry's exports are to other European countries, with the metalworking and electrical engineering sectors particularly focused on the European market. The mechanical engineering sector is much more strongly focused on the Asian market, the electronics sector on North America, and the vehicle manufacturing sector on the Middle East and Africa (see Chart 16).

In 2014, Swiss MEM industry exports to the European market totalled more than CHF 38 billion, almost twice the value of goods exported to its next largest markets, Asia and Northern America, combined.

Over the last ten years, Swiss MEM exports to China have grown disproportionately compared with those to Europe. Other emerging economies and the US also grew significantly more rapidly than Europe as an export destination for Swiss MEM exports.

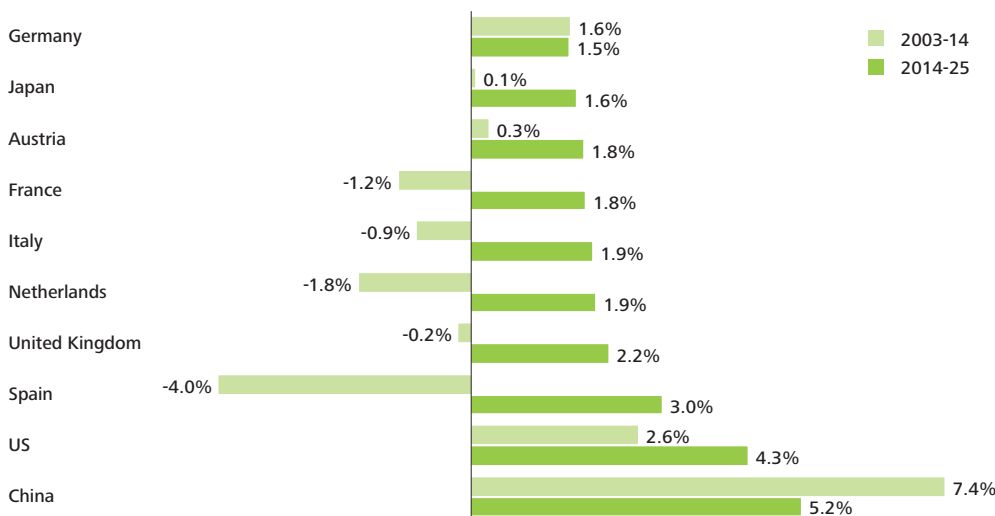
Chart 16. Breakdown of exports by destination¹⁶
[2014, in %]



Note: 'Electronics' also includes precision instruments.

Despite this geographical shift, however, Europe has over recent decades accounted for a higher proportion of growth in Swiss MEM exports than any other market. The greatest growth share has come from exports to Germany, and although exports to that country grew by 1.6% a year between 2003 and 2014 – significantly less than exports to China (+7.4%) and the US (+2.6%) – their contribution to total export growth averaged 0.41 percentage points more than exports to China or the US (+0.23 percentage points and 0.26 percentage points respectively) (see Chart 17).

Chart 17. Growth potential of exports to the industry's largest core markets¹⁷
[2003-14 and 2014-25, in %]



The most significant growth potential over the next ten years looks likely to come not from European core markets but from the North American and Asian markets (see also Section 2.2.). However, the divergence between markets has narrowed, both because there are signs of the European economy stabilising and recovering, and because structural economic growth looks likely to weaken in some emerging economies.



say growing existing customers will be a major growth factor over the next 3 years



say attracting new customers will be a major growth factor over the next 3 years



“The key questions in relation to successful customer integration are: How can we make it easier for our customers? How can we help our customers solve their problems? How can we offer the most appropriate and simplest solutions to our customers within a complex environment?”

Martin Meier
CFO, Robatech

Within Swiss MEM companies’ core markets, China will be crucial over the next ten years even though potential future growth in Chinese demand for MEM products is forecast to be considerably lower than actual growth over the last ten years (5.2% as against 7.4%). Growth in demand from the US is expected to accelerate markedly, with potential growth at 4.3% a year, considerably higher than the actual growth in exports over the period from 2003 to 2014 (+2.6%).

The current sales structure means that the European market will remain crucial to the Swiss MEM industry. For example, Germany is expected to contribute 1.5 times more to total potential growth than China between now and 2025. The largest growth contribution is expected to come from the US market. All this means that the Swiss MEM industry can continue to expect significant potential for growth in most of its core markets.

Growing existing customers and acquiring new customers

Against this backdrop, it is unsurprising that a large majority (67%) of the Swiss MEM companies surveyed believe that increasing their core customer base will be a major factor in their growth over the next three years. Two-thirds also believe that this strategy has been a major factor in their growth over the last three years. Large and medium-sized companies are slightly more likely than small companies to rate increasing their core customer base as an important strategy (73%, 70% and 60% respectively).

Growing by acquiring new customers is even more important. More than four out of five companies surveyed (83%) consider the acquisition of new customers as central to their company’s growth over the next three years, 17 percentage points more than those who believe this strategy has been a major factor in their growth over the last three years (66%). And widening their customer base is of equal importance to all MEM companies, irrespective of size.

For companies right across the Swiss MEM industry, this raises the question of what concrete initiatives and measures can they take to improve growth among current customers and drive acquisition of new customers.

Crucial to these processes is not only the development of new products and services (see Sections 2.3. and 2.4.), but also the customisation of existing products and services. Customisation is a good way to increase customer involvement, achieve higher growth among existing customers and bring new customers on board.

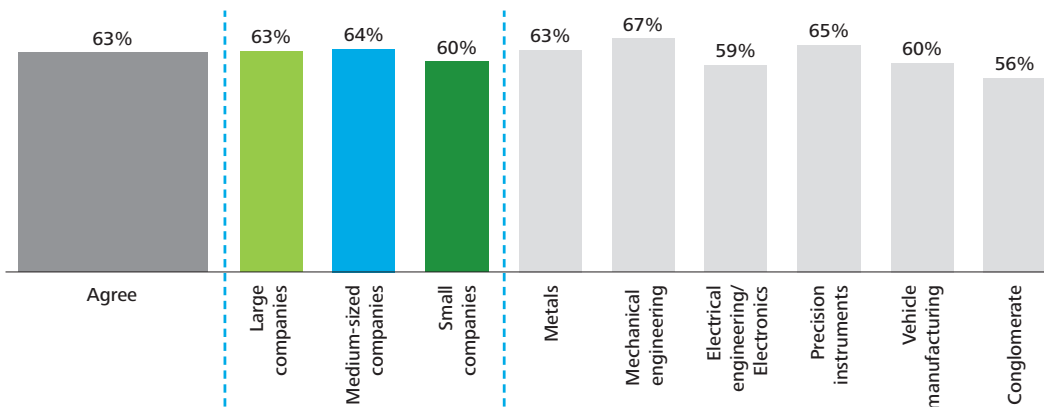
This requires a shift in companies’ thinking away from the ‘push’ factor of the market (better customer products) and towards the ‘pull’ factor represented by an individualised understanding of customers’ needs and of specialised industry-specific solutions. This form of customer integration reflects the trend away from a purely engineering-driven approach and towards genuine collaboration with customers (crowdsourcing) in which customers’ ideas and wishes are reflected when products and services are customised.

Customised products and services as an opportunity for growth

Customisation – adaptation of goods and services to individual customers – is a global trend that has become increasingly common in manufacturing industry and offers manufacturing companies clear competitive advantages. Customers want to be able to specify products that match their specific wishes and preferences and to see their ideas feeding into research and development processes at an early stage. Manufacturing companies that embrace this trend will have a higher level of customer retention than their competitors. The ability to offer customers customised products and solutions may enable companies not only to differentiate themselves from their competitors, but also to achieve better margins from standardised products.

More than 60% of the Swiss MEM companies surveyed of all sizes see customisation of services and close collaboration with customers as a new opportunity for growth (see Chart 18). Companies in the mechanical engineering and precision instruments sectors are most likely to believe that the scope for customisation will stimulate further growth (67% and 65% respectively). Conglomerates and companies from the electrical engineering/electronics sectors are slightly less likely to see potential here.

Chart 18. Survey results: Do you believe customised products and services will generate the new growth opportunities that your company needs?¹⁸



In future, industry 4.0 solutions will gear production even more closely to customers' needs and specifications and may even enable mass customisation. Industry 4.0 solutions mean the consistent interchange of data between machinery/manufacturers and customers. Customer-specific adaptations and customisation of both goods and services become possible not just at the development and production stages, but also at the ordering, planning and sales stages.¹⁹

This wider-ranging integration of customers represents the potential to generate new business models for MEM companies and enable them to acquire market share. Customised products and services not only offer competitive advantage in core markets, but also enable companies to differentiate themselves and acquire new customers both in core markets and in new growth markets.

“The customer’s crisis is our opportunity. We have to listen to our customers if we are to understand them better. Then we can adapt our products to their needs and help them solve their problems.”

Edwin Eichler
Chairman of the Board of Directors, Schmolz + Bickenbach

“The ‘Internet of Things’ is becoming increasingly important for plant manufacturers. Nevertheless, the use of sensor technology to measure and manage maintenance should always be focused on benefit to customers and create value for the long term.”

Markus Pölzl
Head of Commercial & Financials
Grain Milling, Bühler

“Swiss quality will remain the key to keeping our customers loyal – and for standardised products as well as for non-standardised ones.”

Ursula Soritsch-Renier
CIO, Sulzer



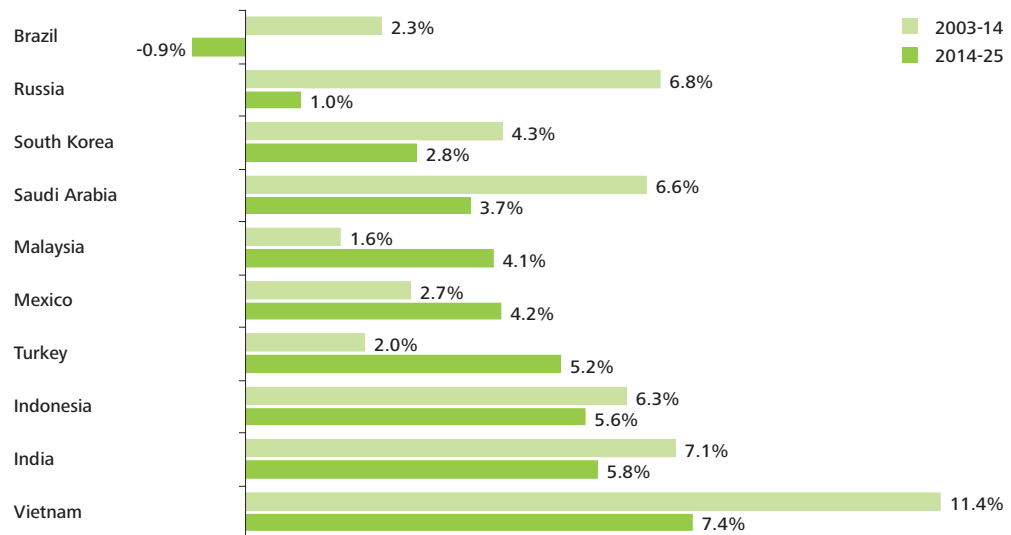
2.2. Going global

The Swiss MEM industry's **potential for growth in new geographical markets** can also be quantified by analysing its export data. This potential can then be compared with companies' geographical **expansion plans and expectations for growth**, not only enabling the assumed potential for growth to be validated but also providing an opportunity for any necessary adjustment in expansion plans. In addition it offers a chance to gauge opportunities to **localise products and services** as a way of opening up further growth.

Potential for MEM industry growth in new geographical markets

Analysis of export data reveals major differences between the emerging economies in terms of their expected potential for growth. While demand from India, Indonesia, Turkey and Vietnam is expected to grow by more than 5% a year over the next ten years, the growth potential of countries previously considered growth markets is disappointing: the Russian market looks likely to grow by just 1% over the same period and Brazil's is actually likely to contract, by 0.9% (see Chart 19).

Chart 19. Growth potential of exports to new markets²⁰
[2003-14 and 2014-15, in %]



Considering not only potential for growth, but also contribution to growth shows that of the markets with the highest potential for expansion, India and Turkey are likely to generate the highest contribution to growth in Swiss MEM industry export markets.

Comparing new geographical markets with core markets as contributors to growth, meanwhile, shows that it is very important for companies to cultivate their existing core markets as well as to explore new ones. For example, in terms of growth over the next ten years, Germany will continue to offer almost five times more potential than India.

Europe will continue to be an extraordinarily important market for the Swiss MEM industry in the near future. Although the most dynamic markets are in Asia, North America and Latin America, the European markets will remain crucially important for the foreseeable future because of their current sales structure.

A positive factor over the next few years is likely to be the Swiss MEM industry's focus within Europe on countries such as Austria, Germany, the Netherlands and the UK, which all offer comparatively good prospects for growth over the coming years. However, the rate of growth in these countries looks set to slow slightly compared with the predicted rates of growth in some emerging economies (see Chart 19).

Expansion plans and growth expectations of Swiss MEM companies

Somewhat more than half of all Swiss MEM companies surveyed (57%) see expansion into new geographical markets as an important strategy for growth over the next three years, 18 percentage points more than those reporting that geographical expansion has been a factor in their growth over the last three years. While most large companies already have differentiated strategies for different geographical regions, 64% of them say that this is a key strategy, a higher proportion than for medium-sized and small companies (57% and 49% respectively).

However, all MEM companies, irrespective of size, have to make decisions about which geographical markets promise the greatest potential for growth. Large companies can often make use of their own extensive market research and business development resources. However, many SMEs have only limited access to such resources and need to proceed more cautiously than large companies in weighing up the risks of emerging markets into which they want to expand and in identifying a local business model. Small supplier companies can sometimes take advantage of the opportunity to join forces with large companies entering new markets or do so in their slipstream.

It is interesting in this context to compare the potential for growth quantified from export data with the growth expectations of the Swiss MEM companies surveyed. The two geographical markets in which MEM companies have seen the most rapid growth over the last 12 months are **Germany** (34%) and **Switzerland** (33%) (see Chart 20). This is unsurprising, since Germany has traditionally been the Swiss MEM industry's largest export market and, according to export data, is likely to remain extremely important in the near future.²¹



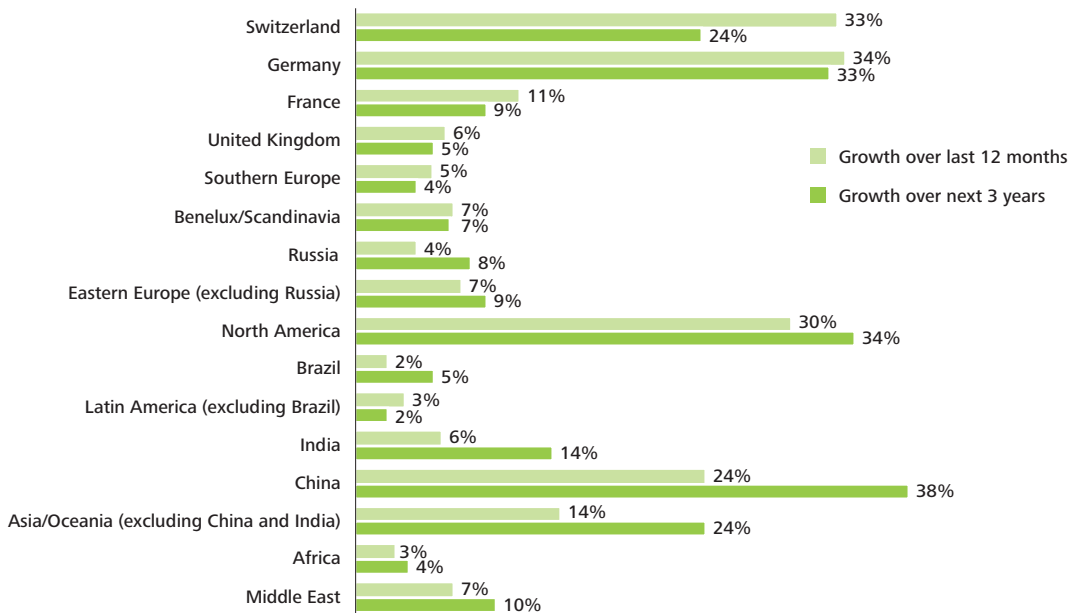
say that expanding into new geographical markets will be a major growth factor over the next 3 years



“Economic growth in China is a risk that cannot be ignored. Any slowdown in the rate of growth in this huge market will have a substantial impact on growth.”

Philipp Felber
Corporate M&A, Schindler

Chart 20. Survey results: In which regions did your company achieve its highest growth over the last 12 months? And in which regions do you expect the highest growth over the next 3 years?²²



“The decline in large markets such as Russia and Brazil over recent years is having a marked impact on manufacturing and is difficult to offset.”

Markus Pözl
Head of Commercial & Financials
Grain Milling, Bühler

For many of the Swiss MEM companies surveyed, this growth is, however, somewhat hampered by the current strength of the Swiss Franc. Only 24% of companies surveyed expect stronger growth within Switzerland over the next three years, while 33% expect growth in the German market to mirror that of the past year – that is, to remain effectively static.

The markets in which Swiss MEM companies expect the highest growth over the next three years are **China** (cited by 38% of companies) and **North America** (cited by 34%). China – and Asia and Oceania more generally – are much more likely to be cited as future growth regions than in the past year. These findings correspond broadly with the analysis of growth potential as measured by export data, which shows that Asia and North America are the most dynamic markets.

Following the wave of optimism over recent years about substantial growth from emerging markets, only a minority of the MEM companies surveyed now expect strong growth in the remaining BRIC countries, **Brazil**, **Russia** and **India** (see Chart 21). The disappointing potential for growth from Brazil and Russia in particular is confirmed by Swiss MEM companies’ gloomier growth expectations for these countries.

Chart 21. Survey results: Comparison of growth regions in 2012 and 2015
[Large companies only]

In which regions do you expect the strongest growth in the coming 3 years?

	2012	2015	Percentage point (PP) change
Switzerland	12%	6%	-6 PP
Germany	15%	22%	+7 PP
France	0%	6%	+6 PP
United Kingdom	4%	7%	+3 PP
Southern Europe	0%	5%	+5 PP
Benelux/Scandinavia	0%	2%	+2 PP
Russia	19%	7%	-12 PP
Eastern Europe (excluding Russia)	19%	9%	-10 PP
North America	23%	49%	+26 PP
Brazil	38%	6%	-32 PP
Latin America (excluding Brazil)	19%	2%	-17 PP
India	35%	16%	-19 PP
China	42%	59%	+17 PP
Asia/Pacific (excluding China and India)	12%	34%	+22 PP
Africa	12%	4%	-8 PP
Middle East	15%	14%	-1 PP

Comparing current expectations for future growth regions with those from the 2012 Deloitte *White Paper on Swiss Manufacturing Industry* (large companies only) reveals a significant decline in optimism about the BRIC countries with the exception of China.

Brazil and **India** are seen as significantly less likely to be growth regions over the next three years, down 32 percentage points and 19 percentage points respectively from 2012. Expectations for **Russia** have also fallen, by 12 percentage points. Confidence in these three BRIC countries as future drivers of growth and as growth regions has declined sharply among the MEM companies surveyed.

By contrast, expectations for **China** are 17 percentage points up from 2012, while those for **North America** are up 26 percentage points. **Asia** (excluding China and India) is 22 percentage points more likely to be seen as a key growth region in 2015 than it was in 2012.

Localisation of existing products and services as an opportunity for growth

The localisation of existing products and services is not yet widely regarded as representing an opportunity for growth: only 20% of all MEM companies surveyed believe that this strategy will be a major factor in their growth over the next three years, seven percentage points more than those reporting that it has been a major factor in their growth over the last three years.

The product localisation strategy is most likely to be favoured by large and medium-sized companies (21% and 23% respectively). Only 13% of small companies would adopt this approach, suggesting that localisation is more of a secondary strategy. MEM companies are expanding by taking their existing products and services into new geographical markets, delivering initially from either a Swiss or a global production facility in what is called a 'global for local' approach. In the first instance, these companies maintain a limited local presence and make use of local sales partners before setting up their own sales organisation. However, localisation – manufacturing in another country and adapting products and services to local conditions (the 'local for local' approach) – makes sense as a longer-term strategy in most cases. Manufacturing more products locally makes further cost savings possible, including in logistical costs, and ensures that products remain competitive against cheap, locally produced goods.

Products tailored to local customers' needs also represent new potential for growth. In emerging markets, the emphasis is often on product simplification, for instance eliminating unnecessary mechanical functions, reducing electronic or automated elements, and increasing the number of manual controls. However, just manufacturing simplified versions of high-tech products is not enough; this form of localisation is more concerned with devising an entirely new approach to product development and coming up with entirely new products. This requires good knowledge of local markets and local know-how.

Products adapted to one set of local market conditions and needs can be exported to other emerging markets with comparable needs. The attractive cost-to-performance ratio of these successful new products means that some of them are able to compete with expensive and, in some cases, over-engineered solutions from highly industrialised countries. In economically straitened times, customers are more sensitive to price and prefer to invest in cheaper, pared-down versions of products that fulfil all the necessary basic functions but forego unnecessary additional functions.

This opens up a number of options for using local production in new growth markets to service global markets and/or existing core markets (the 'local for global' approach).



say that localising existing products will be a major growth factor over the next 3 years



"Going truly global means total localisation. Absolutely everything is transferred to country units. Market development takes place within the markets themselves."

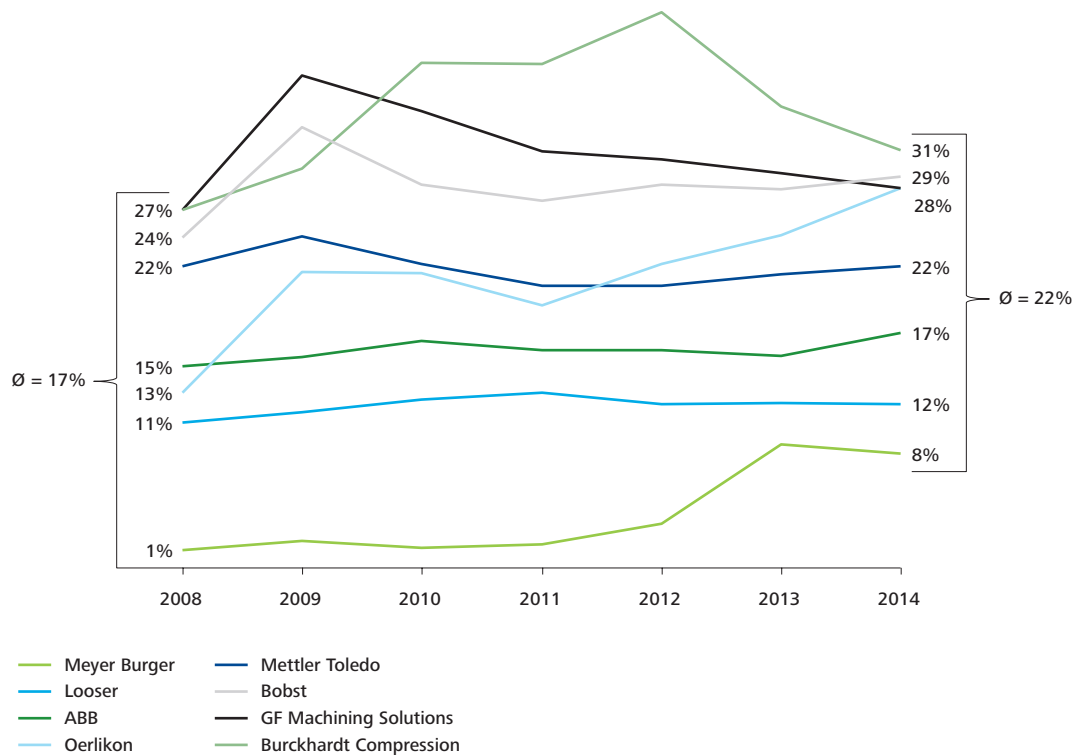
Markus Pölzl
Head of Commercial & Financials Grain Milling, Bühler

3
Developing new services

2.3. Developing new services

For many MEM companies, their services and components business has become a profitable business area over recent years and now accounts for more than 20% of total sales in some cases (see Chart 22). Services business therefore represents not only an economically beneficial expansion of profit models, but also a potential steady source of income and scope for further company growth during lean periods.

Chart 22. Growth in services and components business of Swiss MEM companies²³
[2008-14, in % of total sales]



Swiss MEM companies that are expanding their services provision on an ongoing basis and becoming comprehensive service providers are following the trend to 'servitisation' of the manufacturing industry that has been a global phenomenon over the last few years.



say that developing services business will be a major growth factor over the next 3 years



Developing services business

Against this backdrop, it is unsurprising that almost half of the Swiss MEM companies surveyed (47%) regard further development of their services business as a major strategy for growth over the next three years, 16 percentage points more than those reporting that it has been a factor in growth over the last three years. Slightly more large companies than small and medium-sized companies are likely to cite expansion of services business as a driver of growth (50% as against 43% and 45% respectively).

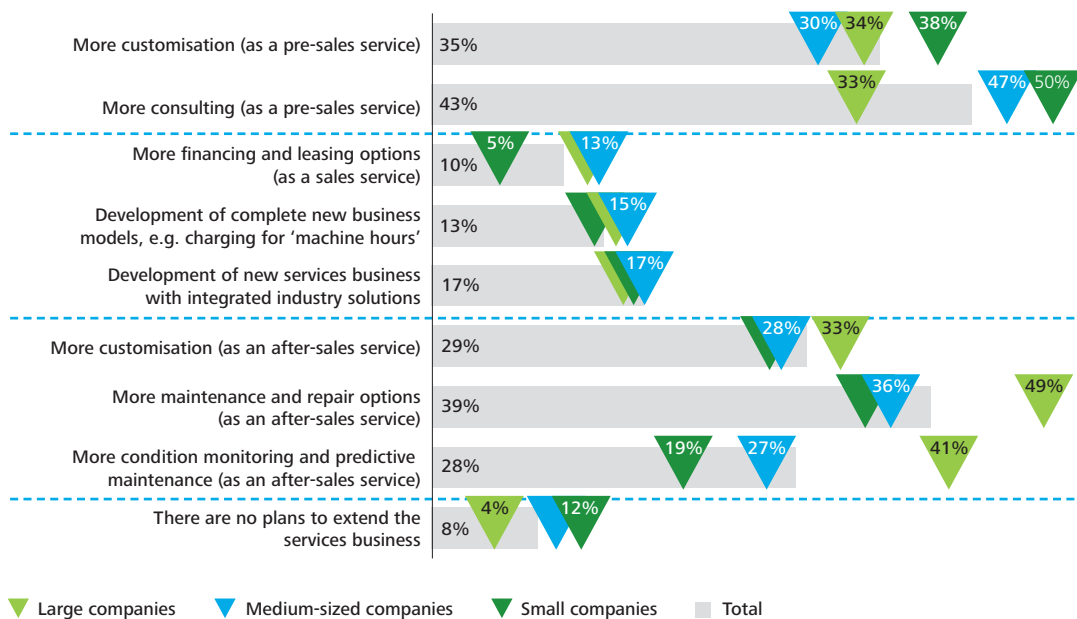
MEM companies as whole are increasingly becoming comprehensive service providers. Alongside the older service models – plant maintenance and repair – new and add-on services are gaining in importance, such as customisation and advisory services and new services business solutions, including integrated service models and operator models.

Overall, 43% of the MEM companies surveyed plan to expand their services business in the area of **consultancy (as a pre-sales service)** (see Chart 23). Breaking this figure down by company size reveals, however, that around half of all small and medium-sized companies say they will be adopting this strategy (50% and 47% respectively) compared with one third of all large companies (33%). Comprehensive pre-sales consulting services are an area in which many MEM companies still differentiate themselves from their competitors and create added value for their customers, which is an essential part of their business. Expansion of services business as a key source of earnings also, however, takes other forms.

“Customisation and consultancy are key aspects of new services for those building plants. Each customer is different and has its own needs and preferences. Advice must be holistic and include aspects of the products to be manufactured in the plants concerned.”

Markus Pölzl
Head of Commercial & Financials
Grain Milling, Bühler

Chart 23. Survey results: How do you plan to grow your services business over the next few years?²⁴



“Innovations that enable ‘all in one’ solutions represent an enormous customer benefit. Selling machinery together with services is also an excellent USP with which companies can differentiate themselves from their competitors.”

Martin Meier
CFO, Robatech

One in three MEM companies – and particularly small companies (38%) – believe greater **customisation as an add-on service** is a possible pre-sales service area for expansion. Large companies are more likely than SMEs to focus on customisation as an after-sales service, with 33% of respondents citing this as a strategy. Many MEM companies also see compiling individual proposals and service models as conferring competitive advantage that will enable them to retain their core customers and acquire new ones. Customised solutions in the pre-sales and after-sales service areas represent a move into a new era of customer orientation. Many of the experts we interviewed said that successful services strategies always focus on long-term customer values and need to span the entire life cycle of products, including end-of-life solutions.

“Operator models, in which companies not only sell machinery and plant but also operate it on behalf of their customers, are often difficult for SMEs to implement because of a lack of financing power.”

Werner Schmidli
CEO, Schlatter

“Finance can be a major problem in emerging markets. Specialised financing and leasing solutions are an interesting way of retaining customers and offer a competitive advantage.”

Werner Schmidli
CEO, Schlatter

Large companies are more likely than small and medium-sized companies to report plans to expand their **maintenance and repair service provision** (49%, 34% and 36% respectively). This strategy also represents an opportunity for differentiation from competitors. Customer-specific ‘all in one’ solutions are becoming particularly popular here.

Condition monitoring and predictive maintenance as part of the digital transformation of the manufacturing industry offer enormous potential for the future. Large companies are much more likely to choose this strategy (41%) than small and medium-sized companies (19% and 27% respectively). Digital condition monitoring enables possible errors and faults to be detected at an early stage, avoiding costly downtime. Industry 4.0 solutions in the services area thus offer significant added value for customers and boost the competitiveness of the companies offering such services.

The top models in solution-oriented services business are a development of an entire **new services business with integrated manufacturing solutions** (cited by 17% of respondents) and **completely new business models**, such as supplying ‘machine hours’ rather than entire machines and including maintenance in the package (cited by 13%). This area remains relatively under-developed, although some sector experts expect it to lead to significant differences between companies. If companies wish to lead the field here, the key factor will be their ability to develop innovative financing models. The successful business model developed in the aviation industry, in which engine manufacturers have shifted away from selling engines and now sell airlines ‘power by the hour’, could be transferred across to other sectors. In this model, the manufacturer retains ownership of plant or machinery and remains responsible for repairs and maintenance; all the customer pays for is actual operating hours.

Greater provision of finance and leasing is cited by just 10% of those surveyed as a possible area for expansion. One reason for the relatively small proportion of survey respondents who see this as offering potential for expansion is the fact that many MEM companies do not offer such services themselves; because of the risks involved, they outsource them. Only a few MEM companies are currently in a position to offer their own financial services. In contrast with the developed markets, where third-party finance can be arranged fairly easily, companies in the emerging markets may face difficulty in finding such services. Helping their customers find a way round this problem may be a way in which MEM companies can set themselves apart from their competitors.

Development of services business is highly relevant to MEM companies, as evidenced by the fact that only 8% of those surveyed have no plans to develop their services business further. It can be assumed from this that 92% of the MEM companies surveyed do plan some kind of expansion of their services business as a growth strategy.

New or alternative sales and distribution channels

The provision of new services is often accompanied by further development of existing sales and distribution channels. New services provision has to be brought to customers in new ways, for example through the increasing digitalisation of sales and distribution networks opened up by new industry 4.0 services.



say that new sales and distribution channels will be a major growth factor over the next 3 years



4

Innovating beyond products

It is, therefore, not surprising that 44% of the companies surveyed consider new or alternative sales and distribution channels to be a key strategy for growth over the next three years, 18 percentage points more than those reporting that this strategy has been a major growth factor over the last three years. This will be an increasingly important strategy in the future. New sales and distribution channels are, moreover, seen as crucial by all MEM companies, irrespective of size.

For company leadership, this means developing a new corporate culture and shifting away to some extent from the traditional engineering culture, in which companies focus on better products with more features, and towards an approach to using operational advantages and consultancy as a selling point.

2.4. Innovating beyond products

In a globalised economy, countries with above-average levels of pay and standards of living find it more difficult to **compete on cost**. This is particularly the case with Switzerland, a small and open economy with high pay levels, so innovation is crucial to prosperity and growth.

For many years, Switzerland has **led the field in terms of innovation**, regularly topping the World Intellectual Property Organisation innovation rankings and the Innovation Sub-Index of the World Economic Forum²⁵. Now, global competition is intensifying and other countries are catching up as leaders in the field of innovation. Breaking down innovation by sector reveals some divergences, however.

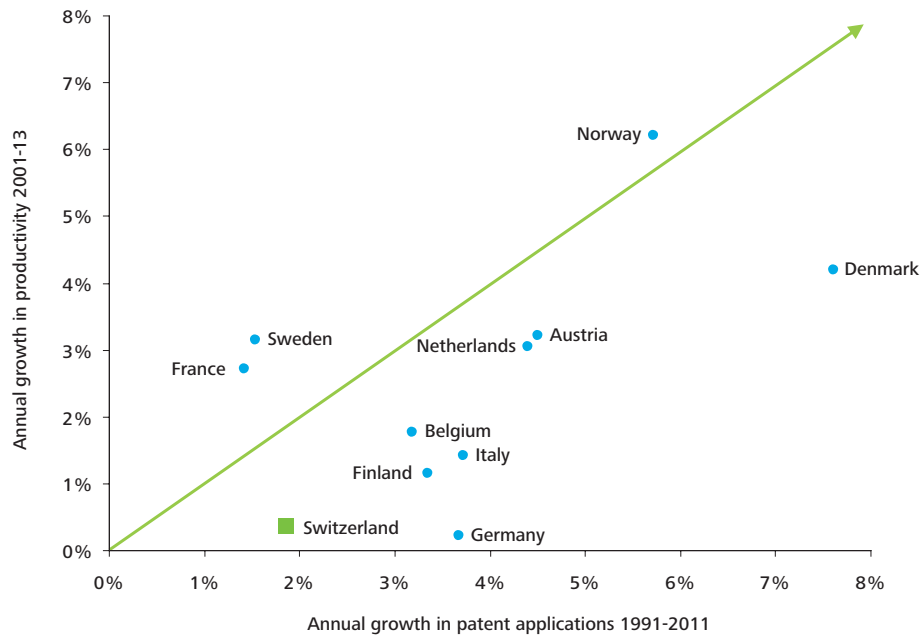
The European Commission's Innovation Union Scoreboard shows that in a number of key sectors, Switzerland is well equipped for innovation.²⁶ Around two-thirds of all industrial value creation is generated by sectors that rely heavily on technology and innovation, and this looks set to increase further. Growth in real-term gross value creation by all Swiss high-tech sectors (including pharmaceuticals, biotechnology, clock- and watch-making, medical devices, chemicals and parts of the capital goods industry) was around 4% a year between 2004 and 2014. Excluding these high-tech sectors, Swiss industry as a whole would actually have contracted slightly instead of growing by an average of 2.4% a year. However, what makes innovative industries competitive and successful is, ultimately, their high productivity level. **Above-average productivity is essential to global success** in a high-wage environment. Over recent years, the high-tech sectors in Switzerland as a whole have been able to boost their productivity by 2.4% a year, compared with an average decline in productivity of 0.2% a year in non-high-tech sectors, including consumer goods and the metalworking industry.

In some sectors, there are clear indicators that companies need to become even more innovative if they are to remain internationally competitive. This is the case, for example, with the Swiss mechanical engineering sector, as is illustrated by comparative figures showing weak growth in productivity and patent activity in contrast with the sector's international competitors (see Chart 24).²⁷

There is a modest positive correlation between growth in gross value creation and growth in patent applications for the mechanical engineering sector. Countries submitting more patent applications often have higher productivity growth. Switzerland tends to be at the lower end of the spectrum when it comes to **growth in both patent applications and productivity**. The comparatively small growth in patent applications in the Swiss mechanical engineering sector may be a function of the way the sector is structured: as well as many companies producing clearly high-tech innovations, Swiss mechanical engineering still has a considerable number of 'traditional' companies, and this tranche of the sector – including companies producing printing and textile machinery, for example – is undergoing major structural change.

It may be that the high proportion of machinery produced for traditional sectors – that is, sectors that are less likely to innovate – is inhibiting the average innovation profile of the Swiss mechanical engineering sector as a whole.

Chart 24. Swiss mechanical engineering in international comparison²⁸
 [Growth in patent applications and real labour productivity]



The Swiss mechanical engineering sector illustrates the need for the Swiss MEM industry to innovate continuously if it is to remain internationally competitive. In global manufacturing, the trend in innovation is towards **development of new value propositions** and **disruptive innovations** that go beyond the traditional concept of product and process innovation.

+45% +15 PP

say that developing new value propositions will be a major growth factor over the next 3 years



Developing new value propositions

Almost half of all Swiss MEM companies surveyed (45%) regard the development of new and innovative value propositions as an important strategy for growth over the next three years, 15 percentage points more than those reporting that it has been a major factor in their growth over the last three years. Developing new value propositions is, therefore, becoming considerably more important as a future strategy.

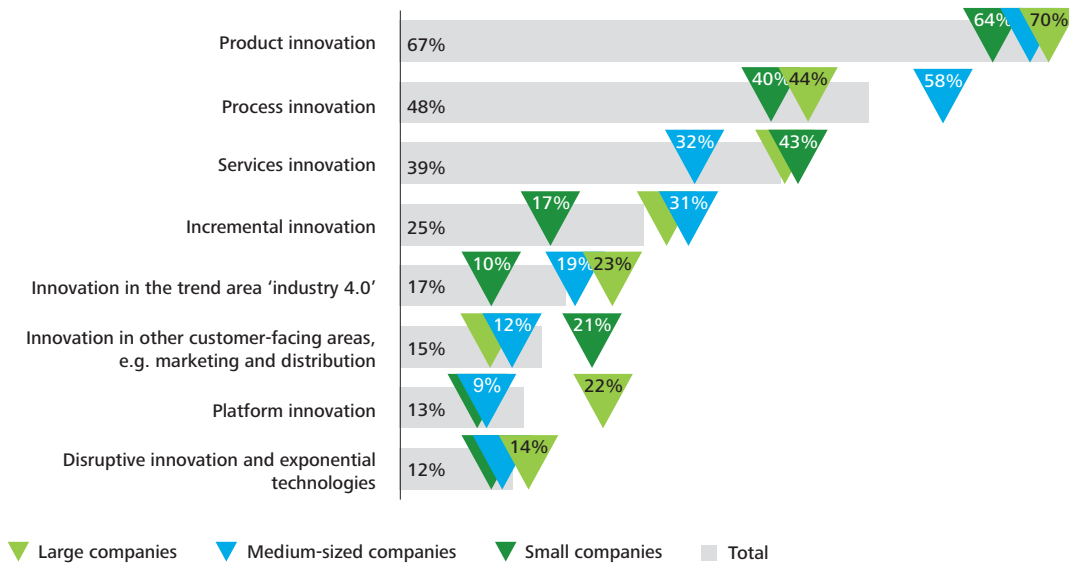
In response to a question concerning the focus of their innovation strategy, 67% of companies cite **product innovation** as the most important area (see Chart 25). This is unsurprising, given that the Swiss MEM industry traditionally has a good reputation for developing new products and in incrementally improving existing products.

“Incremental innovation is the foundation for all future innovation and will continue to be important in the future.”

Walter Steinlin
 President of the Swiss Commission for Technology and Innovation (CTI)

However, many Swiss MEM companies are also considering innovation in further areas beyond product level. **Process innovation** (cited by 48% of companies) and **services innovation** (39% of companies) are important elements in any innovation strategy, with lean production, flexible manufacturing, on-demand manufacturing and localisation of products and services representing good examples of new and innovative processes in manufacturing that do not focus solely on the product. In the case of services innovation, the trend is towards add-on services that create added value for customers and highly customised service solutions (see Section 2.3.).

Chart 25. Survey results: What will be the focus of your innovation strategy?²⁹



As expected, large companies are more likely to focus on over-arching **platform innovation**, with 22% citing this as a strategy as against 8% of small companies and 9% of medium-sized companies. Platform innovations often go hand in hand with a new generation of technologies, which help to keep existing product lines competitive and create a new platform for expanding new product solutions and services.

Medium-sized companies, by contrast, are more likely to focus on **process innovation** (58% of companies surveyed), while small companies prioritise **innovation in other customer-related areas**, such as marketing and distribution (21% of small companies surveyed). The area of sales and distribution channels offers MEM companies a wide range of opportunities for new and innovative approaches to customer interaction and retention, facilitating further growth.

Innovation in the **trend area of industry 4.0**, an area which many companies are now focusing on, is also a more important element in the innovation strategy of large and medium-sized companies (23% and 19% respectively) than of small companies (10%), often because small companies have fewer resources. Our interviews with experts show that this area offers substantial opportunities for Swiss MEM companies to differentiate themselves from their competitors and to improve their positioning in global competition.

Large companies are also slightly more likely to focus on **disruptive innovations and exponential technologies** (cited by 14%), because large companies are able to invest more in putting new resources into these areas.

“Innovation strategies should embrace an increasing range of aspects. On the one hand, incremental improvements and development of new products and services. On the other hand, disruptive technologies that take five years to produce success can also play a crucial role.”

Massimo Muzzi
VP Business Development, ABB Robotics

“Cooperation between companies and academia in the area of innovation has increased over the last 10 years. Not only universities but also universities of applied sciences and a vibrant start-up scene are boosting cooperation.”

Walter Steinlin
President of the Swiss Commission for Technology and Innovation (CTI)

“An innovation partnership between small and large companies and joint product development can be very fruitful. Small companies often have a greater capacity for innovation and can innovate more rapidly. In return, small companies can benefit from having access to the global sales networks of their larger partners.”

Markus Pözl
Head of Commercial & Financials Grain Milling, Bühler

“Manufacturing will in future be moving even more into data-driven areas that enable comprehensive data access. Companies will have to react to this trend if they are to keep their finger on the pulse of current developments.”

Ursula Soritsch-Renier
CIO, Sulzer



say that making use of disruptive innovation and exponential technologies will be a major growth factor over the next 3 years



“At the moment, we are going through a materials revolution, an IT revolution and a process revolution all at the same time, something that has never happened before. Industry 4.0 represents an enormous opportunity for Swiss manufacturing.”

Edwin Eichler
Chairman of the Board of Directors, Schmolz + Bickenbach

Using disruptive innovation and exponential technologies

‘Disruptive innovations’ are innovations that offer the potential to replace completely existing technologies, products and services. **Exponential technologies** are technologies that grow exponentially in line with ‘Moore’s law’;³⁰ examples include intelligent robots, autonomous drones, highly-developed sensors, artificial intelligence (AI) and 3D printing. Both concepts – disruptive innovations and exponential technologies – represent the potential to transform manufacturing industry fundamentally in terms of both products and services, and technology. Companies will have to adapt to a more rapid pace of change and modify their industrial processes more quickly if they are not to be abruptly side-lined by new developments and competitors entering their sector.

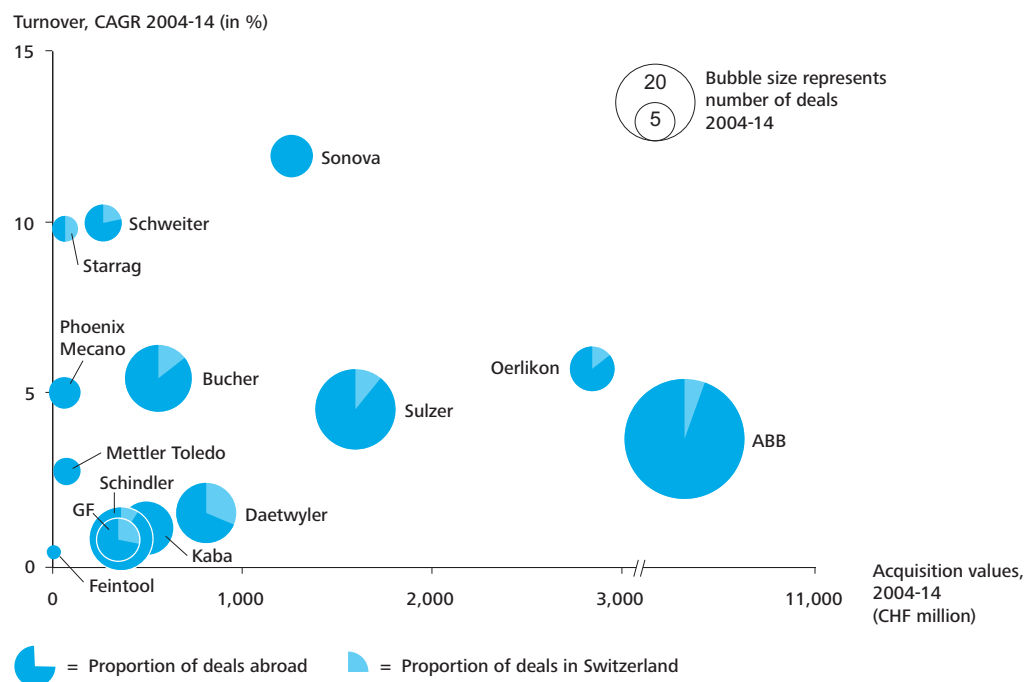
Around one-third of Swiss MEM companies surveyed (35%) expect **disruptive innovations** and exponential technologies to be a major factor in their growth over the next three years, 12 percentage points more than those reporting that these areas have been a major factor in growth over the last three years. Large companies are slightly more likely than SMEs to favour this strategy (37% as against 33%). However, the difference is not substantial, and these new developments will have the same impact on large companies as on SMEs.

2.5. Growing inorganically

Many Swiss MEM companies are actively engaged in mergers and acquisitions activity. Over recent years, there has been a greater focus in terms of inorganic growth on countries outside Switzerland than on the domestic market (see Chart 26). Factors involved here include the small scale of the domestic market, the global operation of large companies, the increasingly global orientation of medium-sized companies, and stronger growth in new global markets.

Chart 26. Acquisition activities of Swiss MEM companies³¹

[2004-14, growth in turnover, acquisition values, number of deals abroad/in Switzerland]



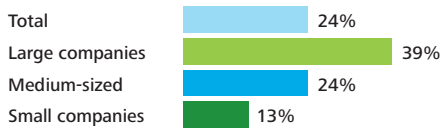
Note: only transactions with a value of USD 5 million or more are included. CAGR = compound annual growth rate (average annual growth).

Acquisition activity in the Swiss MEM industry has slowed somewhat over recent months because the strength of the Swiss Franc has resulted in companies making fewer domestic transactions than in recent years, and because potential candidates for Swiss-based acquisitions by foreign investors suddenly became more expensive when the EUR/CHF exchange rate floor was removed in January 2015.³²

In contrast, the strength of the Swiss Franc has given Swiss MEM companies greater purchasing power abroad and created a greater incentive to acquire foreign companies as a way of ensuring continued growth. This is true not only of large companies but also of many SMEs. Provided they have a robust balance sheet and high levels of liquidity, SMEs can resist the pressure on margins and sales and diversify abroad through acquisitions.

24% +7 PP

say that mergers and acquisitions will be a major growth factor over the next 3 years

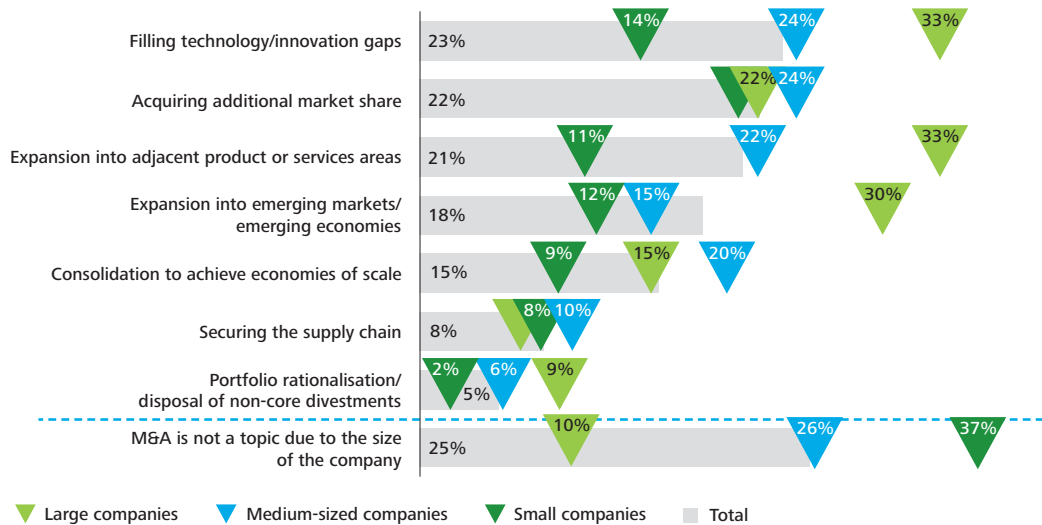


Mergers and acquisitions

Against this backdrop, it is not surprising that 24% of Swiss MEM companies surveyed regard growth achieved through mergers and acquisitions as being important over the next three years, seven percentage points more than those reporting that M&A activity has been a major factor in growth over the last three years. As a strategy, mergers and acquisitions will, therefore, be slightly more important in future. However, many more large companies than small and medium-sized companies see mergers and acquisitions as a core strategy for future growth (39% as against 13% and 24%).

The MEM companies surveyed see **filling technology and innovation gaps** (23%), **acquiring additional market share** (22%), **expanding into adjacent product or services areas** (21%) and **expanding into new global markets** (18%) as the main drivers of M&A activity over the next 12 months (see Chart 27). With the exception of acquiring additional market share, which is relevant to all MEM companies irrespective of size, the remaining three areas (technological gaps, new areas, and new markets) are more likely to be pursued by large companies.

Chart 27. Survey results: What will be the main drivers of M&A activities for your company over the next 12 months?³³



Buying in new technologies and innovations may be a quicker and cheaper route to growth than developing them in-house. The same is true of diversification into new product or services areas: acquisitions make it possible for companies rapidly to acquire new know-how and expert knowledge.

Mergers and acquisitions may also be a way for companies to acquire additional market share and expand into emerging markets. Creating production capacity or developing existing capacity is costly and time-intensive, so acquiring a competitor company can be a very successful move as long as integration is handled properly. Access to existing resources and distribution channels may make market entry quicker or cheaper.

Compared with large companies, medium-sized companies focus slightly more in their mergers and acquisitions activity on **consolidating economies of scale** (20% of companies surveyed) and on **securing their supply chain** (10% of companies).

By integrating suppliers into their own production cycles, MEM companies can ensure the supply of key components and preserve their autonomy, a meaningful strategy in economically difficult times when small suppliers are coming under economic pressure or considering whether to cease trading altogether. Acquisitions of this kind may also improve competitive advantage in global supply chain networks and drive further global expansion.

New alliances and partnerships

Strategic alliances, partnerships and cooperation agreements are often interesting alternatives to mergers and acquisitions. They represent a lower potential for risk in terms of entry into new global markets, and in some emerging markets (such as China, India and the Middle East), existing regulation can make it difficult, if not impossible, for MEM companies to acquire entire companies or to set up their own subsidiaries. Alongside holding companies and joint ventures as a first step towards an eventual acquisition or creation of a subsidiary, strategic alliances, partnerships and cooperation agreements are interesting additional strategies for market entry. They enable companies to benefit from their partners' knowledge of local markets, extensive networks and familiarity with local culture.

Two in every five companies surveyed (40%) believe that new alliances and partnerships will be a major factor in corporate growth over the next three years, 18 percentage points more than the number reporting that alliances and partnerships have been a major factor in growth over the last three years, and almost twice as many as those who believe that mergers and acquisition will be a major factor in future growth. Nearly half (45%) of large companies mention alliances and partnerships, slightly more than medium-sized companies (43%) and considerably more than small companies (32%).



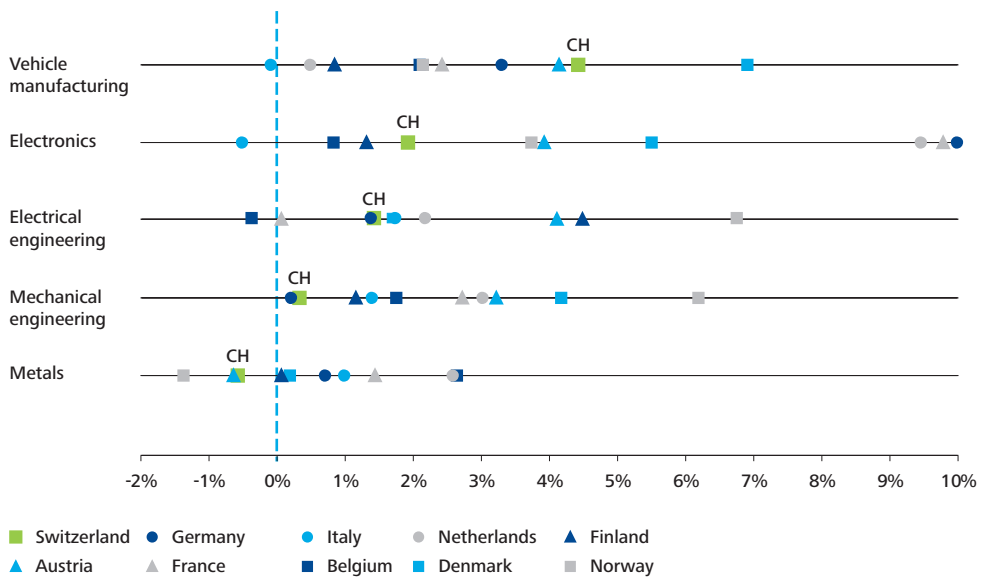
2.6. Leveraging operational excellence

The Swiss MEM industry still needs to improve its labour productivity. Measured by gross value creation per hour worked, growth in **labour productivity** across the Swiss MEM industry has been low compared with the international average since 2001 and has underperformed that in Austria, Denmark, Germany and the Netherlands (see Chart 28).

Given that these countries started from a comparable position (and, in some cases, from a higher base), convergence effects do not adequately explain Switzerland's weak performance. Nor can its below-average growth in productivity be attributed to the impact of the financial crisis and the sharp rise in the value of the Swiss Franc. Throughout the period under consideration, productivity has virtually flatlined in Switzerland.

The main drivers of higher productivity are better capital resources and innovation, with a crucial link between innovation and employees' skills levels. Possible causes for **below-average growth in productivity** in the Swiss MEM industry are, therefore, likely to include inadequate investment, a lack of innovativeness and non-availability of highly skilled workers.

Chart 28. Labour productivity in international comparison³⁴
[Real growth 2001-13 by sector]



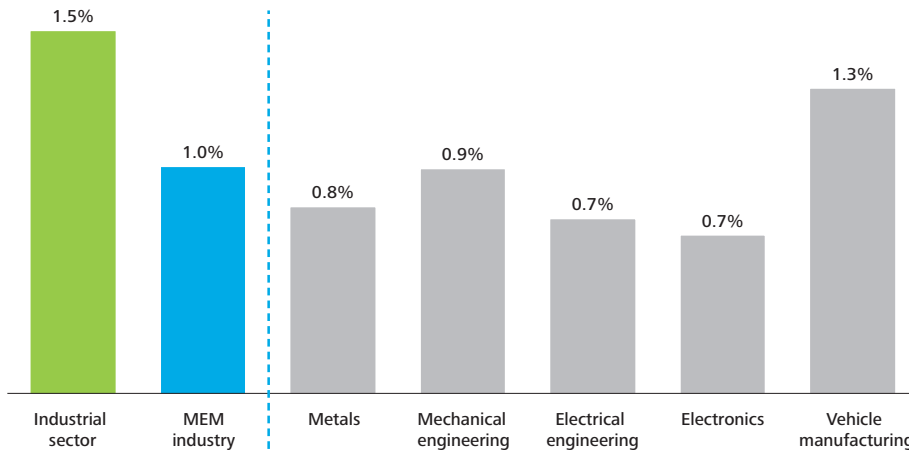
Note: 'Electronics' also includes precision instruments.

The picture within the MEM industry varies widely. While vehicle manufacturing and, with some exceptions, electronics and electrical engineering have achieved reasonable increases in productivity compared with international competitors, the metalworking and mechanical engineering sectors have underperformed their international competitors.

Over the next few years, it is expected that the **structural change** in the Swiss MEM industry will be influenced more by innovation-intensive sectors and growth driven predominantly by higher productivity, rather than by workforce expansion.

The largest increases in productivity across the MEM industry are expected to come from the vehicle manufacturing and mechanical engineering sectors. The MEM industry as a whole looks set to achieve productivity growth of around 1.0% a year, while productivity of the total industrial sector, including chemicals and pharmaceuticals, is likely to grow by 1.5% a year (see Chart 29).

Chart 29. Forecast for real-terms growth in productivity in the Swiss MEM industry³⁵
[2015-20, in %]



Note: 'Industrial sector' also includes the chemical and pharmaceuticals industry; 'Electronics' also includes precision instruments.

While many Swiss companies have made progress towards optimising their operational excellence and have improved productivity over recent years, many also still have considerable work to do in this area. Comprehensive efficiency programmes cushioned companies against the negative impact of the 2008/09 global financial crisis and recession, and the subsequent rise in the value of the Franc before the Swiss National Bank introduced the exchange rate floor for the Franc against the euro in September 2011.

Ongoing productivity improvement is a 'make or break' issue for the Swiss MEM industry as a whole. Removal of the exchange rate floor against the euro in January 2015 has again brought **programmes to increase efficiency and reduce cost** to the forefront of many companies' strategy (see also Section 1.2.). These operational measures are creating further opportunities for growth and greater scope to improve margins in the long term.

Putting in place solid platforms for operational excellence

It is not surprising that around one in three Swiss MEM companies surveyed (32%) see putting in place solid platforms for operational excellence as a central strategy that will be a major factor in growth over the next three years, seven percentage points more than those reporting that such platforms have been a major factor in growth over the last three years. This will, therefore, be a slightly more important strategy for the future. Large and medium-sized companies are much more likely than small companies to focus on operational excellence (44% and 32% of companies surveyed respectively as against 20%).

In response to a question about the areas of their value chain or business in which MEM companies have already successfully implemented operational excellence programmes, more than half (54%) give **production** as the most important area, followed by **procurement and purchasing** (37%) (see Chart 30).

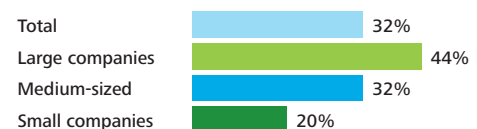
Large companies led in both these areas, with 75% having already achieved operational excellence in production and 52% in procurement and purchasing.

"Operational excellence is an ongoing and essential process."

Martin Meier
CFO, Robatech



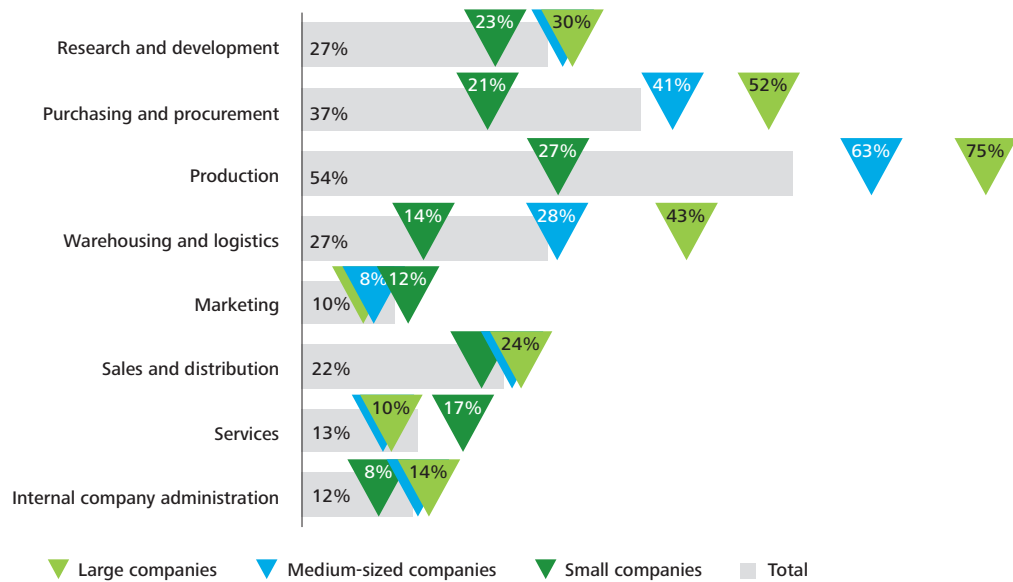
say that creating solid platforms for operational excellence will be a major growth factor over the next 3 years



“Operational excellence programmes are common among manufacturing companies. In the past, initiatives of this kind focused primarily on optimising production; in future, the emphasis is more likely to be on other areas of the company, such as on the white-collar labour sector.”

Massimo Muzzi
VP Business Development, ABB Robotics

Chart 30. Survey results: In which areas of your company have you successfully implemented operational excellence programmes?³⁶



The production process is one of the areas in which MEM companies have traditionally long achieved the largest increases in productivity through a range of measures including lean production, automation, outsourcing, offshoring and nearshoring. Small companies, by contrast, see the areas of production and procurement/purchasing as representing further potential for additional optimisation of operational processes.

Two further areas in both of which 27% of the MEM companies surveyed have already implemented operational excellence programmes are **research and development (R&D)** and **warehousing and logistics**. Large companies are more likely than small companies to prioritise operational excellence in warehousing and logistics because of the size of their logistical networks and the potential this represents for optimisation.

Slightly more than one in five companies surveyed (22%) have also made their **sales and distribution** more efficient, 13% have optimised their **services area**, and 12% have made improvements in the area of **internal company administration**. Seventeen per cent of small companies cite measures to optimise their services area, making them slightly more likely than medium-sized or large companies to prioritise this area. When optimising back-office functions, companies often regard a shared services centre as a good way of keeping down costs and optimising processes to free up resources for further growth.

Alongside the creation of solid platforms for operational excellence in individual business areas, many MEM companies also see the creation of agile and flexible supply chains as a further strategy for making use of opportunities for growth.

“The most important factors in growth are operational excellence and the production of good, innovative products that meet customers’ needs. Then we will be able to move into new markets with our customers.”

Edwin Eichler
Chairman of the Board of Directors, Schmolz + Bickenbach

“Operational excellence touches on a wide range of areas and interfaces in procurement, development, assembly and sales. Avoiding waste should be an integral part of corporate culture, which means the entire workforce undergoing a consciousness shift.”

Werner Schmidli
CEO, Schlatter

Creating agile and flexible supply chains

Thirty-seven per cent of the MEM companies surveyed believe that creating agile and flexible supply chains will be a major factor in their company's growth over the next three years, seven percentage points more than those reporting that this strategy has been a major factor in growth over the last three years. Therefore, measures on supply chains will gain slightly in importance in the future. Large and medium-sized companies are more likely than small companies to create agile and flexible supply chains (40% and 39% of companies respectively as against 31%).

Agile and flexible supply chains may also be a major factor in the growth of MEM companies. Responsiveness and flexibility in this area is a route to greater efficiency and productivity; flexible supply chains also provide some protection against the risk of downtime and minimise variability in quality.

Greater demands for global delivery capacity and pressure to reduce stock levels have increased the demand for flexible supply chains, and IT solutions are helping to integrate and synchronise processes. Such solutions are key to 'global for local' production and mass customisation, since they significantly reduce time spent on planning (see also Sections 2.1. and 2.2.).



say that creating agile and flexible supply chains will be a major growth factor over the next 3 years



"Industry 4.0 solutions make it easier to connect product data and customer data. Increases in efficiency and in quality are possible and can help customers to improve their productivity."

Edwin Eichler
Chairman of the Board of Directors, Schmolz + Bickenbach

3. Checklists for growth of manufacturing companies

Successfully applying these strategies for growth relies on a systematic approach to every stage, from analysis and planning through to implementation. And rapid implementation means tackling issues promptly and proactively.

The following checklists are intended to serve as a source of ideas to kick-start the process of identifying scope for optimisation in your company and as initial guidance on how to achieve it. Where you are unable to answer particular questions in the left-hand column with a clear 'yes', the right-hand column provides a few initial pointers for resolving the problems. Good luck!

1 Driving customer integration	Are you able to answer the following questions on behalf of your company?	If not, then ...
	<input type="checkbox"/> Do we know who our customers' customers are and how successful our customers are in serving them?	Identify the end-customers' needs and position our services in collaboration with our customers
	<input type="checkbox"/> Do we know all the customer contact points right along the value chain?	Draw up a list of all customer contacts, from research and development to maintenance and repair, with targets and areas of responsibilities
	<input type="checkbox"/> Are we making consistent use of all those points of contact with our customers and tailoring what we do to them?	Systematically collect, assess and analyse all customer feedback
	<input type="checkbox"/> Do we understand all our different customers with their diverse preferences and needs?	Segment and describe direct and indirect customers, including marketing intermediaries, and assess how we can create added value for them
	<input type="checkbox"/> Do we know how our competitors seek to involve and retain customers?	Accentuate differentiation from competitors
	<input type="checkbox"/> Are we collecting customer group data in a targeted way so that we can use analytical tools to identify their needs promptly and understand them in detail?	Proactively identify customer benefit and ongoing adaptation of service packages involving appropriate analytical tools
	<input type="checkbox"/> Are we making use of the scope for digitalising all our information to inform decisions on how we can improve our customer service?	Provide tools to gather and process data and information as feedback for the process chain
	<input type="checkbox"/> Are we using all our employees (i.e. not only those in sales) to create a good customer experience?	Develop an integrated customer ethos and train all relevant customer contacts
	<input type="checkbox"/> Are we systematically measuring customer satisfaction and using feedback as an opportunity?	Define 'moments that matter' and devise a strategy to use these for customer involvement and retention
	<input type="checkbox"/> Are we systematically collecting data on our products so that we can make performance improvements for our customers?	Connect machinery and data analysis to make improvements in customer services (a strategy for the 'Internet of Things')
	<input type="checkbox"/> Are we using customer recommendations – including viral comments – to acquire new customers?	Create platforms to enable our customers to share views and experiences and to facilitate incentivisation, customer recommendations, automation, etc.
	<input type="checkbox"/> Are our customers involved in our design of customer services?	Devise a strategy for using open innovation, crowdsourcing, affinity groups for customers, etc.
	<input type="checkbox"/> Are we involved in our customers' research and development?	Systematise collaboration with customers on development
	<input type="checkbox"/> Are we paying systematic attention to all our customers' wishes with regard to customisation and adaptation of our services?	Develop calculations for cost/benefit analyses with regard to customised service provision and develop new business models that allow for customisation and customer integration



Are you able to answer the following questions on behalf of your company?	If not, then ...
<input type="checkbox"/> Do we know the size and growth potential of new global markets?	Consult relevant macroeconomic and industry-specific indicators (e.g. World Bank, regional development banks, national banks, statistical agencies, etc.)
<input type="checkbox"/> Do we know the customer structure and size of the customer base in relevant new markets?	Segment customers in line with key criteria (e.g. size, market power, market share, innovativeness or possible margins)
<input type="checkbox"/> Do we understand the background and environment of new markets and the risks they represent?	Critically analyse the background and environment of any new market (e.g. legal protection and patent protection) and its risks (e.g. political system, currency, availability of resources/energy, adequate supply of suitably skilled staff, etc.)
<input type="checkbox"/> Do we know who our competitors are in the new markets that are most important to us?	Segment competitors by relevant criteria (e.g. size, market power, market share, innovativeness or control of distribution channels)
<input type="checkbox"/> Have we defined our market entry and growth strategy?	Evaluate advantages and disadvantages of a range of models including agents, our own sales organisation, our own manufacturing company or joint venture (essential in some countries)
<input type="checkbox"/> Is it strategically clear whether we develop everything ourselves or whether we acquire it in the local market?	Identify possible targets in the new markets and compare purchase prices with the costs of developing everything ourselves, taking into account qualitative criteria such as risk and speed of market entry
<input type="checkbox"/> Is it clear in terms of our planned market entry whether we enter alone or with one or more customers?	Assess whether the new market can be developed independently and whether experience of customers on the ground means that we can build a local business or need to locate a joint venture partner
<input type="checkbox"/> Do we have all the functions locally that we need for individual business models in our global markets or do we want to operate with a lean structure, outsourcing or relying on shared services centres?	Clearly structure business models, from autonomous legal entity to lean marketing organisation without conclusion of contracts
<input type="checkbox"/> Do we intend to produce goods locally in our new markets for the global market ('local for global' production)?	Assess whether local specialist expertise or cost structures offer advantages for the global market
<input type="checkbox"/> Do we know what local needs are and are we adapting our existing products to these new markets?	Identify needs, adapt products and/or create a market for existing products, and define which products will be used to enter new markets
<input type="checkbox"/> Have we created the right conditions to protect our products and technologies?	Clarify statutory and commercial opportunities and risks abroad
<input type="checkbox"/> Have we taken the fiscal and financial precautions to ensure that cash flows smoothly?	Identify ways to repatriate profit and capital both as part of normal trading and in the case of exit from the market

3

Developing new services

Are you able to answer the following questions on behalf of your company?

- Do we know how our customers' service needs are changing over time?
- Do we know our customers' latent and future service needs?
- Do we know what successful service provision our competitors are offering?
- Do we have a service strategy?
- Do we have the ability to develop and manage new services?
- Do we have the ability to sell new services?
- Are our customers involved in our development of new services?
- Do we have the relevant information about our customers to enable us to offer them new services?
- Is our organisation driven by more than just products and engineering?
- Are we selling more than just products or product use to our customers?

If not, then ...

- Analyse services business in relation to changes in areas such as commissioning, maintenance and repair, etc. and further development
- Conduct customer surveys and competitor analyses
- Accentuate differentiation from competitors and fill any gaps
- Develop methodology for defining goals for services (customer retention, additional income, differentiation of access), and services that are tailored to market needs, i.e. are sector- or customer-specific
- Develop customer and sector knowledge, and service development process and portfolio management arrangement
- Develop consultative selling skills (people, processes and systems)
- Make use of modern technologies, such as open innovation, to integrate customers in the development process
- Digitally network the value chain with feedback systems to inform service development
- Rethink the business model, moving away from the product area as a profit centre and towards sales and services business as a profit centre
- Create the cultural and financial conditions to enable the company to offer operator models

4

Innovating beyond products

Are you able to answer the following questions on behalf of your company?

- Is our research and development solely related to our product range or is it broader?
- Does our company take company structure and processes into account in thinking about innovation?
- Are we innovating in our profit model and in our networks?
- Have we made full use of the product system and product performance?
- Are we making use of all opportunities for sales and services in the company?
- Are we making enough use of our brand?
- Are we involving our customers sufficiently in value creation?
- Are we sure that there is no resistance within our organisation to new ideas?
- Do we have the right operational model for innovation?
- Do we have the necessary skills within the company to innovate?
- Are we using new technologies to bring disruptive innovations to market?
- Are we using all the resources we have available to innovate successfully?

If not, then ...

- Incorporate innovation into all areas of value creation – i.e. also the business model, the product platform and customer experience
- Consider process innovations (flexible manufacturing, crowdsourcing, lean production, etc.) or structural innovations, such as outsourcing, decentralised management, late-stage customisation, etc.
- Devise strategies to include new profit models, such as subscriptions, memberships or auctions, and to integrate the wider corporate network through alliances, franchising, supply chain management, open innovation, etc.
- Check whether products are easy to use and environmentally friendly, how they can be customised, and whether they are modular, expandable, etc.
- Assess the extent to which new and electronic marketing sales and marketing channels can be used and whether the company is offering the full range of services that customers want
- Use opportunities for co-branding, private labelling, certification and brand expansion
- Check personalisation of products, create a unique customer experience, involve customers in development, use customer complaints as an opportunity for new business
- Targeted creation of space for development and growth of new business areas on the edge of current business activity
- Gear governance (such as budget allocation and incentives), risk capability and innovation portfolio management (such as business case and stage-gate process) to the needs of the market and measure market success
- Create a company-wide culture of innovation, put employee training in place and make financial resources available
- Create opportunities to take advantage of the scope offered by the digital revolution and to minimise risks (such as supply chain disintermediation, new competition from outside the sector, new opportunities for scaling or substantially accelerated life cycles for products and business models)
- Create an innovation ecosystem with a portfolio of relevant partners

5

Growing inorganically

Are you able to answer the following questions on behalf of your company?

- Is our company ready for acquisitions, mergers, strategic alliances or joint ventures?
- Are we regularly checking our own portfolio and asking where we need to play and how we can win?
- Can we pre-structure acquisitions in such a way that they reflect our synergy, financial and strategic aims?
- Do we have the necessary financial resources to make acquisitions?
- Have we evaluated our scope to achieve our goals through embarking on a joint venture?
- Are our corporate processes and infrastructure (including IT and HR functions) appropriate for company acquisitions?
- Have we defined our goals and strategy for acquisitions, such as acquiring new market shares or technologies or expanding into new geographical markets or product segments?
- Do we have enough people with the right skills?
- Have we done enough research and screening (including structured searching for potential candidates for acquisition, compiling brief information, drawing up a longlist and a shortlist, etc.) or do we have the right external partners who can do this for us?
- Do we have guidelines on when we can halt an acquisition and on what grounds?

If not, then ...

- Write an M&A/joint venture manual and instructions for the process of integrating new companies
- Clarify the profitability of the current portfolio of business units and define a strategy for divesting or acquiring new business units
- Coordinate potential transactions with corporate strategy, including acquisition strategy
- Create room for manoeuvre by bringing in outside capital or by acquiring capital on the financial market
- Draw up a joint venture and cooperation strategy and identify possible joint venture partners
- Devise a robust acquisitions platform
- Clarify goals and strategies with owners, Board of Directors and management
- Put in place a company M&A team or a network of partners and experts who will collaborate in the acquisition process
- Compile company market intelligence or create a network of partners
- Establish clear acquisition governance and set a maximum price for acquisitions in advance

Are you able to answer the following questions on behalf of your company?

- Do we understand where operational excellence can bring our company market advantage?
- Are we not excessively complex in a way that restricts operational excellence?
- Have we identified the optimal structure for our company in terms of achieving operational excellence?
- Can we distinguish between the causes and the effects of inefficiency?
- Do we know where our focus should be in improving operational excellence?
- Do we have the right skills to implement operational excellence sustainably?
- Do our employees have the right skills to achieve and sustain operational excellence as a high-performance team?
- Are our employees motivated to strive for operational excellence?
- Do we have the right processes and systems to support operational excellence?
- Have we addressed unwarranted beliefs, for example that 'C' products cannot be restructured/eliminated because of the 'A' customers, and/or political 'sacred cows' that are hampering operational excellence?

If not, then ...

Assess the significance and current level of operational excellence across the value chain, from purchasing to sales, in relation to quality, costs, compliance and responsiveness as measured by customer expectations

Identify drivers of complexity, such as an excessively wide range of products or fragmented production network, and define ways of reducing complexity

Devise systematic target operating models

Use new analytical tools to generate evidence from objective data

Carry out sensitivity analyses to enable priority-setting

Create a culture of continuous improvement based on cross-functional concepts, such as lean management, Six Sigma, etc.

Define a target-oriented recruiting and human resources development system that supports operational excellence initiatives

Create qualitative and quantitative incentive systems

Harmonise processes and systems where this is meaningful and continuously integrate new technologies, such as cloud-based CRM or HR systems

Develop a conceptual model of what the ideal company would look like if it could be created from scratch and identify barriers to developing this model

Endnotes

1. White Paper on Swiss Manufacturing Industry. Challenges and prospects in global competition, Deloitte, December 2012.
2. Deloitte/BAKBASEL survey. Because of rounding, total responses may not always add up to 100.
3. Deloitte/BAKBASEL survey.
4. Deloitte/BAKBASEL and Oxford Economics figures.
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22. Respondents were able to cite up to three regions. Deloitte/BAKBASEL survey.
23. Figures from annual reports, company websites and OneSource.
24. Respondents were able to cite up to three areas. Deloitte/BAKBASEL survey.
25. The Global Innovation Efficiency Index 2015, World Intellectual Property Organization, 2015; The Global Competitiveness Report 2015-2016, World Economic Forum, 2016; Innovation reinvented. Challenges and solutions for Switzerland's manufacturing industry, Deloitte, September 2013.
26. Innovation Union Scoreboard 2015, European Commission, 2015.
27. In common with all indicators of innovation, patents have advantages and disadvantages. It is important to bear in mind that not all inventions ultimately reach the market and are not, therefore, 'innovations' in the strict sense of the term. Moreover, it is difficult accurately to ascribe innovations to specific sectors. Empirical research has shown, however, that patents are often a good predictor of economic performance.
28. Deloitte/BAKBASEL figures.
29. Respondents were able to cite up to three areas. Deloitte/BAKBASEL survey.
30. Moore's law states that the capacity of microchips, bandwidth and computers doubles more or less every 18 months. Industry 4.0. Challenges and solutions for the digital transformation and use of exponential technologies, Deloitte, November 2014.
31. Figures from annual reports, company websites, OneSource und Mergermarket.
32. Swiss SMEs: M&A activities during the first half-year 2015, Deloitte, September 2015.
33. Respondents were able to cite up to three drivers. Deloitte/BAKBASEL survey.
34. Deloitte/BAKBASEL figures.
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