Qt Group

Company report

9/2020

Inderes Comissioned research

Perfection in performance and valuation

We re-iterate our previous target price of 35.0 EUR for Qt Group and lower our recommendation to reduce (prev. Accumulate). Qt's equity story combines a market with large growth potential, a product with proven competitiveness, demonstrated ability in strategy implementation, and a scalable business model. The company is also currently transitioning towards the strong and profitable growth phase of its strategy, which makes the investment profile highly appealing. The rise in share price does however limit share's return potential, even if Qt executes excellently on its strategy to reach its goals.

Competitive product in a market poised for strong growth

Qt is a software developer's tool for application and graphical user interface (GUI) development for various platforms. Qt enables their customers to simplify and speed up product development, enhance user experience, and decrease costs via lighter hardware requirements. Many of Qt's customers' industries are in transformation as their products' value creation is transitioning from hardware towards software, making Qt a long-term strategic technology partner for many of them (e.g. LG, Daimler). The company has invested especially in the embedded devices' software development tool market (Qt development framework), and we expect the graphical interface market to be on the verge of accelerated growth as graphical interfaces gain popularity in everyday devices and applications. We believe that the competitive field in embedded devices is still very open and fragmented.

Good track record in efficient and disciplined strategy implementation

Qt adopted their strategy based on embedded devices and distribution licenses in 2016 and has thereafter invested mainly in ramping up their global sales network and product development. The strategic choices made in 2016 have proven to be correct, earnings development has surpassed expectations, the underlying market is strong, the business model has proven to be successful, and no single strong competitor can be identified in Qt's area of specialization. In the big picture however, seeing that the large investments made in 2017-19 have proven successful, the growth strategy is still in the ramp-up phase and market trends will strengthen in the coming years. We expect this to enable Qt to grow to a significantly larger scale.

Efficient and scalable business model

In Qt's business model, a growing portion of earnings are generated by the customers' end-product sales through distribution licenses. This enables Qt to profit from the explosive growth of graphical user interface devices' sales, which in turn makes the business very scalable. We estimate the total 2025 market potential for Qt's current product portfolio to be about 1000 MEUR, of which Qt will capture about 18% in our estimates. The most lucrative growth opportunities are offered by large enterprise customers in volume consumer electronics, automotive, and industrial sectors.

Priced to perfection

We expect Qt to grow according to their strategy by around 20% annually for the coming years and achieve a 180 MEUR revenue, paired with a 29% EBIT- margin in 2025. With the estimated development, the expected annualized return on investment for the share will be under 7%. In light of this, even if the company meets the expectations of its promising growth story, the investors' expected return will remain modest with the current valuation.

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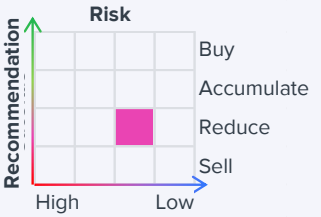
Recommendation and target price



Reduce
Previous: Accumulate

35.0 EUR
previous: 35.0

share price: 35.7 EUR
Potential: -2.0 %

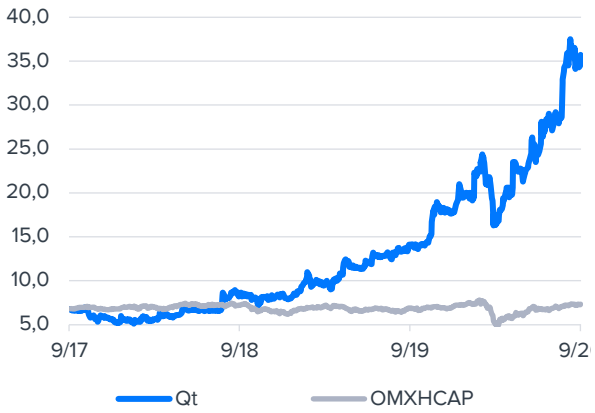
Key figures

	2019	2020e	2021e	2022e
Revenue	58	73	89	110
Growth %	28 %	26 %	22 %	23 %
EBIT (adj.)	0,2	10,8	16,9	26,1
EBIT % (adj.)	0,4 %	14,7 %	18,9 %	23,8 %
Net income	-0,4	8,8	15,2	23,4
EPS (adj.)	-0,01	0,37	0,62	0,93
P/E (adj.)	neg.	97,5	57,8	38,4
Dividend yield-%	0,0 %	0,0 %	0,7 %	1,5 %
EV/EBIT (adj.)	>100	77,6	48,3	30,5
EV/EBITDA	>100	63,2	43,5	28,6
EV/Sales	8,4	11,4	9,2	7,3

Lähde: Inderes

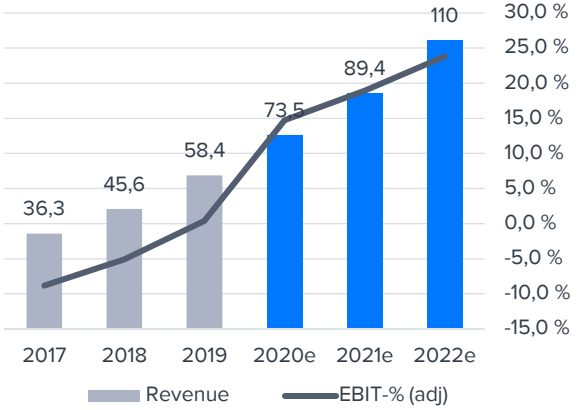
Source: Inderes

Share price



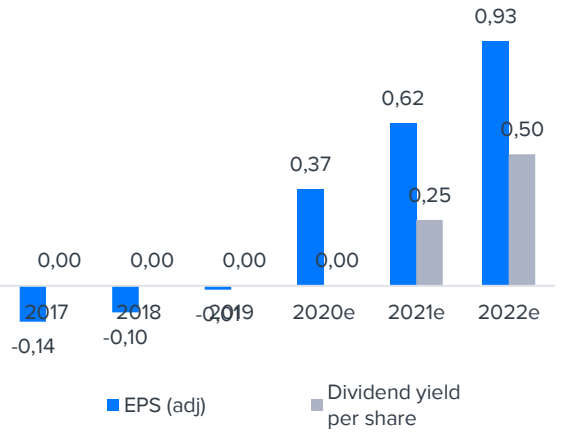
Source: Thomson Reuters

Revenue and EBIT-%



Source: Inderes

Earnings per share and dividend



Source: Inderes

MCAP
863
MEUR

EV
840
MEUR

EV/EBIT
48
2021e

P/E (adj.)
58
2021e

Value drivers

- Mature and competitive technology and products
- Market has strong growth drivers
- Competitive field still open in embedded devices
- Very scalable and competive business model
- Broad developer community protects competitiveness
- Strategic value of technology
- Growth strategy has progressed according to plan

Risk factors

- Failure in sales efforts
- Limited visibility into distribution license earnings
- Longevity of competitive advantages as technology develops rapidly
- Weakening of the Qt developer community

Valuation

- Strong revenue growth drives valuation growth
- Distribution licenses offer substancial potential in scalability
- Positive net income and clear earnings' growth support earnings' based valuation from 2020 onwards
- Valuation contains strong growth expectations
- Potential acquisition target

Contents

Qt Group in short

Qt develops, productizes, and licenses software development tools based on Qt technology for commercial and open source license use.

2012
Digia acquires Qt from Nokia

2016
Divestment from Digia

58 MEUR (+28 % vs. 2018)
Revenue 2019

0,2 MEUR (0,4 % of revenue)
Operating profit 2019

12
Countries where active

348
Employees 2020 Q2

69% / 31%
license / maintenance as share of revenue 2019

Source: Qt Group / Inderes

Company description and business model 1/4

Company description

Development tools for coders

The Qt company offers software developers a software development environment. Qt is a cross-platform application framework and widget toolkit for creating natively running interfaces and applications. These tools enable the customers' software developers to improve their efficiency and helps them launch their products faster. Qt is a tool for both visual design, as well as coding. The end users are software developers developing user interfaces or service designers. Consumers can find the technology in for instance LG's television interfaces, or the interfaces of new cars' infotainment systems. Graphical user interfaces' increasing demand is one of the megatrends driving demand for Qt. By adopting the technology, it is possible to develop applications for embedded devices, desktop and mobile applications.

Qt's development environment enables customers to generate savings in R&D, as they are typically in a situation which requires a variety of complicated development tools or platforms, which all require specialized skill sets to operate. Due to the cross-platform nature of Qt framework, the customers don't need to develop multiple iterations for different platforms, which also improves the time-to-market. Additionally, Qt's embedded device customers have generated savings compared to HTML, both in terms of development costs' and through lower hardware requirements.

Qt's customer base is very diverse. The Qt framework software is in use in over 70 industries, with no single customer accounting for over 5% of revenue. Qt has a user base of over 1.5 million users, and over a million developers have registered a personal Qt account.

The broad developer community is based on open source code and a freemium- model. This has proven to be a successful way to increase awareness of Qt's framework and tools amongst developers, but also supports revenue growth in the long run. The company has operating locations in Finland, Norway, Germany, the US, China, Japan, India, and Korea. At the end of Q2'20, Qt employed 348 people, of whom most work in product development, sales, and consulting. Qt's revenue was 58 MEUR in 2019, 69% of which was license sales and consulting, with the remaining 31% being maintenance revenue. North America accounted for 38% and Europe and APAC 62% or revenue.

Qt's history

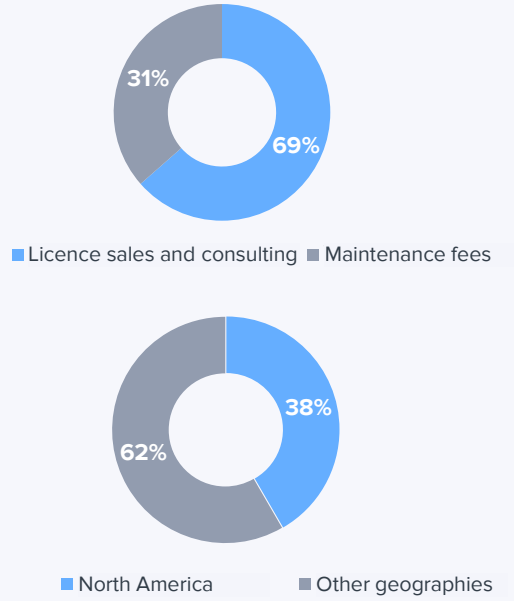
Qt as a company has an eventful past, which brings some strengths. Development of the technology began in Norway in 1991, leading to the founding of Trolltech. The company enlisted on the Oslo stock exchange in 2006, and was thereafter acquired by Nokia in 2008, subsequently renamed as Qt.

Nokia aimed to spread Qt as far and wide as possible. This largely open access to the Qt technology was part of harnessing Qt to support Nokia's smart devices strategy, at the expense of license sales and commercialization. After Nokia failed their smart device strategy, Qt was left without a role in the organization, and Qt was sold to Digia in 2012 for the price of only a few million euros. This kick-started a new phase in commercializing Qt as a part of Digia.

Qt finally regained its status as an independent company in 2016, when it was divested and listed on the Helsinki stock exchange. As an independent company, Qt Group had a better chance to make investments to fulfill their strategy and carry larger business risk.

Due to Qt Group's long history, they have mature and competitive technology, further strengthened by the strong developer community, strong recognition, and a globally duplicable product. This, paired with disciplined and focused strategy implementation, has enabled the company to find commercial success after gaining independence from Digia.

Revenue distribution(2019)



Qt's key advantages for customers

- Improved efficiency in product development, simplification, costs' savings
- Costs' savings in harware requirements
- Faster Time-to-market
- Reliable and stable foundation based on open source code

Source: Forrester

Partners

KDAB

LUXOFT

siili

Consultants utlising Qt's technology

Qt developer community

Functions

- R&D
- Consulting
- Management
- Global sales organization

Resources

- Qt-technology
- Strong customer relations
- >1m user Qt community

Business model

Qt offers a platform agnostic development framework and realted tools for software developers, enabling customers to improve their productivity and user experience.

Qt

- Multi-platform development framework
- Strong potential in embedded devices
- Customer accrues savings in development and hardware costs
- Reliable and stable development platform for customers

Sales channels

- Direct sales
- Partners
- Online

Customer segments

Over 70 customer industries altogether

- Industrial automation and embedded devices
- Automotive
- Consumer electronics
- Desktop and mobile solutions

Products

- Developer licenses
- Distribution licenses
- Maintenance
- Consulting

Cost base

340 ppl(2019)
56 m€ (2019)

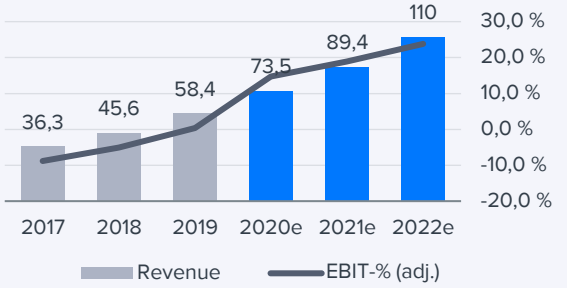
- Personnel espenses *(70 % of costs)*
- Materials and services *(4%)*
- Other operating expenses *(26%)*

Licenses vs services and maintenance

69% 31%

Income

Revenue 58 m€
EBIT 0 m€ (2019)



Source: Inderes

Company description and business model 2/4

Business model

Revenue generated throughout customers' products' lifecycle

Qt receives payments for their products multiple times during the lifecycle of their customers products, which makes their business model fascinating. When the customer starts developing a new product, the first thing they typically do is acquire a developer license for their developer team. Qt also offers consulting on the use of their technology. 70% of revenue is recognized instantly as license sales, and 30% is recognized as maintenance revenue over the following 12 months. The maintenance agreements are renewed annually thereafter. We find it possible that the company will bundle the license and maintenance revenue as a single continuous annual fee, as has been the trend in the software industry with SaaS-business models.

In the embedded devices market, the customer pays royalties based on the sales volume of the end product in addition to the developer license. We estimate consulting and developer license sales to act as an indicator for future maintenance and distribution license income.

Developer license sales and consulting: 44 % of revenue

Qt Group's license sales and consulting include individual developers licenses and consulting for Qt based technologies. The company expects the developer licenses to grow in the long run, but the growth potential is limited by the number of software developers globally. The price of a single developer license online is about 4 thousand dollars. In large contracts, the number of users and prices are negotiated separately with the customer. In desktop and mobile applications, sales are based nearly completely on developer licenses.

Consulting services are an important and profitable support function for license sales but is not scalable. Qt expects consulting to grow on par with revenue growth but remain below 20% of revenue. Consulting services are present in all parts of the customer life cycle: 1) at the sales stage to find out the customer needs, eliminate technical risks, and choose the best solution for the project, 2) in making a Proof of concept, 3) in design and implementation and 4) in productization. With these, Qt Group aims to optimize the use of Qt tools for the customer and enable the most efficient execution of projects. The consulting services have broad experience from multiple industries. The Qt Group has numerous consulting partners, including KDAB, Siili and Luxoft.

Support and maintenance : 31 % of revenue

The support and maintenance income is based on continuous development and updates. Qt expects maintenance services to provide stable cash flow in the long term. Customers are free to discontinue their subscription, but by doing so, miss out on maintenance services and updates. The support and maintenance income follows license sales with a slight delay.

Distribution licenses: 25% of revenue

Qt has as part of their embedded devices' strategy managed to transition the revenue driver towards pricing based on their customers' sales volume, which increases the business model's scalability further and expands market potential. The distribution license income is recognized when the customer sells their end products. The contracts are negotiated separately and take into account the customer specific sales estimates for the end products. The prices can vary from consumer electronics' few cents per device to over a thousand per unit in high end medical equipment. Income for Qt materializes with delay and is based on the customers' reports on sales figures.

Qt reports distribution license sales once a year, as due to their nature quarterly fluctuations are large.

Open source and licensing

Qt Group's main challenge historically in license sales has been the ease of exploiting open source software. Improper use and failure to receive proper compensation are mostly driven by the historically vague licensing terms in open source software, and when in the gray zone, the company has not received license payments. The license agreement was amended in 2016 with the release of Qt 5.7 version, Qt 5.14 released in 2019, and Qt 5.15 released in 2020. The new versions contain amended terms that state that producing a commercial product with the Qt framework always requires a commercial license.

Users of the freeware version have been met with multiple restrictions this year with the aim that consultants developing Qt products for their customers must use the commercial license. The newer versions also add functionality, which encourages users of older versions to update to newer ones with commercial licenses. We believe that this has already been reflected in license sales growth.

Avoiding the commercial license opens up the possibility of litigation, and also the possibility that anyone can modify the source code or software contained within the framework. Breaching the license agreement could for instance lead to the offender having to withdraw their product from the market, in addition to legal consequences. For these reasons, we find it improbable that large corporate clients would breach the terms of the license agreement.

Company description and business model 3/4

Sales and go-to-market

Qt Group currently has sales locations in 8 countries. The large sales organization was ramped up over the last few years and paired with the strong clientele is a clear strength. Over 100 people out of the 348 person work force are employed in sales. A typical team consists of a sales person, a consultant and a support and maintenance person.

The company has had a keen focus in sales organization growth after the 2016 strategy launched. Investments have been mostly financed by equity from the spring 2017 share issue. The results of these investments have been visible especially since 2018 (license sales and consulting 2018 +33%, 2019 +32%, and H1'20 +45%). In comparison, license sales and consulting grew by only 9% in 2017.

The sales organization has been virtually built from scratch after the company was acquired from Nokia in 2012. Qt focuses mainly on direct sales to large customers in its embedded devices' strategy, as the product development projects are often complex and require a hands-on approach. The buyer is typically a product development manager or CTO. Often choosing Qt as a technology partner is a strategic choice and requires strong customer knowledge. The largest obstacle in customer acquisition is to divert the customer's development team to use Qt's framework, and for this reason the Qt developer community and its recognition is key in the long-term sales success.

In addition to sales, the role of the developer community is to offer Qt consulting, complementary technologies, and participate in the Qt community through product development. We understand that Qt is now focusing on developing its partner network to be better equipped to serve SME clients, as the company's direct sales are more focused on the larger customers. The online sales channel is meant to reach smaller customer segments globally and generate leads for the sales team, as the freemium model offers a low threshold for trials. The online sales are based on developer licenses for desktop and mobile applications. The embedded devices (Qt for Device Creation) licenses are priced individually by the internal sales teams.

Product development

Qt's product development is focused on developing current technology, developing new features (Design Studio), and completely new products to open new markets (Qt for MCU). The R&D is centered in Berlin, Oslo and Oulu in Finland.

119 (2018: 118) employees worked in product development at the end of 2019. The company also outsources software development at a growing pace. In 2019, product development costs were 12.9 MEUR, or 22% of revenue (2018: 10.9 MEUR and 24 %). We expect the R&D investments to remain at a 20% level of revenue despite sales growth, as the company has a clear state of mind to invest in both current products and new growth opportunities. Additionally, maintaining the competitiveness of the current product portfolio requires constant investments into efficiency and performance. We also see a possibility to obtain new technologies through acquisitions.

Notable updates include the 2018 support for the Python programming language and 3D Design studio as code contribution from NVIDIA, which eases collaboration between coders and designers.

The more current updates include QT for MCU's launched in 2019, which facilitates using Qt technology in micro controllers, further expanding the potential markets.

About 75-80% of all of Qt Group's product development is done within the organization. The rest comes from the partnership network and the developer community.

Development of the Qt network is therefore partly in the open-source environment, in collaboration with other communities, individuals, and companies. This improves the evolutionary aspects, quality, and credibility of new functions in the products. With the community code contribution, Qt also gains a good interface with the customers and their needs.

Development of technology is however largely dependent on in-house product development, and this doesn't support comparable scalability and speed present in tools maintained by developer communities such as React Native.

Part of the in-house product development is work that has been done for specific customer needs, but the IPR is owned by Qt. Changes and alterations originating from partners and the community require approval from Qt, and Qt can also commercialize them. Qt as an open-source product is a central competitive feature. The customers value that they have access to the source code and are not left dependent on a third-party software supplier. Other competitive advantages provided by the open-source nature are good documentation, continuity, and support.

Qt Group has a contract with the KDE Free Qt foundation stipulating that the essential functionality and features remain under open-source license in the future as well. This guarantees the customer with the functionality provided by the open-source software.

Company description and business model 4/4

Customer base

Two target markets

The markets are divided into two; 1) desktop and mobile applications' platform agnostic development and 2) embedded devices. Out of the two, desktop and mobile applications have been historically a bigger market, but technically more mature and more competitive, and are based on license sales. The embedded device market is the corner stone of the new growth strategy, and earnings here are also based on license sales. Qt technology is used by over 5 000 customer companies in over 70 industries.

Desktop and mobile: sales of developer licenses

In the desktop and mobile application development market, a typical sale is a developer license for some tens of thousands. The customers are typically small software developers in need of efficient and powerful tools. A single developer license can be purchased directly from Qt's online store. Our rough estimate is that about half of the 58 MEUR revenue is generated by desktop and mobile applications and grows by single digit numbers. Desktop and mobile is generally a flat or declining market going forward.

Embedded devices: scalable potential from distribution licenses

When looking at embedded devices, the size of both the contracts and customers are vastly greater. The target group here are global large enterprises, in for instance consumer electronics and the automobile industry, where volumes are substantial. We believe that the average contract in this target group in the ballpark of over a million. The contract sizes will scale upwards depending on the customers' sales volumes.

Typically in embedded device contracts, the customer is provided with all the services: consulting, licenses, and maintenance. The projects are complex, shielding from competition for the same clients. Distribution license revenue has increased by 28% and 21% in 2018 and 2019 respectively. Qt estimates that distribution license sales with accelerate growth at the end on 2020 and continue in 2021.

The demand for Qt in the embedded device market is most often driven by strategic needs. In the wake of digitalization, touchscreens, software, and related services are becoming more and more common in many industries. Regardless of if the product in question is a car, television, industrial equipment, or washing machine, the manufacturer of these devices needs to make a strategic choice in whether to develop the software themselves or use existing software. The problem for most customers is that they seldom have the required competence in software development. Giving control of the software to a third party (e.g. Google) can on the other hand lead to a weaker position in the value chain, leading to mitigated control of the end product, and simultaneously also the device manufacturer loses control over the user data, which is often critical in digital service creation. This transition has already happened in smart devices and is coming for other industries as well. Qt Group offers an alternative , when the customer makes a strategic choice to develop their software in-house.

A typical new relationship with a customer begins with the customer going over choices in software. With Qt being one alternative, the sales and consulting departments go over the customer's problems and go through a demo phase called POC (Proof-of-Concept). The choice in technology is strongly influenced by the strategic mindset of the customer, as well as the input of the R&D manager. Should the customer choose Qt, negotiations between procurement and legal departments on contract terms commence.

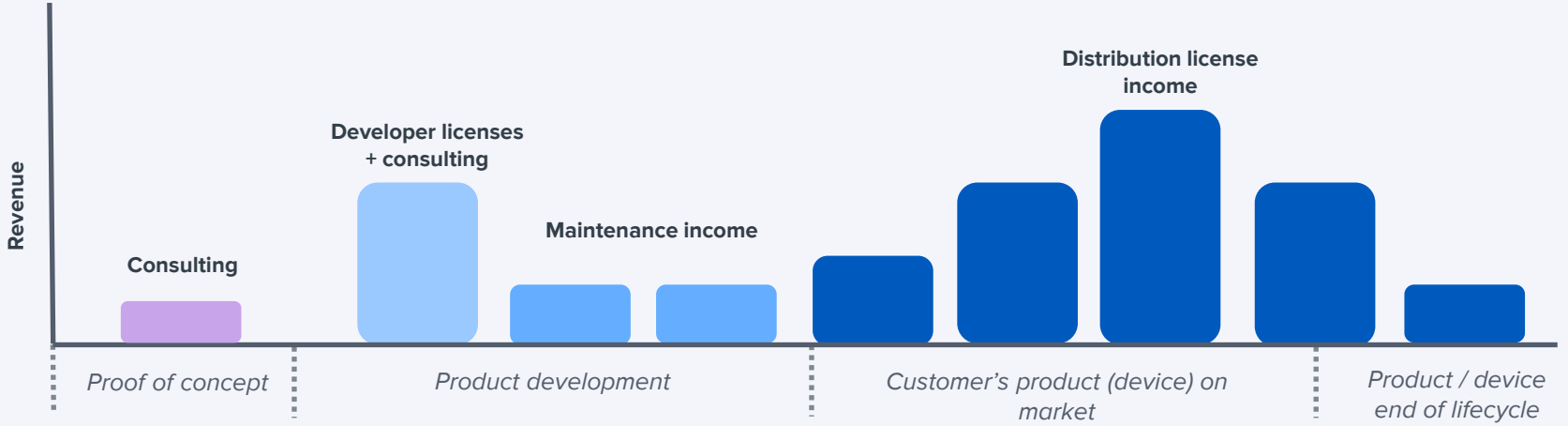
For instance in the automotive industry, from a post POC framework contract, it can take up to 6 months for the development team to start utilizing the developer license. This generates some license revenue, but most of the revenue is generated with distribution licenses. It takes 2-3 years from product development to the production of a vehicle, after which the revenue for Qt Group's distribution license begins. Consulting services follow along through the whole time period, albeit consulting can also be done by outside companies with Qt knowhow.

It is a long and strenuous process to build a contract portfolio of large customers, but in the long run it offers scalable growth potential with very good customer retention rate. For many customers, Qt Group is a long-term strategic technology partner, meaning that utilization of Qt often grows within the customer organization, after the partnership has commenced.

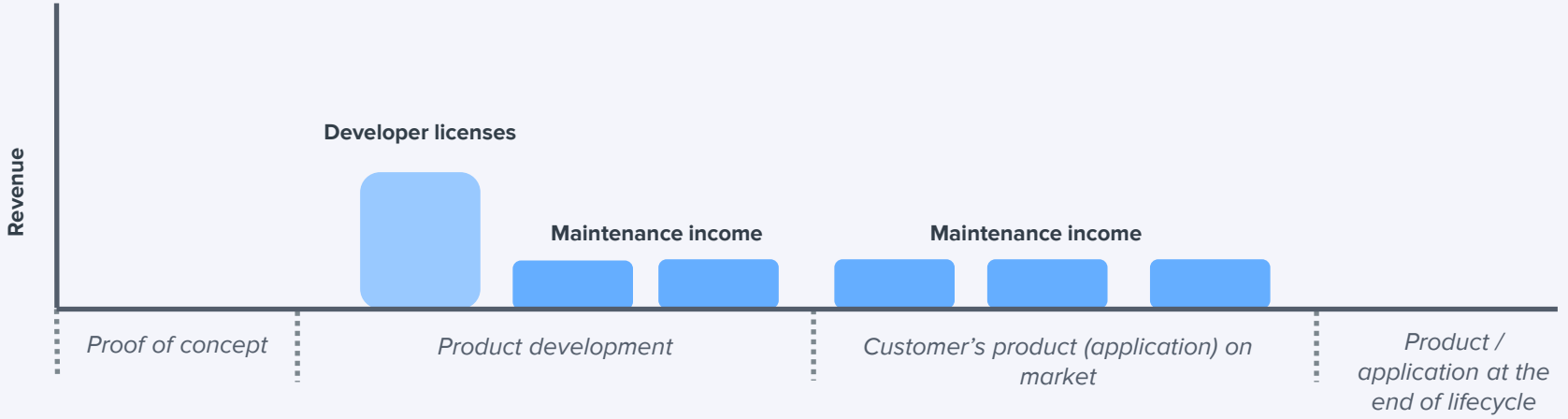
In embedded devices deliveries and recognition of revenue can also be quite fast for Qt, especially if the customer expands Qt technology utilization into alternate products in their product portfolio.

Qt Group's business model

Income generation in embedded devices (e.g. 1-5 years)



Income generation in desktop and mobile applications



Source: Inderes

Investment profile

Investment profile

Young market with strong growth

In the wake of digitalization, many industries are undergoing change in the value chain, with the products' value transitioning from the device (hardware) to software. Qt as a technology is present in facilitating this change, meaning that the company is also positioned to reap benefits from the growing proportion of software in the value chain. The Distribution license-based sales model positions itself on a rapidly growing market, driven by the rapid increase in hardware price and increasing demand for graphical interfaces expanding to new markets. Available developers are the growth constraint, translating to demand for more efficient tools. In embedded devices, the market is largely unestablished and young, and Qt is in part creating the market.

Competitive product and strong entry barriers

Qt's technology has a long history and is ample in features, and therefore doesn't require vast development investments. Instead, the focus is on strengthening competitive advantages and maintaining the freshness of the software. The competitive advantages are in our view underlined by the fact that global enterprises like LG and Daimler have made the strategic choice to utilize Qt. The Qt products solve some key issues for the clients: product development speed, decreasing hardware costs and improving user experience.

The business model has high stickyness. When the customer chooses Qt, the technology is expanded into new product lines and the developer team gets acquainted with it, making transition to other technologies a tedious and difficult process. The utilization is often further expanded due to efficiency gains, making it very hard for a competitor to break into the relationship. The competitor will also have a hard time trying to build an equally broad and functional technology with such vast recognition and strong developer communities.

Demonstrated ability in successful strategy implementation

Qt Group's strategic choice made years ago to focus on embedded devices has proven to be correct. This paired with disciplined and successful implementation of the strategy has brought about excellent results, and Qt has progressed exactly as planned, further validating trust in the strategy. During the investment period of 2017-18 the company proved successful in building a global sales network and functional organization structure. Additionally, the revenue drivers transitioning towards distribution licenses seems to be bearing fruit.

Efficient and scalable business model

Qt's product is globally duplicable to nearly all industries, where the device utilizes a graphical user interface. The license-based business model is extremely scalable, indicated already by the EBIT margin reaching 20% during some quarters. The business model's income is generated in multiple stages of the customers' products' lifecycle, with development risk related to the sales of the end-product shared with Qt. This enables a value-based pricing model and protects Qt against pricing competition.

In the company's business model, investments are very front-ended, and due to the nature of the distribution licenses, revenue generation is quite back heavy. Despite of this, Qt has managed to keep its balance sheet light. This, paired with the up-front payments from customers for developer licenses and maintenance, enables ample cash flow that exceeds the net result.

Strategy transitioning towards scalable growth

From an investor's point on view, Qt is in a very interesting developmental stage as the company has managed to begin transitioning towards a profitable growth stage, after its investment phase. The company is also free from having to prove its business model's validity to investors. The share price is supported by revenue growth and by earnings growth, both of which offer the market something to lean on when pricing the company.

Risk profile

Key risks

The most notable risks from an investors' point of view in our understanding are:

- **Poor visibility into contracts and distribution licenses:** Investors currently have poor visibility into larger distribution license contracts, their timing, and the extent of cash flow generated.
- **Failure in sales**: Qt Group must be able to win over and close large clients for the distribution license business to succeed as outlined in the 2025 growth strategy.
- **Technologic transition**: Qt Group's product development can fail in estimating coming trends in technology in the future, web-based technologies gaining more ground can weaken the competitive advantages or the Qt communities, or completely new technologies can disrupt Qt Group's business.
- **Industry consortiums:** companies operating in different industries and forming consortiums can disrupt the market or create competing technologies.
- **Sector valuation:** we note that the peer group for Qt is extremely high, with double digit P/S-figures. Decline in the valuation of the sector as a whole would create pressure for Qt's valuation as well.

Investment profile

1. **Developing market on the brink of strong growth**
2. **Mature and proven technology**
3. **Good track record in strategy's successful and disciplined implementation**
4. **Scalable and efficient business model**
5. **Strategy transitioning to profitable growth phase**

Potential

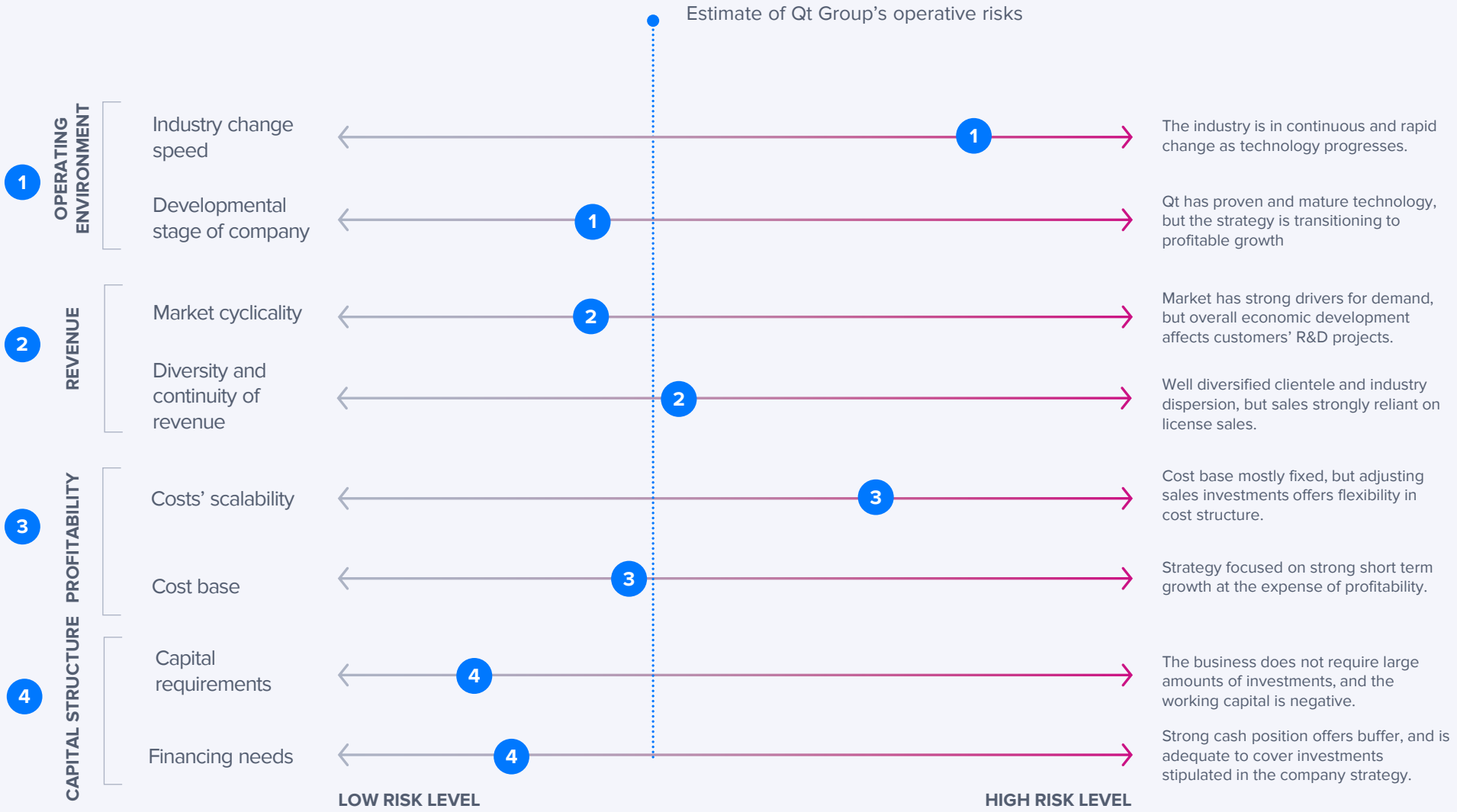
- Number of devices containing software growing rapidly and value creation transitioning towards software
- Access to large manufacturers of volume products
- Competitive field open in embedded devices
- Strong growth potential if dstribution license sales prove successful
- Scalability offers tempting profitability potential in the long term

Risks

- Weak visibility in distribution license income
- Disruptive competitive pressure such as Android
- Sustainability of competitive edge as technology advances
- Weakening of Qt's developer community
- High valuation levels troughout the sector

Source: Inderes

Risk profile of business model



Source: Inderes

Industry 1/3

Market for software development tools

Qt operates in the global market for software development tools that is structurally growing rapidly. Growth is driven by the number of devices with graphical user interfaces. The size of the market in 2019 was about 12.7 billion dollars and grew by about 10% (Gartner). There are about 23 million software developers globally, and the number is expected to increase to 28.7 million by 2024 (Evans Data Corporation).

For Qt Group, the most important segments are traditional desktop application development, mobile applications and embedded devices. The technology possessed can be utilized in all of these, albeit the strategic focus is in embedded devices. In desktop applications, the market is mature, and in mobile applications it is growing, but very competitive. In embedded devices, the market has substantial growth potential driven by the internet-of-things derived device volume growth for devices with graphical user interfaces. In terms of competition, the market is largely undefined.

Developmental stages of the market

The growth driver for the software development tools' market has changed from desktop applications (PC, 1990-2010) to mobile (2010), and most recently embedded devices. Just a decade ago, software development was mostly focused in desktop applications, and Qt was quite competitive. The rise of mobility led to the center of gravity transitioning towards mobile devices. In this segment, Qt did not compete very well against the fast-growing supply of free net-based libraries, such as Facebook React Native and Google Angular 2. The market quickly became extremely competitive, and the small financially challenged developer segment did not offer a proper opportunity for Qt. Qt remained competitive in cross-platform software development, in which the same application is transferable to different platforms.

The current growing yet undivided market of interest for Qt is the embedded devices market. The demand for embedded devices is growing rapidly, and they often require visual user interfaces, cross platform solutions, and technologies that can extract the best possible efficiency from the hardware available. Qt is strong in all of these. The embedded devices market is also transitioning towards a prominent commercial market, as the buyers for the technology are the world's biggest corporations and their R&D departments, instead of small individual developers. This enables Qt to transition towards a distribution license-based business model.

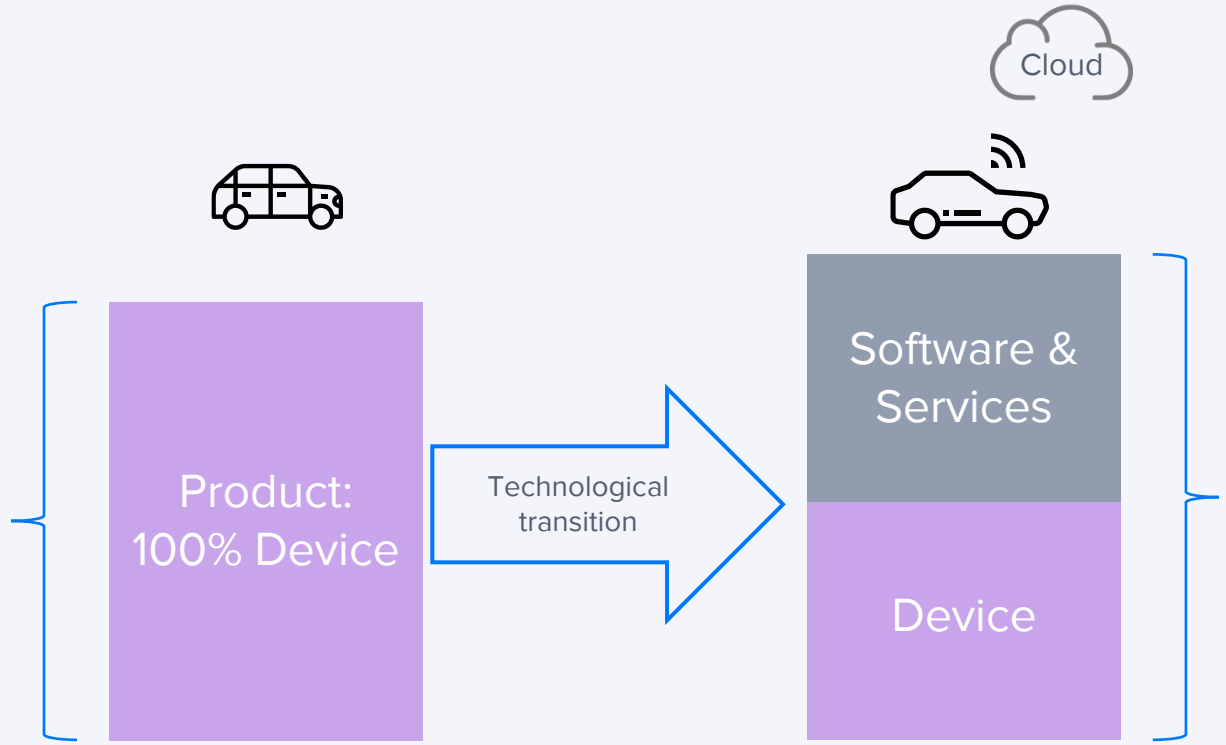
When looking further, after embedded devices the next major growth driver could be virtual reality. VR solutions are already used in many industrial applications, and these solutions already use Qt technology.

Market trends and growth drivers

The relevant markets concerning Qt have some supporting trends, of which we have identified the following:

- **Significance of user experience** as a competitive differentiator is growing across nearly all industries. This is driven especially by the growth of graphic user interfaces. These became common from smart devices and have thereafter become mainstream in other devices. Applications with traditional black and white LCD screens will be replaced with graphical user interfaces, for example.
- **Hardware prices continue to decrease,** which has led to touch screens and digital interfaces becoming increasingly common in low price volume products, such as household appliances. In these products it is important to maximize the efficiency of the hardware, which is one of Qt's key strengths. There have been market suspicions that increase in hardware performance and reduction in price will negatively impact Qt's advantage, but we believe that this development is more of a trend that will bring about new markets, as erosion in hardware price opens up the possibility to expand graphical interfaces to new devices and appliances.
- **Platform agnostic feature** is emphasized when the same application is required to work across a wide range of operating systems and devices as a continuous user experience. Qt is strategically committed to supporting multiple platforms.
- **Lack of software developers** increases demand for more powerful software development tools globally.
- **Open-source model gaining popularity** in software development supports Qt. Especially on the mobile front, open-source has been the winning solution. The popularity of open-source code exploitation will most likely expand to many new industries through embedded devices, as companies are unwilling to be stuck using a single technology from a single company. Successful technologies also require a strong developer community, which is one of the strengths of open-source code.
- **Transition in distribution and business models** driven by digitalization. A growing number of industries are in the situation where the added value is created by software and services. The business models are transitioning from product sales to cloud based "as a service" type solutions. This is forcing customers to make strategic technology choices, where Qt is one option. Customers migrating towards service-based business models also provides Qt Group with a better opportunity to move towards a distribution license-based business model.

Qt's strategic role in the technologic transition of industries



The device manufacturer's added value is based on the product, software offering small in terms of competition (e.g. a car)

The device is the platform on which software and cloud-based services are built. The value for the end customer is created through software and services. Qt aims to take its share of the value creation through distribution licenses. For instance, a car and entertainment and other services connected to it.

Before

Competition: closed industry, other manufacturers

Future

Competition: internet companies, software companies, devices are commoditized

Source: Inderes

Industry 2/3

Desktop and mobile development

The desktop and mobile application developer market is a stable market from Qt's viewpoint. According to the company, Qt has good recognition, market share, and a large customer base. The largest focus is the Windows platform, but this is complicated slightly by Microsoft offering their own developer tools as well. Qt has however had a strong stance in desktop applications historically. The mobile application development tools' market has not grown at the same pace as the market for mobile applications, and therefore Qt has failed to be financially successful in this market. The main reason is that the large players (like Google and Apple) offer a wide range of free tools to developers. The best differentiating factor for Qt is therefore the possibility to develop applications in both desktop and mobile with the same technology.

As single markets, neither mobile nor desktop are something sought by Qt, but instead the advantage comes from being cross-platform. The competing technologies are mostly web-based solutions that have speed, wide developer communities, and code stacks as advantages. Qt on the other hand offers advantage in applications that require maximized performance.

The target market for Qt's technology in mobile and desktop applications is about 500 MEUR globally. The market is stagnated, and not expected to grow (IDC), with growth figures in single digits expected for Qt. We estimate desktop applications to account for under half of revenue, and sales are mostly based on license sales (Qt for application development), where the limiting growth factor is the number of developers. The market is important for Qt and brings steady cash flow, but in addition also supports growth and expansion into the embedded device market.

Embedded devices

Qt finds the largest future growth potential in the embedded devices' market. In this market Qt strives to change its business model to be based on the sales volumes of the end product. This would mean that growth is no longer dependent on the number of developers and the company is able to exploit the exponential growth of IoT devices utilizing graphic user interfaces. The diversity of devices creates demand for Qt type platform agnostic software development framework providers. In this market, Qt sells normal developer licenses, but in addition, every device utilizing Qt technology is under a distribution license. The role on distribution licenses is currently still quite small (25%), but essential for future growth. According to user interviews, the Qt technology and C++ language are very strong in comparison to the HTML powered alternatives. The rationale behind this is the stability which developers find very important when looking at devices with lifespans of a decade. Users also appreciate Qt's efficiency, which generates savings in hardware costs.

Estimates on the market sizes in embedded devices are difficult to assess. Estimates for growth rates are in excess of 6 %:n (Global Market Insights, Fior Markets). The embedded device market is expected to grow from 12 billion dollars in 2020 to over 20 billion dollars in 2025 (Global Market Insights). Development tools only account for a small portion of the market, and accurate estimates on the entire market size are difficult. The central segments are consumer electronics, the automotive industry, medical devices and industrial automation. According to market research, customers are especially looking for solutions where applications can be used in devices that are limited by computing power, which is one of Qt's strengths. For Qt, the defining driver is the increasing commonality of graphical user interfaces in these devices.

Qt's customer verticals

Qt's technology is strong because it is applicable to many different industries, with most of the competing solutions tailored for a specific industry. A horizontal strategy supporting multiple industries is in our view the winner, as graphical user interfaces are similar in their operating logic regardless of the industry. The current technology is in use in over 70 different industries according to the company. This enables Qt to scale its R&D expenditure over multiple industries, with industry specific modules being possible to add to suit the specific needs of individual segments such as the automotive industry. The core value of the Qt technology is to be able to scale regardless of industry, hardware, or the technological platform.

With the industry specific modifications, Qt is able to strengthen competitive advantages in its chosen verticals. It is our understanding that Qt fits quite well into many customer verticals, thanks to the comprehensive code stack. The more thorough the ready code stack library available is, the faster the customer can go through the product development cycle, and the more attractive Qt is as an alternative. The most relevant customers are ones that require the performance offered by C++. If the customer's need is to develop fast and light applications with a low performance requirement, web-based solutions are more competitive.

Industry 3/3

In the customer vertical in embedded devices, Qt is focused especially in the automotive industry customers, consisting of both manufacturers and their suppliers. Out of the 15 largest manufacturers, 13 are in at least the proof-of-concept stage. Peugeot and Daimler have been announced publicly for example.

Qt has developed industry specific solutions to be able to expand its offering from for instance infotainment systems to digital dash boards. The potential uses in the automotive industry for Qt solutions are infotainment solutions, digital dash boards, and back seat entertainment systems. The manufacturers will most likely want to utilize the same technology in their entire product range and all the screens, which supports Qt when transitioning from trialing to full usage.

The automotive industry's transformation driven by digitalization is very current. The manufacturers strongly prefer to keep all of the data pertaining to customers and software development to themselves. All of the manufacturers are not willing to bring outside internet companies' software and services to their products because the products' position in the value chain will be weak, with the customers' added value transitioning towards data, software, and services related to the aforementioned. It is quite likely that some manufacturers will outsource the digitalization phase to for instance Google, and instead focus on being as efficient as possible in manufacturing volume cars. In this case, Qt is not as likely a choice for a software development framework. For leading brands however, this is probably not a possibility.

It is our understanding that the automotive industry is a significant growth driver in Qt Group's strategy, and the company has stated its strategic goal is that about a quarter of revenue is expected from the automotive industry.

We believe that distribution licenses contribute in the range of about a dollar per infotainment system per car in the automotive industry sales. Qt also offers solutions for other uses, such as digital dashboards and other screens.

Global car sales volumes are in the 100 million unit annual sales range, and we expect tens of millions in revenue potential for Qt. Qt has worked hard in this segment for many years, and distribution license income is expected to materialize in the coming years as new car models enter the market.

In other customer segments, especially interesting for Qt are those industries that manufacture large volumes of devices with graphical user interfaces. These are for instance consumer electronics, two wheeled vehicles (motorcycles, electric cycles, electric motorcycles etc.) and medical devices. The target customer groups are global enterprises such as LG, who are contacted via Qt's own sales organization.

Assessment of Qt's market potential

We have compiled a rough estimate on the compound market potential of Qt's products. The estimate contains many assumptions and is mainly aimed at illustrating the size of the target markets.

The developer license and maintenance income potential derives from the number of Qt application developers. There are roughly a million users with a Qt Account. Only a small portion of these are active and develop commercial products using Qt technology. We estimate the commercial users to average about 2000 EUR in revenue annually. Assuming a 5% conversion ratio, this gives a market potential of 100 MEUR.

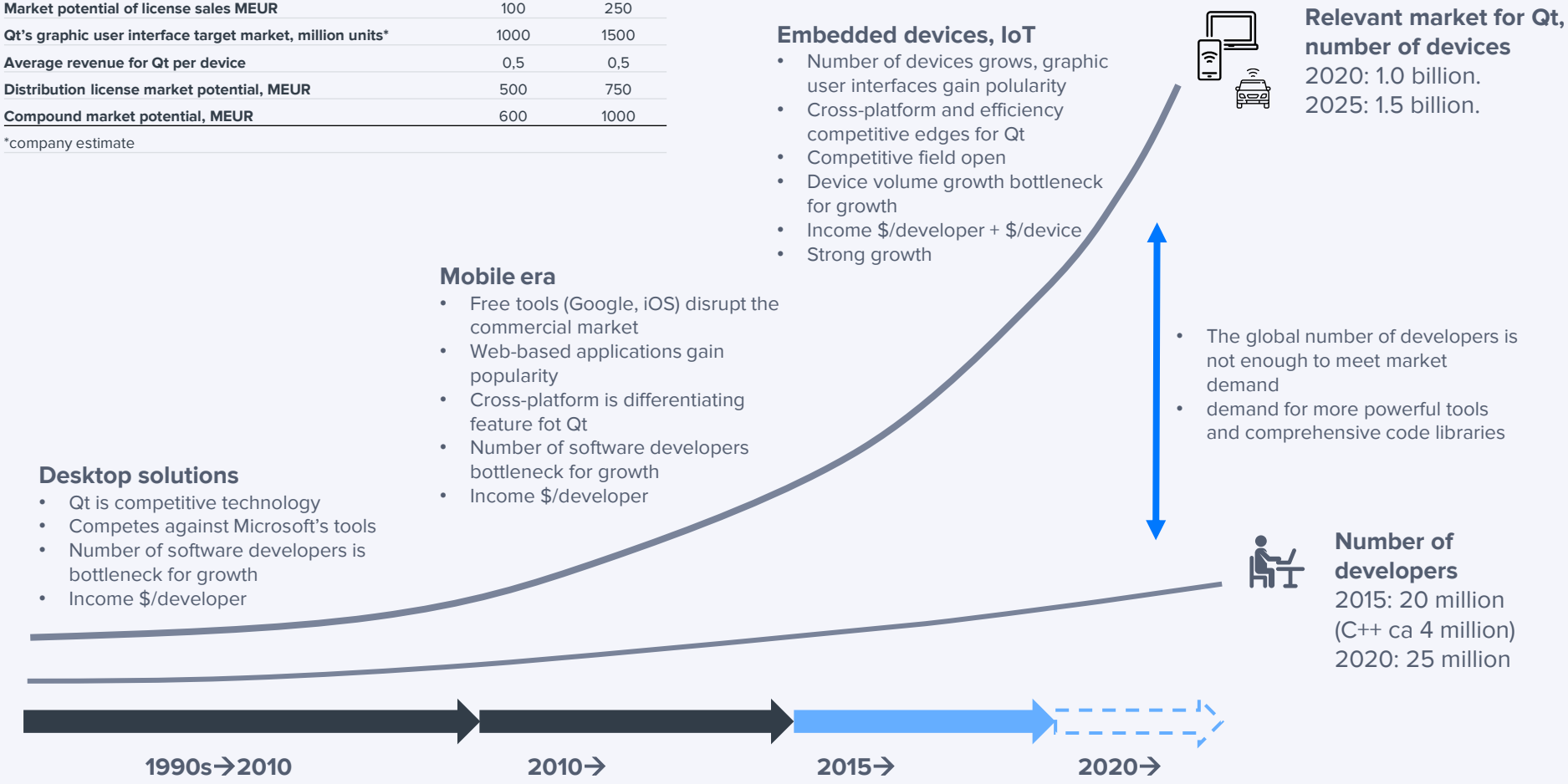
Distribution licenses' market potential is hard to estimate through the graphical interface devices' target market. The company's own assessment is that the relevant market for Qt is about a billion devices this year. The distribution royalty can be estimated at about 0.5 EUR per device. Therefore the market potential for Qt in this market would be 500 MEUR, and the entire potential 600 MEUR.

We expect Qt users to grow to 1.25 million by 2025, and the conversion ratio to improve to 10% due to constraints in licensing agreements and improvements in the commercial products. The market potential for developer licenses is then 250 MEUR. The company estimates that the most relevant market of devices with graphic user interfaces will grow to 1.5 billion devices in 2025, and assuming the same average price of 0.5 EUR per device, the embedded devices market potential would be 750 MEUR, and compound market potential in 2025 over a billion EUR. The 175 MEUR revenue sough in 2025 therefore corresponds to a market share of 17.5% of the entire relevant global market.

Evolution of Qt's markets

Estimate on Qt market potential	2020	2025
Qt Account users globally, million	1,00	1,25
Commercial license potential of user base	5,0 %	10,0 %
Average invoicing for maintenance and developer licenses/ user	2000	2000
Market potential of license sales MEUR	100	250
Qt's graphic user interface target market, million units*	1000	1500
Average revenue for Qt per device	0,5	0,5
Distribution license market potential, MEUR	500	750
Compound market potential, MEUR	600	1000

*company estimate



Source: Inderes, IDC, Grand View Research

Competition 1/2

Competition fragmented

Qt Group's competitive field is very fragmented, and it is difficult to pinpoint direct competitors. The competition is mostly related to which customer vertical or field is in question. The different applications of the programming language and intended uses also define competition. Qt is based on the C++ language, the main advantages of which are performance and optimizing memory usage. This is especially crucial for embedded devices, often requiring good performance and usually are constrained by limited memory availability. The downside of C++ is that it is difficult as a programming language. In the latest version, Qt has also brought support for Python.

The traditional desktop application market is established and transitioning with the strong growth of mobile applications. On the desktop side, Qt competes with for instance Microsoft Visual Studio and Android Studio, out of which the latter is free. With the growth in device base and diversity, applications of today need to be able to function on different screens and devices. This needs to be accomplished platform- and operating system agnostically. In these multi-platform solutions Qt is strong.

The mobile market is very competitive, and the commercial market for tools has been disrupted by free tools that can be used to develop native applications for specific platforms (e.g. Android, iOS). The market is dominated by free platform independent libraries, such as React Native (community overseen by Facebook), Xamarin (free, but works with visual studio), Ionic, and Adobe PhoneGap. Adobe PhoneGap will be discontinued in October 2020. The advantage with free code stack libraries are the developers and communities, who have access to end user data. The downside is fragmentation and the fact that they may not be stable enough in the long run.

In embedded devices, the competition is still quite open. Customers often prefer to use self-developed tools instead of commercial products, sometimes in conjunction with Qt. Compared to HTML, Qt framework's performance and stability are competitive advantages in embedded devices. Qt is often competing with solutions build by the customer's team itself. For the customer, it is often important to avoid being dependent on outside software providers (Google), and secure access to the code, and subsequently hold the development in their own hands.

We believe that Qt has been very competitive as the company expands into the embedded device market. The main competitors (e.g. Crank, Altia, EB, Kanzi) have to our understanding been unable to grow substantially in Qt's target markets. Many competitors are focused in a specific industry vertical. This is hard to see as a competitive strategy against Qt in the long run, as Qt can scale its R&D into multiple industries.

Competition also dependent on intended use of applications

Depending on the requirements of the devices, different tools are suited in different market segments. For instance web-based (Javascript) technologies are well suited for touch screens when a lot of hardware performance is available. When the device needs a lot of performance and capacity, C++ and thus Qt are stronger, also thanks to the extensive code stack libraries. There are some specific platforms (such as Ipad) that have targeted native tools available. These are probably not too well suited for the embedded device market, because these devices are required to operate platform agnostically. In the platform agnostic approach, the most important factor is that a once coded application can be used on multiple platforms simultaneously (such as Android and Windows). The services related to these applications must also function independently of the platform. Qt and the C++ language used by Qt are therefore not optimal in every application, but nevertheless well positioned in the markets Qt has chosen.

Market entry barrier high

The Qt framework is mature and ready. Maintaining the technology up to date requires continuous product development, but there are no R&D needs currently present in the coming years. New players therefore face challenges in competing with Qt. The entry barrier is enforced with the following:

- Development tools can't live without developers and coders. New tools face difficulty in getting a developer community behind them. When the developers are acquainted with a certain tool, change is difficult to implement.
- Customers face difficulty changing tools once the choice has been made technology wise, because development, product lines, and know-how have been built to facilitate a certain development tool. Once the tool is used broadly in the product range, the complexity and barrier to change grow.
- Sales cycles in the embedded device market are long and gaining access to the large customer organizations is difficult.
- Due to the long history of Qt and similar players, their customers have a broad code library in use. Ready and available application components are a valuable competitive advantage.

Qt's most notable competitive risk is free technologies and internet companies' potential disruptive competitive threat (google Android) the internet companies are most keen to gain access to user data. Due to this, multiple application segments are not interesting for them, and in many cases clients are unwilling to give up their user data.

Competition 2/2

Qt's technology's strengths

The key strengths in technology for Qt in our view are the following:

- **Multiplatform support**. Qt has been released for multiple different platform such as Linux, Android, iOS and Windows.
- **Efficiency**. C++ is a very efficient language in applications requiring a lot of performance, which brings about savings for the customer in hardware.
- **Stability and continuity of development**. Qt Group's customers can rely on the continuity of the technology due to the agreement with KDE Free Qt foundation. Qt has strong incentives to develop versions of the software for the most used interfaces. Development of many of the free alternatives (React Native, Angular 2) is in the hands of developer communities in an open environment and is dependent on the community. The quality of the development can also vary substantially.
- **Documentation**. Documentation is one of Qt's strengths, as it offers developers confidence, smooth and fluent development, and continuous support.
- **Broad range of software libraries**. This, paired with the proficient documentation, enables rapid product development cycles. This is an important competitive advantage, as time-to-market is often crucial for customers.
- **Independence and data protection**. With Qt, customers can depend on the fact that the user information and source code always stay with the customer (of Qt), and never end up with the software provider.

Qt's technology's weaknesses

From the investors' point of view, the prominent technological challenges in our view are the following:

- **Web based applications gaining popularity**. Should the web-based alternatives to interfaces gain more popularity in embedded devices, Qt will be in a weak position.
- **C++ -language difficulty**. C++ is a language relatively hard to master. The number of C++ developers is important for Qt, but the difficulty of the language can negatively impact its popularity. Qt also supports other languages such as Python but is nethertheless strongly C++ dependent.
- **Small open developer community**: The open active developer community for Qt is relatively small, which means that the contribution of development coming from the community is also relatively small. Many of the large libraries maintained by larger developer communities (i.e. React Native) develop at a fast rate thanks to the extensive community.
- **Limited partner network**. Due to the Nokia background, Qt has a limited amount of technology partners and consulting companies with Qt know-how.
- **Personnel risks**. Qt's development is reliant on in-house R&D, which could pose risks related to key personnel.

Consolidation

Due to the strategic importance of development tools, acquisitions and mergers are quite possible in the sector. We also find that Qt is a viable target for acquisition, but Qt is also possibly looking to acquire companies that can complement the technology.

The closest acquisition to Qt is from 2016, when Chinese Thundersoft bought Finnish Rightware. Rightware was a competitor of Qt in graphic dashboard displays for the automotive industry. The acquisition price was 64 MEUR, and with the estimated 7 MEUR revenue in 2016, the EV/Sales multiple was 9x.

Qt could be a strategically tempting target for acquisition for automotive manufacturers, who find it important to secure independence and continuity of utilized technology. The strategic interest would be like the automotive industry consortium's Here acquisition. Also global software could see Qt as a strategically intriguing target.

Competitive field

		Components			Usage			Suitability		
Software tool/language	Ownership	IDE*	Code libraries	Up-to-date documentation	Mobile	Desktop	Embedded devices	Cross-platform	Native-apps (Android, iOS etc.)	Web-based solutions
Qt/C++	Qt Group	✓✓	✓✓	✓✓	✓	✓✓	✓✓	✓✓	✓✓	✓
Xamarin Studio/ C#	Microsoft	✓✓	✓✓	✓✓	✓✓	✓✓	✓	✓✓	✓✓	
Rightware Kanzi/ Javascript	Rightware	✓✓	✓	✓✓			✓✓ Automotive	✓✓		
React Native/ Javascript	Developer community		✓✓	✓	✓✓	✓✓ Browser		✓✓	✓✓	✓✓
NativeScript/ Javascript	Telerik		✓✓	✓✓	✓✓	✓✓ Browser		✓✓	✓✓	✓✓

✓✓ Core competence

✓ Competence

* Integrated Development Environment (IDE) is a development enivonment or program, that helps write applications or otherwise help in their creation. The simplest form is a text editor. Often they include simulators or other helpful tools.

Source: Inderes

Strategy 1/2

Strong focus and efficient implementation

when Qt gained independence from Digia in 2016, the foundation for the current strategy and commercialization was created. During Digia ownership in 2012-2016, Digia funded technological development and commercialization. After divesting, Qt started on its current growth strategy. The strategy required large upfront investments that were funded by the share issue in 2017.

Strategy implementation has been disciplined and effective. The company has progressed on the chosen path, with results mainly exceeding expectations. The global sales network has been built successfully, competiveness of the framework strengthened, the products expanded to new target markets, and revenue drivers renewed. This foundational work has been completed according to budget, and Qt is financially strong.

Qt's strategy based on embedded devices and distribution licenses was adopted in 2016, meaning that in the big picture the strategy is still in its ramp-up phase. Before 2016, revenue (2015: 27 MEUR) was mainly based on desktop and mobile applications. We believe this business segment has continued to grow at a modest pace, meaning that the growth numbers for the embedded devices markets have exceeded 50% in the last few years.

Market shares are being distributed now

Qt's strategic focus into embedded devices' markets has been timed well, as the markets are experiencing accelerated growth. This was far from obvious 5 years ago. Now it is however apparent that graphical user interfaces will expand rapidly to new devices, and new technology segments are experiencing a transition to which customers are still seeking answers on how to respond to.

Due to the developmental stage of the market it is imperative that Qt focuses on aggressive market share growth in especially seizing the large volume manufacturers, such as consumer electronics and the automotive industry. It is important for Qt to be in discussions now, as strategic technology choices are being made in customer industries. This is also reflected in the management's and organization's incentive programs, which emphasize strong growth.

Once the customer has chosen the technology, it is often expanded into use throughout the organization, as it is resource heavy to utilize multiple technology platforms simultaneously. This supports growth in the long term. For instance for Daimler, Qt was first used in the Mercedes A-series and is now expanding to other models.

Sales' strategy

Qt has expanded its sales network through recruitment and opened new sales offices during the last few years. The largest investments have already been done, with the focus starting to shift into improving the efficiency of sales. In embedded devices, the sales cycles are long, work towards deals extremely challenging, and local presence essential. Due to this, the company goal is now to blanket the key markets of the US, Germany, China, Korea, and Japan with a continuous presence. Especially in the APAC region Qt has stated that sales commitments have been very successful. Reseller networks are utilized in regions where the market potential is smaller.

We believe that the size of customers and value of contracts have been on a continuous growth path due to the investments, and the company has been able to close many significant customers. For instance in the automotive industry, Qt has stated that there are 13 out of the 15 largest manufacturers at least the POC stage of the sales cycle.

Our view is that succeeding in building an own sales network is a key foundational aspect for long term growth. Qt has a ready sales channel and good relationships with large customers, which enables sales of new solutions efficiently. For instance the go-to-market for the new MCU product has been rapid due to strong customer relations and the sales network.

Strategy's investments and finance

In addition to the sales channel and market shares' growth, Qt invests in maintaining its current portfolio's competitiveness and opening new target markets.

Qt strives to expand its competitive advantage with investments into development of the current products. These investments can be targeted into specific components for specific industries, which strengthen the competitive advantage in the chosen customer vertical. The automotive industry is the most prominent, but other areas include digital TV, industrial automation and medical equipment. By developing ready industry specific solutions into the Qt code library, Qt can accelerate the customers' development cycle, which is a key competitive feature.

Strategy 2/2

The other investment focus is in expanding to new markets, of which the microcontroller aimed MCU product is a good example. Touch screens and graphical user interfaces are gaining commonality in both smaller and lower price point products, meaning they need to be operated on modest and cheap hardware requirements. Qt's competitive advantage is efficiency, and with MCU, Qt tech can be taken to still lighter applications. Real world applications include home appliances and electric scooters. The common LCD black and white screen known by consumers will be replaced by graphic interfaces as hardware costs' reduction makes it possible for manufacturers. In these products, distribution license income per device are small, but volumes are large.

Our understanding is that as part of their strategy and expanding the product portfolio, Qt is also viewing potential acquisition targets. These could be complementary technologies that Qt could scale into its existing sales channels and customer base. The alternative to this is expansion through in-house R&D.

Qt's financial position is strong as the company has maintained a light balance sheet and the business is generating solid cash flow. The cash position stood at 18 MEUR at the end of Q2'20, and the first half of the year had 7 MEUR operating cash flow. Qt therefore has good possibilities to finance development with cash flow and even make small acquisitions.

Qt invests from its profits and doesn't recognize R&D expenditure on the balance sheet. We believe development costs to remain at around 20% of sales for the coming years as the strategy indicates a strong state of mind to invest in long term growth.

Financial targets

Qt released new financial targets for 2017-2021 in February 2017. The target was to reach an annual revenue of 100 MEUR and 15% operating margin in 2021. In March 2020 the company released targets for 2022-2025, where the company is looking for over 15 %:n growth and over 15 %: operating profits, the later set to reach 20% at the end of the strategy period. In practice, the targets correspond to over 175 MEUR revenue and EBIT of over 35 MEUR in 2025 .

The profitability target for the strategy period is in our view modest, as strong sales growth scaling should substantially increase profitability in the next few years. The company most probably wants to have flexibility in its targets for investments and isn't therefore setting the profitability bar too high. Should the growth materialize according to the targets, we believe Qt has ability to reach profitability of 25-30% in the long run. Accordingly, we find the revenue target realistic, but challenging. The 2021 target of 100 MEUR can also be delayed as the Corona pandemic hinders distribution license sales. The strong growth outlook is however based on already won contracts and income from previous license sales, so we have confidence in the coming years' growth. Market potential should not affect reaching the revenue growth goals.

We expect to see the company start to pay a small dividend in 2022, basing our assumption on the strong result and strong cash flow.

Growth drivers of the strategy

Qt expects revenue growth to be based mainly on organic growth. Acquisitions into specific complementary technology are possible. The key growth driver in the strategy is winning large customers, and thereafter expanding Qt technology inside the customer organization. This will be followed by distribution license sales growth as devices with graphical user interfaces gain popularity and become part of everyday life. Therefore the company needs to be studied with a multiyear scope, as revenue comprises very late compared to the upfront nature of expenses.

For investors to have a better grasp on evaluating the progress of Qt's strategy, the following should be kept in mind:

- Revenue growth driven by license sales
- This should be followed by accelerating growth in distribution licenses
- New contracts with prominent device manufactures and automotive manufacturers
- Expansion into new product segments such as MCU
- Scalability of profitability and cash flow

Qt's strategy and goals

Investment phase → **Profitable growth phase**

Target	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	32.4 MEUR	↗	↗	↑	↑	100 MEUR	>15 %	>15 %	>15 %	>175 MEUR
EBIT	-1.7 MEUR	↘	↘	Positive	↗	> 15 %	> 15 %	> 15 %	> 15 %	> 20 %
Status	-	Achieved	Achieved	Achieved	H1 Achieved					

2016 - 2018

Investments into the sales organization and product development

- Share issue to fund investments (2016)
- Building physical sales channel for key markets
- Carefully chosen development investments (e.g. Automotive industry, 3D Studio)

2019 - 2020

Growth accelerates due to investments into sales

- Sales' focus from growing the organization to improving efficiency
- Pricing model moving towards distribution licenses and growth fueled by distribution licenses
- Expansion into new business of micro-controllers (MCU)
- Expenses' growth stabilizing and scalability ramping up

2021 - 2025

Scalability towards strong profitability

- Position strenghtened towards large volume manufacturing customers
- Growth in MCU- product
- Long "tail" of distribution licenses growth begins
- Global sales organization and customer relations utilized in new product market entry
- Target in 175 MEUR revenue and >20 % EBIT in 2025

Source: Inderes, Qt Group

Historical development

Operative performance

Qt's revenue has grown rapidly for the past few years as the investments into the sales network bear fruit. Revenue increased by 12% in the first large investment year of 2017 but increased to 26 % in 2018 and 28 % in 2019. The last 12 month rolling period (H1'20 ending period) resulted in 68 MEUR sales, an increase of 52% to the comparison period. In 2019 distribution license sales increased 21 %, maintenance 18 % and developer license and consultation revenue 39 %. Therefore distribution licenses have yet to fulfill their goal as the key growth driver.

Profits have developed as planned. Due to the investments mandated by the new growth strategy EBIT was -9 % in 2017. In 2018 investments continued and the EBIT% was -5 %. In 2019 Qt reached break-even, accordingly with the strategy's road map. During the last 12 months (6/19-6/20) the actualized EBIT margin has been 9 %, reflecting the transition towards the scalable growth phase. Earnings' development has exceeded our expectations in the last few years, as the growth investments have been smaller than we estimated. We also point out, that should the company have capitalized R&D expenditure, the company could have shown substantially better profitability.

Qt's quarterly result fluctuate according to license sales. Seasonally Q2 and Q4 are usually the strongest in terms of license sales.

Cost structure

The cost structure is essentially fixed, and scales according to growth. The operational expenses were 59 MEUR in 2019. The costs' where driven up by especially the development of the sales organization (2017: 40 MEUR). Although Qt is clearly a growth company, we believe that the company also has a strong culture for profitability as well.

Personnel expenses were the largest single item at 39 MEUR, or 66% of the cost base. Due to the aggressive incentives provided to the sales force, the personnel costs have grown. The second largest single item is other operating expenses of 8.5 MEUR, 24% of revenue. Other expenses have been smaller than planned, as Corona has halted some planned expenditure.

Product development expenses amounted to 12.9 MEUR. Product development expenses in 2017 were 8.5 MEUR, and services 3.1 MEUR. Services consisted mainly of third-party development costs. It is important to note that depreciation is very low now and in the future, as the company does not capitalize its product development expenses.

Balance sheet and financial position

Qt's balance sheet is on a stable foundation in comparison to the business model and current strategy. Net gearing was -67 % at the end of Q2'20 and the equity ratio was 62 %. Cash and cash equivalents amounted to 18.0 MEUR, interest bearing debt was 3.4 MEUR. The company is most probably not paying dividends for this year as the focus remains in growth investments.

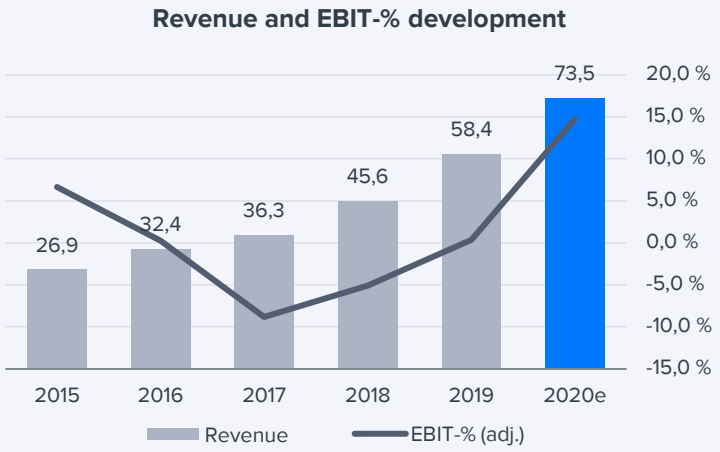
One of the strengths of Qt's business model is the negative working capital (-13 % of revenue), which means operative cash flow is strong. For example, the company had 6.1 MEUR operative cash flow in 2019 despite an EBIT of only 0.2 MEUR.

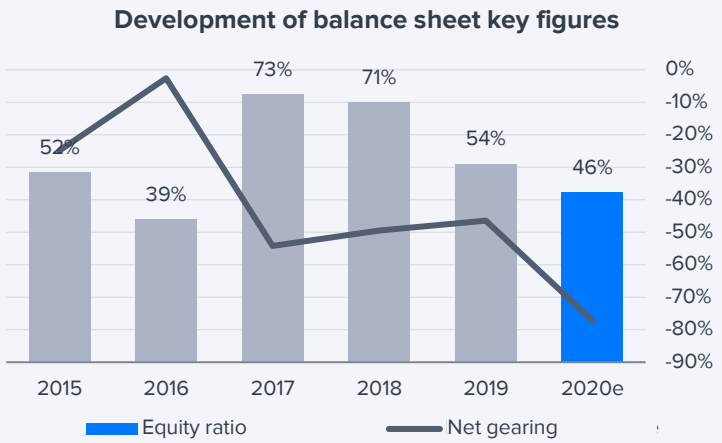
Qt's strong balance sheet paired with the ample cash flow from operations facilitates both investments and acquisitions in the coming years.

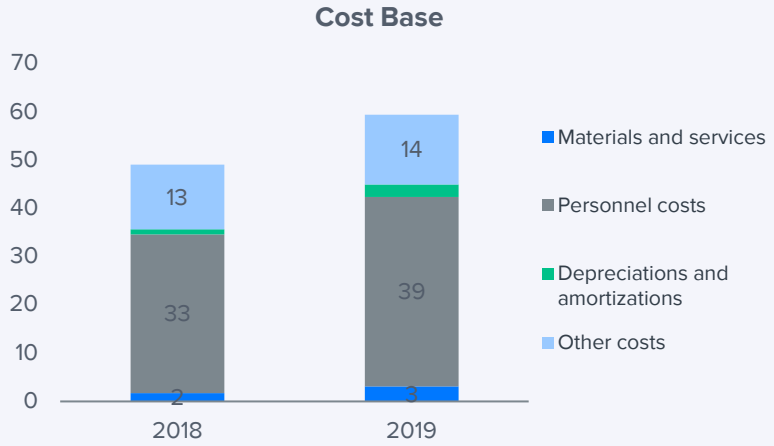
Incentive programs

Qt's management has an incentive program for the years 2019-2021 tied to the revenue of FY 2021. the incentive will kick in at 80 MEUR revenue and increase linearly to a maximum of 530 000 shares, which is reached at 120 MEUR. Out of the maximum amount corresponding to the value of 530 000 shares, the maximum amount for the CEO is 100 000 and other key personnel 430 000.

Historical development







Source: Inderes

Estimates and valuation 1/3

Estimates

Baseline for estimates

We base our estimates on revenue through three components: developer licenses and consulting, distribution licenses (run-time) and maintenance. The company reports distribution licenses currently on a yearly basis.

Qt is transitioning from the heavy investment phase into the strong growth phase. After the investment phase, the business model scalability will start to show, as revenue growth accelerates and costs' growth evens out. The company's own strategic roadmap for 2021-2025 is the foundation of our estimates. We find the targets convincing as Qt has successfully followed its own targets thus far.

On short term, growth is driven by the timing of license sales, which means that quarterly visibility is poor. The maintenance income (about a third of revenue) provides some stability. The long-term estimates are still burdened by the poor visibility into distribution licenses' income. We believe that Qt has a much better visibility into distribution license income, as the company has a better knowledge of automotive-industry customers models coming to market that use Qt technology in the coming years.

Short term estimates – scaling phase

Qt's outlook expects 2020 revenue to increase over 20 % at comparable exchange rates and EBIT to be in the black. For H1, Qt achieved 33 % comparable growth and a 5.8 MEUR operating profit, so the guidance should be easy to achieve. To some extent growth can be estimated by the up-front payments received during Q2, which saw growth of 29%. Qt states that currently there are no indications that the Corona pandemic will have a material effect on either business nor revenue growth.

We estimate 2020 revenue growth to be 26 % up to 73.5 MEUR and EBIT to be 10.8 MEUR (EBIT-% 14.7 %). Profitability is supported by other operating expenses decreasing due to the Corona virus. Our estimates for 2020 are developer license sales and consulting to increase by 32 %, maintenance 18 %, and distribution licenses 25 %. We expect the 2020 EPS to increase to 0.37 EUR from the previous -0,01 EUR.

For 2020, we believe that revenue growth will continue, but we expect Corona to negatively impact distribution license income and weaken the probability to achieve 100 MEUR revenue. Our estimate for next year's revenue growth is 22 %, translating to 89 MEUR. The operating profit in our estimates will increase to 19 % and 17 MEUR. EPS is expected to increase to 0.62 EUR for 2021.

Long term estimates – distribution licenses drive growth

Qt's goal is 100 MEUR in revenue and an EBIT margin of 15% for 2021. After this, the strategy period in 2022-2025 targets at least 15% annual sales growth for the entire period. This corresponds to at least 175 MEUR revenue in 2025. The company pursues at least 15% profitability at the beginning of the strategy period, which increases to 20% towards the end. The company has communicated that the growth target is based on the current product portfolio and does not include acquisitions or expansion into new segments.

We estimate that the distribution licenses account for most of the growth objectives. With developer licenses, the growth limits will be reached at about 100 MEUR revenue, as growth is limited by the global number of application developers.

Estimates and valuation 2/3

In the years 2021-2025 we expect Qt's revenue to increase at a stable 20 % annual rate. The revenue will reach 180 MEUR in 2025, while the company's own target is at least 175 MEUR revenue.

We estimate that in light of the current growth outlook, Qt has a good chance to reach 25-30% profitability in the 2022-2025 strategy period, on which our estimates are also based. Our view is built upon the strong scalability as well as the fact that Qt is getting better and better return on growth investments. The company's own targets for the EBIT margin exceeding 15 % 2021-2024 and exceeding 20 % in 2025 are more modest, but we believe they reflect flexibility left for growth investments. In our estimates, Qt will achieve a 52 MEUR EBIT (29% margin) in 2025. The estimate corresponds to a 1.65 EUR EPS, and average earnings' growth of 28% in 2021-2025.

Valuation

Value creation should be viewed with a multi-year focus

Qt has transitioned to a scalable earnings growth phase, which has alleviated difficulties related to valuing the share. This has been reflected in the rapid increase in share price. Investors have gained an even stronger confidence in the growth potential of the business model, earnings potential, and progress of the company's strategy. Therefore we can evaluate Qt's value creation through cash flow and earnings growth. In the big picture however, Qt is still at the beginning of its strategy, meaning that our focus needs to be in the years ahead when evaluating value creation.

Our view on the value

Our valuation is based mainly on assessing Qt's value relying on the 2025 estimates. We evaluate Qt's potential value in 2025 and reflect this back to the years' 2020-2024 expected returns and investor risks, on which basis we will construct our view of the share. We find this is the most prudent way to evaluate the attractiveness of the share, as it accounts for the developmental stage as well as the long-term potential. The efficacy of the model is further improved by the strong track record in following long-term roadmaps.

In our base case scenario Qt is valued in 2025 with an EV/Sales and EV/EBIT multiple of 6x and 20x (we have raised the EV/Sales multiple due to the higher EBIT margin). Through these, the EV would be 1.07 billion EUR in 2025. When adding the cash flow for the years 2020-2025 the EV is 1.25 billion EUR, corresponding to a share price of 51 EUR and an annualized rate of return of 6.8% on the share compared to the current price. In our view, this expected return falls short of the markets return requirement, despite our estimate expecting an excellent result. Therefore our estimate supports our view that the share is already priced correctly.

In our pessimistic scenario, revenue and operating profit fall 30% short of the base case scenario, and the 2025 revenue remains at 126 MEUR. This could not be considered a failure as such, but rather a transition to mature growth sooner than expected. The multiples used in this scenario for revenue and operating profit are 4x and 15x. The market cap is then 673 MEUR, corresponding to a 27 EUR share price and -5% annual return.

In our positive scenario, revenue and operating profit exceed the base case scenario by 30%, and the 2025 revenue increases to 234 MEUR. Due to the stronger growth profile, the multiples in this scenario are 8x and 25x. Assuming no dividends are paid, the market cap is 2 billion EUR and an 82 EUR share price, which translates to a 17.1% annualized return. The scenario requires both an excellent performance from the strategy as well as very favorable market development.

Current valuation multiples

Qt's share valuation is starting to receive support from valuation multiples as the company transitions from the investment phase to the profitable growth phase. Revenue based valuation is high (EV/Sales 2020e 11.4x), but somewhat justifiable with the over 40 % compound revenue growth and profitability figure.

The 2021e P/E and EV/EBIT multiples are high at 58x and 48x, but only slightly above the peer group. For 2022e, the multiples decrease to 28x and 30x, which are still slightly elevated when reflected on the 28% annual earnings growth rate expected for 2021-2025. The growth potential offered by Qt's target markets could offer upside in the long-term even with the current valuation, as the company will most probably be able to renew and find new growth elsewhere. Validation for pricing would however need to be bravely sought outside of the already ambitious growth strategy. We find the pricing is currently most realistic base on the current portfolio-based strategy and its goals.

Estimates and valuation 3/3

Qt's pricing is overall higher than the peer group. We have used operating system developers, CAD companies and automotive industry software vendors as a peer group for Qt. The peers are mainly large and established IT sector players. The larger size of the peers weakens comparability to Qt, but on the other hand gives credibility to the peer group and estimates. Investors should also keep in mind that the whole sector is priced with exceptionally high multiples, meaning that the investor will be burdened with indirect risk related to the resilience of the entire sector's valuation multiples.

In our estimates Qt will begin paying dividends for the year 2021, after which dividend yield will be a few percent compared to the current share price. Dividend yield is currently the secondary return component.

DCF valuation

The EV of our DCF for Qt is 850 MEUR, corresponding to a 35.5 EUR share price. The business yields good cash flow as the earnings turn positive, because the balance sheet is very light and working capital is negative. Our estimates expect the company to grow sales by about 20% annually for the coming years and achieve a 29% operating profit margin in 2025. Our terminal estimates from 2030 onwards have EBIT-% at 29% and revenue growth at 2.5%. The valuation in increased by the negative working capital, which increases cash flow as the revenue increases. The weight of the terminal value is a frightening 70%, reflecting the high growth figures included in the current valuation. The WACC in the DCF model is set at a modest 7.9%, which in turn reflects the lower risk profile based on the strong execution ability and resulting successes in the company's recent history.

Scenario analysis of valuation

Year 2025	Pessimistic	Current estimates	Optimistic
Variable: Revenue MEUR	126	180	234
Variable: EBIT MEUR	37	52	68
X revenue multiple	4,0	6,0	8,0
X operating profit multiple	15,0	20,0	25,0
= EV (EV/Sales)	505	1082	1876
= EV (EV/EBIT)	550	1048	1703
Mean (EV)	528	1065	1789
+net cash + dividends 2020-2025	147	184	239
=market cap	675	1249	2029
Share price in 2025 (including dividends)	27,4	50,7	82,3
Return	-23 %	42 %	130 %
Annualized return (5v)	-5 %	6,8 %	17,1 %

Source: Inderes

Quarterly estimates

Profit and loss	2018	Q1'19	Q2'19	Q3'19	Q4'19	2019	Q1'20	Q2'20	Q3'20e	Q4'20e	2020e	2021e	2022e	2023e
Revenue	**45,6**	**12,8**	**14,0**	**14,7**	**16,9**	**58,4**	**18,4**	**18,1**	**17,2**	**19,8**	**73,5**	**89,4**	**110**	**131**
License sales and consulting	30,6	8,5	9,6	10,2	12,1	40,5	13,4	13,0	11,8	14,1	52,3	64,4	81,2	98,8
Maintenance income	15,0	4,2	4,4	4,5	4,8	17,9	5,0	5,1	5,4	5,7	21,2	25,0	28,5	32,4
Gross profit	**-1,2**	**0,1**	**1,3**	**0,8**	**0,6**	**2,8**	**2,8**	**4,3**	**2,6**	**3,5**	**13,3**	**18,8**	**27,8**	**36,3**
Depreciation and amortization	-1,1	-0,6	-0,6	-0,7	-0,7	-2,6	-0,7	-0,7	-0,6	-0,6	-2,5	-1,9	-1,7	-1,7
Operating profit excluding non-recurring items	**-2,3**	**-0,5**	**0,7**	**0,1**	**0,0**	**0,2**	**2,2**	**3,6**	**2,1**	**3,0**	**10,8**	**16,9**	**26,1**	**34,6**
Operating profit	**-2,3**	**-0,5**	**0,7**	**0,1**	**0,0**	**0,2**	**2,2**	**3,6**	**2,1**	**3,0**	**10,8**	**16,9**	**26,1**	**34,6**
Net financial expenses	-0,2	-0,1	0,0	-0,1	0,1	-0,1	0,0	-0,2	0,0	0,0	-0,2	0,0	-0,1	-0,3
Profit before taxes	**-2,5**	**-0,6**	**0,7**	**0,0**	**0,0**	**0,1**	**2,2**	**3,4**	**2,1**	**3,0**	**10,7**	**16,9**	**26,0**	**34,3**
taxes	0,1	0,0	-0,1	-0,2	-0,2	-0,5	-0,6	-0,6	-0,2	-0,4	-1,8	-1,7	-2,6	-5,2
Minority shares	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Net profit	**-2,4**	**-0,5**	**0,6**	**-0,2**	**-0,2**	**-0,4**	**1,6**	**2,8**	**1,8**	**2,6**	**8,8**	**15,2**	**23,4**	**29,2**
EPS (adjusted)	**-0,10**	**-0,02**	**0,03**	**-0,01**	**-0,01**	**-0,01**	**0,07**	**0,12**	**0,07**	**0,11**	**0,37**	**0,62**	**0,93**	**1,16**
EPS (reported)	**-0,10**	**-0,02**	**0,03**	**-0,01**	**-0,01**	**-0,01**	**0,07**	**0,12**	**0,07**	**0,11**	**0,37**	**0,62**	**0,93**	**1,16**

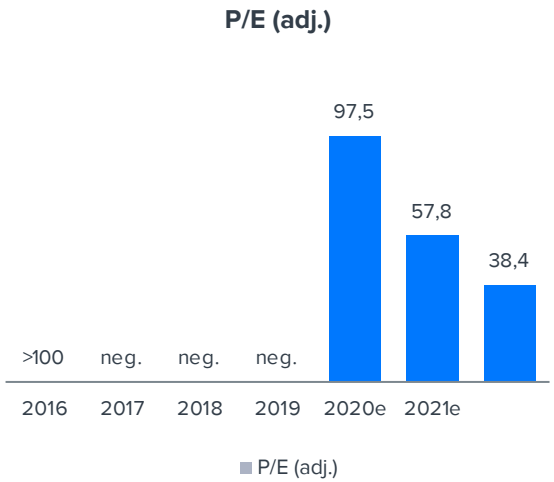
Key figures	2018	Q1'19	Q2'19	Q3'19	Q4'19	2019	Q1'20	Q2'20	Q3'20e	Q4'20e	2020e	2021e	2022e	2023e
Revenue growth -%	25,7 %	23,7 %	4,6 %	36,8 %	51,8 %	28,0 %	43,7 %	29,2 %	17,2 %	17,1 %	25,9 %	21,7 %	22,7 %	19,7 %
Adjusted revenue growth-%	-28 %	-45 %	-46 %	-107 %	-97 %	-109 %	-519 %	407 %	2799 %	-6286 %	4864 %	56 %	54 %	33 %
Gross margin-%	-2,7 %	0,8 %	9,4 %	5,1 %	3,7 %	4,8 %	15,4 %	23,6 %	15,3 %	17,9 %	18,1 %	21,0 %	25,4 %	27,7 %
Adjusted EBIT-%	-5,1 %	-4,1 %	5,1 %	0,5 %	-0,3 %	0,4 %	11,8 %	20,0 %	11,9 %	15,0 %	14,7 %	18,9 %	23,8 %	26,4 %
Net result -%	-5,2 %	-4,3 %	4,3 %	-1,3 %	-1,2 %	-0,6 %	8,8 %	15,5 %	10,5 %	13,2 %	12,0 %	17,0 %	21,3 %	22,2 %

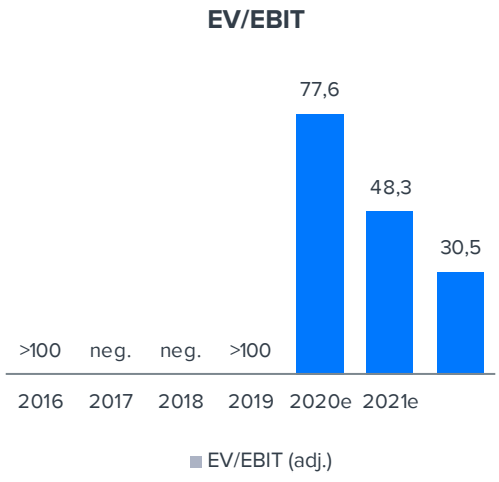
Source: Inderes

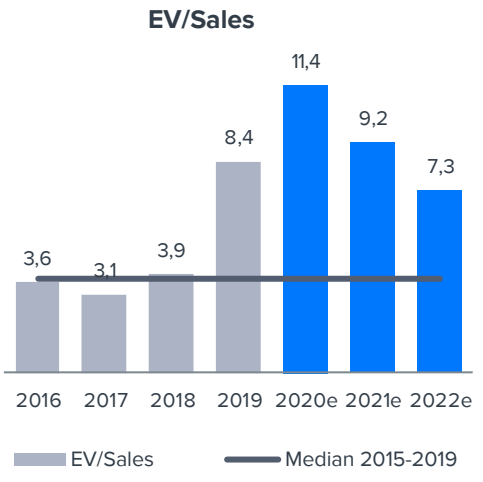
Valuation summary

Arvostustaso	2016	2017	2018	2019	2020e	2021e	2022e	2023e
Share price	5,62	5,21	7,90	21,0	**35,7**	**35,7**	**35,7**	**35,7**
Number of shares	20,8	23,8	23,8	23,7	**24,2**	**24,7**	**25,2**	**25,2**
Market cap	117	124	188	497	**863**	**863**	**863**	**863**
Enterprise value	117	113	179	489	**840**	**818**	**796**	**778**
P/E (adj.)	>100	neg.	neg.	neg.	**97,5**	**57,8**	**38,4**	**30,8**
P/E	neg.	neg.	neg.	neg.	**97,5**	**57,8**	**38,4**	**30,8**
P/FCF	neg.	11,4	neg.	neg.	**70,5**	**45,8**	**33,9**	**27,9**
P/B	14,2	6,1	10,3	29,3	**30,0**	**18,4**	**12,9**	**10,3**
P/S	3,6	3,4	4,1	8,5	**11,7**	**9,7**	**7,9**	**6,6**
EV/Sales	3,6	3,1	3,9	8,4	**11,4**	**9,2**	**7,3**	**5,9**
EV/EBITDA (adj.)	neg.	neg.	neg.	>100	**63,2**	**43,5**	**28,6**	**21,4**
EV/EBIT (adj.)	>100	neg.	neg.	>100	**77,6**	**48,3**	**30,5**	**22,5**
Dividend/Earnings (%)	0,0 %	0,0 %	0,0 %	0,0 %	**0,0 %**	**40,5 %**	**53,8 %**	**70,0 %**
Dividend yield-%	0,0 %	0,0 %	0,0 %	0,0 %	**0,0 %**	**0,7 %**	**1,5 %**	**2,4 %**

Source: Inderes







Peer group valuation

Peer group valuation Company	Share Price	Market cap MEUR	EV MEUR	EV/EBIT 2020e	 2021e	EV/EBITDA 2020e	 2021e	EV/Sales 2020e	 2021e	P/E 2020e	 2021e
Adobe Inc	496,92	196388	196189	43,6	36,7	38,2	32,7	18,3	15,9	49,7	43,6
ANSYS Inc	330,03	23247	22976	41,1	36,2	39,4	34,4	16,9	15,3	52,8	46,5
Atlassian Corporation	169,80	35276	34432	115,9	102,7	108,0	92,8	25,6	21,3	153,0	144,0
Autodesk Inc	239,55	42464	42563	63,2	47,3	56,7	43,3	15,5	13,5	82,8	59,9
Basware Oyj	37,10	538	585	221,4	71,4	31,9	24,9	3,9	3,5		
CDK Global Inc	45,54	4551	6637	15,1	13,6	10,9	10,7	4,1	4,0	14,7	14,3
Dassault Systemes	158,00	41658	43908	33,3	29,0	27,9	24,8	9,7	8,8	42,6	37,2
IAR Systems Group AB	164,00	210	211	24,4	18,5	15,9	12,8	5,6	4,9	33,0	24,9
Materialise NV	40,54	1795	1793		296,4	103,1	69,9	10,4	9,6		518,9
Microsoft	209,25	1309798	1256121	28,4	25,2	22,9	20,2	10,5	9,5	36,4	31,8
Nuance Communications Inc	32,79	7479	8502	29,1	27,2	26,3	24,5	6,9	6,6	38,3	36,0
Oracle	60,95	153744	178289	12,2	11,6	11,4	10,7	5,4	5,3	15,6	14,1
PTC Inc	88,20	8356	8964	26,8	23,6	24,0	21,5	7,5	6,8	36,5	30,8
QAD Inc	41,84	694	586	131,1	47,8	58,5	32,1	2,2	2,3	211,9	69,8
Synopsys Inc	211,79	26283	25514	29,9	26,5	25,2	23,0	8,2	7,6	37,0	33,4
Vitec Software Group AB		830	873	45,7	41,2	20,4	18,5	7,0	6,2	65,0	44,4
Qt (Inderes)	**35,70**	**863**	**840**	**77,6**	**48,3**	**63,2**	**43,5**	**11,4**	**9,2**	**97,5**	**57,8**
Mean				**57,4**	**53,4**	**38,8**	**31,0**	**9,8**	**8,8**	**62,1**	**76,6**
Median				**33,3**	**32,6**	**27,1**	**24,6**	**7,8**	**7,2**	**40,4**	**37,2**
Diff-% to mean				***133 %***	***48 %***	***133 %***	***77 %***	***46 %***	***27 %***	***141 %***	***55 %***

Source: Thomson Reuters / Inderes. Notice: Market cap used by Inderes does not account for own shares held by the company.

Balance sheet

Assets	2018	2019	2020e	2021e	2022e
Non-current assets	**15,5**	**19,0**	**15,7**	**13,8**	**13,9**
Goodwill	6,6	6,6	6,6	6,6	6,6
Intangible assets	4,6	4,1	3,7	4,0	4,5
Tangible assets	1,2	4,6	3,8	3,3	2,9
Associated companies	0,0	0,0	0,0	0,0	0,0
Other investments	0,0	0,0	0,0	0,0	0,0
Other non-current assets	0,2	0,3	0,0	0,0	0,0
Deferred tax assets	3,0	3,5	1,7	0,0	0,0
Current assets	**23,3**	**31,0**	**46,8**	**73,7**	**105**
Inventories	0,0	0,0	0,0	0,0	0,0
Other current assets	0,0	0,0	0,0	0,0	0,0
Receivables	13,6	19,1	23,9	29,0	35,6
Cash and equivalents	9,7	11,9	22,9	44,7	69,8
Balance sheet total	**38,8**	**50,0**	**62,5**	**87,5**	**119**

Source: Inderes

Liabilities & equity	2018	2019	2020e	2021e	2022e
Equity	**18,3**	**16,9**	**28,7**	**46,9**	**67,0**
Share capital	0,5	0,5	0,5	0,5	0,5
Retained earnings	-6,4	-5,8	3,0	18,2	35,5
Hybrid bonds	0,0	0,0	0,0	0,0	0,0
Revaluation reserve	0,0	0,0	0,0	0,0	0,0
Other equity	24,2	22,3	25,2	28,1	31,0
Minorities	0,0	0,0	0,0	0,0	0,0
Non-current liabilities	**1,8**	**4,6**	**2,2**	**2,2**	**5,2**
Deferred tax liabilities	0,4	0,4	0,4	0,4	0,4
Provisions	0,0	0,0	0,0	0,0	0,0
Long term debt	0,2	2,5	0,0	0,0	3,0
Convertibles	0,0	0,0	0,0	0,0	0,0
Other long term liabilities	1,1	1,7	1,7	1,7	1,7
Current liabilities	**18,7**	**28,4**	**31,6**	**38,4**	**47,1**
Short term debt	0,4	1,6	0,0	0,0	0,0
Payables	18,3	26,8	31,6	38,4	47,1
Other current liabilities	0,0	0,0	0,0	0,0	0,0
Balance sheet total	**38,8**	**50,0**	**62,5**	**87,5**	**119**

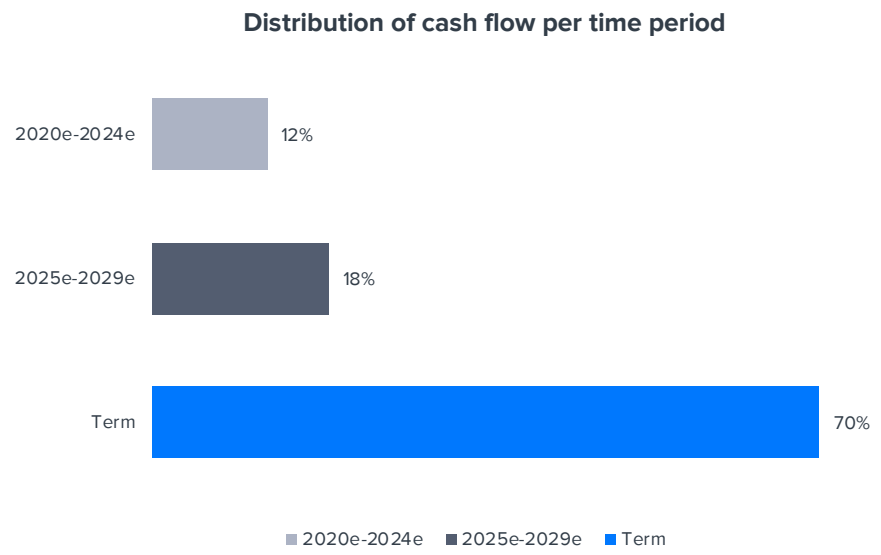
DCF model

DCF calculation	2019	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	TERM
EBIT	**0,2**	**10,8**	**16,9**	**26,1**	**34,6**	**44,6**	**52,4**	**60,2**	**68,6**	**76,8**	**78,7**	
+ Depreciations and Amortizations	2,6	2,5	1,9	1,7	1,7	1,8	1,9	2,0	2,3	2,7	3,0	
- Paid taxes	-0,9	0,0	0,0	-2,6	-5,2	-8,9	-10,4	-11,9	-13,5	-15,2	-15,5	
- Tax shield from paid interests	0,0	0,0	0,0	0,0	0,0	-0,1	-0,1	-0,1	-0,2	-0,2	-0,2	
+ Taxes from interests received	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
- Change in net working capital	3,0	0,0	1,7	2,1	2,3	2,6	2,5	2,8	3,0	3,0	0,7	
Operative cashflow	**4,9**	**13,3**	**20,4**	**27,3**	**33,4**	**40,1**	**46,3**	**53,0**	**60,2**	**67,1**	**66,7**	
+ Increases in int. bearing long-term liab.	0,6	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
- Investments	-5,6	-1,0	-1,6	-1,9	-2,4	-2,7	-2,8	-3,5	-3,9	-4,2	-3,3	
Free operative cash flow	**-0,1**	**12,2**	**18,8**	**25,4**	**31,0**	**37,5**	**43,5**	**49,4**	**56,3**	**62,9**	**63,3**	
+/- Other items	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Free cash flow	-0,1	12,2	18,8	25,4	31,0	37,5	43,5	49,4	56,3	62,9	63,3	
Discounted free cash flow		**12,0**	**17,1**	**21,4**	**24,1**	**27,0**	**29,1**	**30,6**	**32,3**	**33,4**	**31,2**	**592**
Discounted cumulative free cash flow		850	838	821	800	776	749	720	689	657	623	592

Debt-free DCF value	**850**
- Interest bearing liabilities	-4,1
+ Liquid assets	11,9
- Minority share	0,0
Dividends	0,0
Equity DCF value	**858**
Equity DCF value per share	**35,5**

Cost of capital (WACC)	
Tax-% (WACC)	20,0 %
Targeted gearing	10,0 %
Cost of debt	6,0 %
Company Beta	1,00
Market's risk premium	4,75 %
Liquidity premium	0,50 %
Risk-free rate	3,0 %
Cost of equity	**8,3 %**
Weighted cost of capital (WACC)	**7,9 %**

Source (Inderes)



Summary

Income statement	2017	2018	2019	2020e	2021e
Revenue	36,3	45,6	58,4	**73,5**	**89,4**
EBITDA	-2,3	-1,2	2,8	**13,3**	**18,8**
EBIT	-3,2	-2,3	0,2	**10,8**	**16,9**
EBT	-3,7	-2,5	0,1	**10,7**	**16,9**
Net income	-3,2	-2,4	-0,4	**8,8**	**15,2**
Adjustments	0,0	0,0	0,0	**0,0**	**0,0**

Balance sheet	2017	2018	2019	2020e	2021e
Taseen loppusumma	37,5	38,8	50,0	**62,5**	**87,5**
Oma pääoma	20,3	18,3	16,9	**28,7**	**46,9**
Liikearvo	6,6	6,6	6,6	**6,6**	**6,6**
Nettovelat	-11,0	-9,1	-7,9	**-22,9**	**-44,7**

Cashflow	2017	2018	2019	2020e	2021e
EBITDA	-2,3	-1,2	2,8	**13,3**	**18,8**
Change in net working capital s	-0,2	0,2	3,0	**0,0**	**1,7**
Opearative cashflow	-3,2	-1,7	4,9	**13,3**	**20,4**
Investments	-1,2	-0,8	-5,6	**-1,0**	**-1,6**
Free cash flow	10,9	-2,1	-0,1	**12,2**	**18,8**

Per share figures	2017	2018	2019	2020e	2021e
EPS (reported)	-0,14	-0,10	-0,01	**0,37**	**0,62**
EPS (adjusted)	-0,14	-0,10	-0,01	**0,37**	**0,62**
Operative cashflow per share	-0,13	-0,07	0,21	**0,55**	**0,83**
Free cashflow per share	0,46	-0,09	0,00	**0,51**	**0,76**
Equity per share	0,85	0,77	0,72	**1,19**	**1,90**
Dividend per share	0,00	0,00	0,00	**0,00**	**0,25**

Growth and profitability	2017	2018	2019	2020e	2021e
Revenue growth, %	12 %	26 %	28 %	**26 %**	**22 %**
EBITDA growth, %	163 %	-46 %	-324 %	**376 %**	**42 %**
EBIT (adj.) growth, %	-3917 %	-28 %	-109 %	**4864 %**	**56 %**
EPS (adj.) growth, %	-2919 %	-26 %	-85 %	**-2561 %**	**69 %**
EBITDA, %	-6,3 %	-2,7 %	4,8 %	**18,1 %**	**21,0 %**
EBIT (adj.) margin, %	-8,8 %	-5,1 %	0,4 %	**14,7 %**	**18,9 %**
EBIT margin, %	-8,8 %	-5,1 %	0,4 %	**14,7 %**	**18,9 %**
ROE, %	-22,6 %	-12,4 %	-2,0 %	**38,8 %**	**40,3 %**
ROI, %	-18,1 %	-11,6 %	1,1 %	**43,5 %**	**44,8 %**
Equity ratio	73,3 %	71,2 %	54,3 %	**45,9 %**	**53,6 %**
Gearing	-54,2 %	-49,5 %	-46,4 %	**-79,7 %**	**-95,3 %**

Largest shareholders	% of shares
Ingman Development Oy Ab	21,7 %
Keskinäinen Eläkevakuutusyhtiö Ilmarinen	6,4 %
Aktia Asset Management	5,7 %
Keskinäinen Työeläkevakuutusyhtiö Varma	4,6 %
Evli	3,5 %
Kari Karvinen	3,3 %

Valuation multiples	2017	2018	2019	2020e	2021e
EV/Sales	3,1	3,9	8,4	**11,4**	**9,2**
EV/EBITDA (adj.)	neg.	neg.	>100	**63,2**	**43,5**
EV/EBIT (adj.)	neg.	neg.	>100	**77,6**	**48,3**
P/E (adj.)	neg.	neg.	neg.	**97,5**	**57,8**
P/B	6,1	10,3	29,3	**30,0**	**18,4**
Dividend yield-%	0,0 %	0,0 %	0,0 %	**0,0 %**	**0,7 %**

Source: Inderes Shareholder data: Modular Finance AB

Disclaimer and recommendation history

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Buy - Stock's risk adjusted return is very attractive

Accumulate - Stock's risk adjusted return is compelling

Reduce - Stock's risk adjusted return is weak

Sell - Stock's risk adjusted return is very weak

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Recommendation history (>12 month)

Date (dd/mm/yyyy)	Recommendation	Target price	Share price
14/03/2017	Accumulate	7,50 €	6,81 €
28/04/2017	Accumulate	7,80 €	7,04 €
11/08/2017	Accumulate	7,80 €	6,88 €
24/10/2017	Accumulate	7,50 €	6,68 €
15/01/2017	Accumulate	6,40 €	5,58 €
19/02/2018	Buy	7,00 €	5,50 €
30/04/2018	Buy	7,50 €	5,94 €
10/08/2018	Buy	9,50 €	8,30 €
02/11/2018	Buy	10,00 €	8,16 €
09/01/2019	Buy	10,00 €	8,40 €
18/02/2019	Accumulate	10,00 €	9,30 €
26/04/2019	Accumulate	12,50 €	11,50 €
12/08/2019	Accumulate	14,00 €	13,20 €
04/11/2019	Accumulate	18,00 €	16,70 €
02/02/2020	Reduce	22,00 €	22,30 €
16/02/2020	Accumulate	26,00 €	23,50 €
02/04/2020	Buy	22,00 €	18,60 €
24/04/2020	Accumulate	26,00 €	23,50 €
10/08/2020	Accumulate	35,00 €	32,50 €
16/09/2020	Reduce	35,00 €	35,70 €

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