## Remedy Entertainment Company report

6/2018



## Video game company for the long run

Remedy has progressed as planned in all its strategic objectives since the IPO a year ago. The gaming projects have progressed as scheduled, and Remedy has advanced successfully to the simultaneous development of two large scale gaming projects. The company has a good relationship with two strong publishers, with whom we believe the co-operation has gone well thus far. Although the progress of the strategy does not yet reflect in the company's numbers due to the developmental stage of the projects, the development going as planned has substantially decreased Remedy's risk level when compared to last year. We expect the multiproject model strategy transition currently underway to start to bear fruit next year. We reiterate our buy recommendation and increase our target price to 8.50 EUR (previously 7.5 EUR).

### Not just a hit business

Remedy is a gaming studio established in 1995, best known for its Max Payne, Alan Wake and Quantum Break games. The company focuses on developing AAA (video games with the highest development budget and promotion) games for PC and console platforms, with gaming enthusiasts being the main end users. Remedy differentiates from competitors with original story-driven third-person shooter action games. The contest for publishing contracts and buyer recognition is tough, but the entry barrier in Remedy's segment is also high. This is due to the multi-year lead times in game development which requires technology, visibility and vast know-how in terms of success and financing. Competitive advantage and sustainability of the business model are supported by in-house game development technologies, publishing deals as well as sequels to own game brands.

### Uneventfulness has been a good thing for the last year

After the IPO, Remedy has been busy implementing its multi-project strategy, where developing numerous projects simultaneously is in the spotlight. This requires financing a larger portion of development costs, which thereby enables the company to hold onto the IPR (intellectual property rights) and thus enables Remedy to receive a larger portion of sales' revenue. Remedy has a strong track record in developing quality games, but just as importantly also a good track in developing the games efficiently with a relatively small budget, meaning that Remedy doesn't have to hit multimillion sales numbers to be profitable. The company has been unable to tell much about upcoming games, but the underlying business has progressed according to plan. The success of the strategy will be measured next year with the release of the self-owned P7 game project, which we cautiously expect to reach 1.5M unit sales volumes. This translates to revenue in excess of 30 MEUR and an EBIT of 7.7 MEUR (EBIT-% 25%) in 2019.

### Valuation still tempting in terms of FY19

On a whole, we find the risk/reward ratio tempting when considering the substantial value creation potential offered, providing the strategy is successful. The risks are however high, as is common with gaming companies. Remedy operates in a market that reacts quickly to development in both technology and consumer behavior. With the current share price, the FY19 P/E estimate is 14.5x and the EV/EBIT multiple is 7.9x, which still offer a tempting upside potential should our estimates materialize.

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### **Recommendation and target price**

### Buy

Previous: Buy



8,50 EUR

Previous: 7.50 EUR

Share price: 7.30 EUR Potential: 16.4 %

<b>Key figures</b>	2016	2017	2018e	2019e
Revenue	16,4	17,2	20,9	31,2
growth-%	19,4 %	4,6 %	21,5 %	49,6 %
EBIT	3,9	2,0	0,0	7,7
EBIT-%	24,0 %	11,7 %	-0,2 %	24,7 %
PTP	3,7	1,8	-0,2	7,6
EPS (EUR)	0,26	0,16	-0,01	0,50
Dividend (EUR)	0,05	0,00	0,00	0,20
P/E (adj.)	-	52,9	neg.	14,5
P/B	-	3,6	4,1	3,2
EV/S	-	3,3	3,2	2,0
EV/EBITDA	-	20,5	404,1	7,7
EV/EBIT	-	22,1	neg.	7,9
Dividend yield-%	-	0,0 %	0,0 %	2,8 %
Source: Inderes				

### **Global gaming market (BUSD)**



Source: Newzoo

# Revenue 31 M€ 2019e EV/S 2.0x 2019e EV/EBIT 7.9x 2019e

Source: Inderes

### **Revenue and EBIT-%**



## M Value drivers

- Transition in value chain to a stronger position, larger portion of sales income
- Multi-project model provides continuity and diversifies risks.
- Strong track record in developing successful games
- In-house technology platform provides scalability and competitive advantage

## A Risk factors

- Gaming projects failing or being delayed
- Dependence on publisher
- Dependence on success of single games
- Technology and market trends
- Business model transition still unproven

### ✓ Valuation

- Industry relative valuations rising
- Strong value creation potential providing successful game sales
- Requires perseverance, valuation should be observed from 2019 viewpoint

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## **Remedy in short**

Remedy has specialized in developing story-driven single-player action games for PC, Xbox, and PlayStation platforms.

1995

**ESTABLISHED** 

78/100

**Metacritic score** 

### 8 RELEASES

**DURING THE COMPANY'S HISTORY** 

**REVENUE** 

2.0 MEUR (EBIT-% 11.7)

**OPERATING PROFIT 2017** 

164

**EMPLOYEES 5/2018** 

**GAMES UNDER DEVELOPMENT**  1996



Death Rally

2011

Death Rally

Mobile



Max Payne 2012



2003

Max Payne 2

2014



Alan Wake



Alan Wake:



American Nightmare



Agents of Storm



Quantum Break

Revenue and profitability



Source: Inderes, Remedy

## Company description 1/3

### **Company description**

### Respected game studio

Remedy Entertainment (Remedy) is a Finnish video game developer founded in 1995. It is one of the oldest and most recognized game developers in Finland, best known for its Max Payne games, Death Rally, Alan Wake, the addon Alan Wake American Nightmare, as well as Quantum Break which was released in 2016. Remedy's revenue for 2017 was 17.2 MEUR and operating profit 2.0 MEUR (EBIT-%: 11.7 %). The company employed 164 people in May 2018. 12 outsourced employees are working on the gaming projects in addition to the in-house personnel.

Remedy is best known for story-driven action games, being one of the most respected studios in the premium games category. As a distinction of this, the Max Payne Hollywood movie hit the big screens in 2008, when game-based movies were still a rarity. The internal driving force and ambition to develop unique, high-quality story driven games is reflected in Remedy's Metacritic score of 78/100. Metacritic is a website that aggregates scores from both critics and gamers separately to form a single score.

Remedy develops premium games mainly for PC, Xbox and PlayStation. The gamers playing the games are mostly interested in story-driven action games, and are willing to invest in excess of 50 EUR in a single game. From a business perspective, Remedy's game development differs substantially from mobile game development, where development cycles are

shorter, entry barriers lower, target groups and the market are different, and the business model is based on free downloads usually driven by ingame micro transactions.

## Long history has matured the company into an experienced game studio

Remedy's first game, Death Rally, was released in 1996. Before the 2001 release on their first hit game, Max Payne, Remedy was learning the ins and outs of operating in the gaming market, how differentiation is achieved and how to cultivate a unique culture. With Max Payne, the company learned what it takes to create a story-driven hit game. Building upon this basis, a culture of ingenuity and creativity was formed, one that can integrate and absorb American pop culture into its themes. Max Payne was a hit, and with the hit seguel Max Payne 2, the company understood the importance of sequels in game development. Developing a seguel is easier, and often sequels fare even better than the original. Remedy sold the IP of Max Payne in 2002, continuing to develop the game up until 2003. Following the divestment of the IP, the company had a strong cash buffer for years to

In 2004, Remedy made note of their strong focus on the PC platform, and saw expansion into the console market as a good way to move forward. They partnered with Microsoft to develop the Alan Wake game. Microsoft was the strongest choice for a partner at that point, and allowed Remedy to maintain control over the IP. Alan Wake proved to be a much more strenuous project than anticipated earlier. The gaming

experience had to be altered mid-project, leading to a release delay of one year. The costs of the delay came out of Remedy's pocket, resulting in no revenue in 2008.

Microsoft published Alan Wake in the spring of 2010, the same day Rockstar's hit game Red Dead Redemption hit the shelves (Metacritic: 95/100). This partially gnawed Alan Wake's sales, but it was a moderate success financially nonetheless. To this day, a loyal fan base is patiently waiting for a sequel, with Remedy still holding the IP.

Partnering with Microsoft last decade was a worthy choice, as Xbox 360 was well received among the contemporary generation of consoles, but with Alan Wake Remedy was dependent on Microsoft's strategy. Microsoft was supposed to publish Alan Wake for PC, but made a strategy call to emphasize Xbox instead, resulting in a notable delay of the PC release. Remedy decided to develop an add-on for the PC independently, and this proved successful with 2012 revenue reaching 15.5 MEUR. Through the Microsoft partnership Remedy learned the importance of the partners' strategy in game development. With Alan Wake, Remedy and Microsoft never reached the iteration in development that would have facilitated the development of sequels.

## **Company description 2/3**

Before the next major project, Remedy tried its hand at mobile games with Death Rally mobile and Agents of Storm in 2011-2014. The company found that the competition was ferocious and would require substantial marketing commitments. The F2P (free-to-play) dominated mobile market also lacked footing for Remedy's core competence of premium games. In addition, mobile game development wasn't a part of Remedy's culture. The company wanted to make content for the larger screens.

Remedy's latest project Quantum Break released in 2016 and also developed in collaboration with Microsoft - was hampered by the Xbox One console failing to meet PlayStation 4's popularity. Microsoft sought to create an entertainment center for the whole family, whilst Sony focused solely on gamers. Xbox One also missed out by entering the European market a full year later than the PS4. This meant that the potential gamer base for Quantum Break was limited further from optimal. As Remedy developed Quantum Break for Microsoft as a subcontractor - with the IP rights owned by Microsoft - it is our understanding that Remedy did not profit much from the actual sales. Despite this, Remedy achieved a very strong result (EBIT-% 24%) during the Quantum break release year of 2016, illustrating the company's cost efficient production capacity in quality games.

### Remedy games' reviews

The success of Remedy in the future is very much dependent on the potential to develop successful quality games, and this can be

estimated to some extent by the track record. In the gaming industry, especially in the pricy premium game segment, end users are motivated by reviews. Metacritic is a website comprised of reviews by numerous critics and gamers. Gamers follow and read Metacritic especially, so it has an important role in the gaming community.

Remedy has released 8 games during the span of its long history. The company made its mark in 2001 with Max Payne, strengthening its recognition 2 years later with the sequel Max Payne 2. The series is Remedy's best reviewed game, and has received additional international recognition with for instance the British Movie Academy's prestigious Bafta award. Remedy made 3.1 MEUR in revenue the year Max Payne was released, receiving a score of 86/100, averaged over critics and gamers, on Metacritic. The sequel brought in 6.6 MEUR in revenues for the release year and scored 83/100, averaged over gamers and critics on Metacritic.

With Alan Wake, Remedy partnered with Microsoft and focusing on the Xbox 360 platform. The game received strong 82/100 reviews on Metacritic averaged over gamer and critic scores, but we believe it was somewhat hampered by choices made by Microsoft. The add-on for Alan Wake was a financial success with 2012 revenues of 15.5 MEUR, but reviewed slightly behind its predecessor in terms of Metacritic scores.

Preceding Quantum Break, Remedy released two mobile games in 2011 and 2014. The mobile games went down in history as an endeavor that didn't result in financial success.

The company's latest addition Quantum Break has received an average user and critic Metacritic score of 66/100. Quantum Break failed to reach the historical quality level of Remedy seen previously, which we find to be partially influenced by the initial availability of the game only through the Windows 10 store, which isn't a very popular venue amongst gamers.

By compiling Metacritic user reviews, Metacritic critic reviews, and the Steam scores, Remedy has a median score of 78/100, independent of platforms. This is a very strong result, with very few gaming companies, or even individual games for that matter, reaching this level in any given category.

The median reviews are higher in comparison to competitors, with only CD Projekt topping Remedy's overall score. CD Projekt represents the very best of the industry, both financially as well as in terms of game quality.

## **Company description 3/3**

### Three games in the pipeline

Remedy currently has the sub-contracted Crossfire 2 underway in collaboration with Smilegate, Crossfire 2 being the seguel to the first part in the series. The 10 year old Crossfire by Smilegate is an extremely popular online game especially in China. The game has over 8 million simultaneous active users, and has generated about billion euros in revenue per year, making it one the most commercially successful games ever. Smilegate is currently developing a seguel, where Remedy's role is to develop and produce the story driven single player section of the game. Remedy is able to develop some new technological skills, gain experience on the Asian gaming market, and gain online games' development experience. The recognition and brand of Remedy are emphasized by the fact that one of globally most successful gaming houses chose Remedy to develop a part of their game. It is our understanding that the financially very well off Smilegate is extremely demanding in who they choose to partner with, and only a handful of game studios in the world are able to achieve the quality demanded by Smilegate.

The second game under development is under the working title P7, for which Remedy holds the IPR. The game is currently in full production. What is known of the game is that Remedy is developing a completely new game type and world space, with the intention that gamers can enjoy the game for much longer. The gamers will be provided with more opportunities to develop their character and more freedom in completion of the quests than previously possible in Remedy games. Knowing the history

of Remedy, it is safe to assume that the game will be substantially different from other games on the market, paired with a strong story-driven experience. We expect to see the game released at the beginning of 2019. P7 is part of Remedy's transition towards the multi-project model and simultaneous development of numerous projects. This diversifies both the production risk as well as the product specific risk.

In addition, Remedy is at the conceptualization stage of a third project, where a small team is planning a suitable gaming concept and shortlisting potential partners. Should Remedy decide to pursue a P7-style large scale project, it is in our view prudent to diversify the production risk and utilize the commercialization experience of a large publisher. If on the other hand the third project turns out to be a smaller project, Remedy could consider publishing the game themselves, thus opening the possibility to reap a much larger portion of sales revenues. The downside is that Remedy would need to invest more into marketing and distribution. The third project is an integral part in the strategic transition towards the multi-project model.

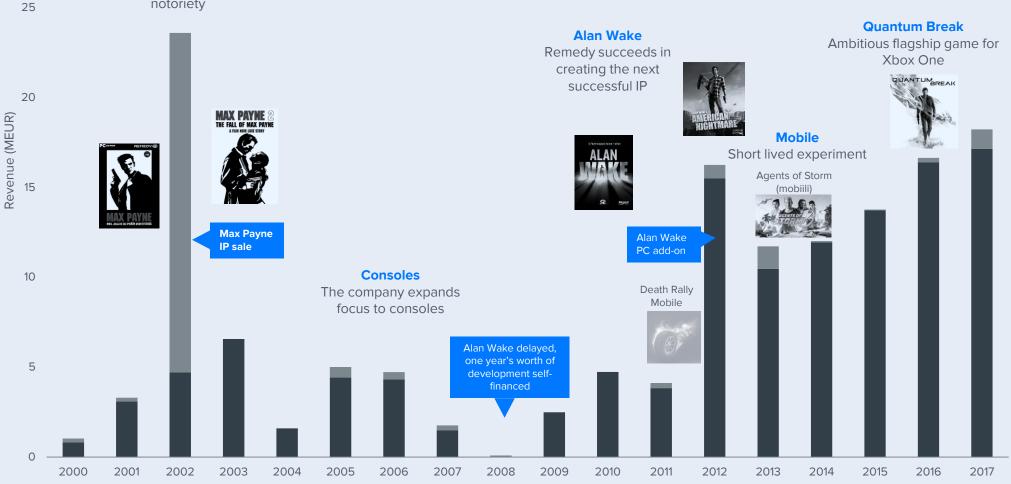
## History of Remedy

### **Max Payne**

Remedy gains global notoriety

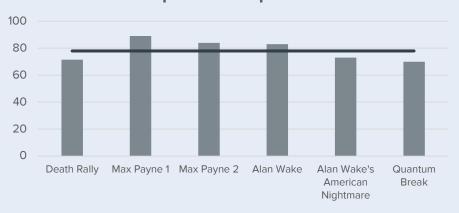
## P7 and CrossFire 2 in development

P7 self-held IP and Crossfire 2 sub-contracted



## **Reviews of Remedy's games**

## Medians of all Remedy game reviews independent of platform\*



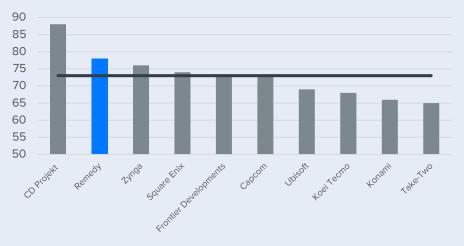
## **(4)**

Remedy has a strong track record in quality games. They dont have any notable failures, albeit they quickly withdrew from the mobile game market.

## Q

Remedy is one of the most successful game studios when ranked by reviews. In the AAA premium category, reviews play a substancial role in game sales.

### Remedy Metacritic scores vs. competitors





Historically Remedy has usually developed one game at a time (development cycle 2-4 years), with mainly publishers carrying the development risk. This has limited the scalability of Remedy's business model.

## **Business model 1/2**

### **Business model**

### Premium game development

Remedy's business model is based on game development for PC, PlayStation 4, and Xbox One. The company develops the games in collaboration in such a way that between Remedy and the end customer there's a publisher, who partially finances the development, and the distributor, who is in charge of distribution. In this sort of development there are essentially two models: the sub-contractor model and the self-owned IP model. Drawing a line between these two can be vague and dependent on publishing contracts, which vary from project to project. In the sub-contractor model Remedy does not own the IP, or owns a minority. In this instance, the publisher finances most or all of the development and gets the majority of sales revenue. In the self-owned IP model Remedy owns most of the IP in development, finances most of it and is entitled to a larger share of sales revenue.

Games developed by Remedy can be categorized as AAA games. These have the defining characteristics of a large (upwards of 10 MEUR) development budget, high quality level and extensive marketing. Developing AAA games is a high-risk business, with commercial success often requiring strong sales (millions of units). Large production values also mean that the games are aesthetically very pleasing, often utilizing the latest technology for effects and offering dozens of hours of gaming. The target user group here are gamers who are willing to spend as much as 60-70 EUR on a single game.

### Game development life cycle in Remedy games

The development cycles of AAA games vary between 2-5 years. In the hands of the consumer however, the life cycle is short, with most sales occurring during the release year. Sales after this usually account for a mere fraction of total sales. This translates into very cyclical cash flows. With digital distribution and sequels, the revenue generated by a game can be harnessed to have some more continuity.

Remedy's development process from the design table to a finished product can be broken down into 5 phases.

The first one is conceptualization, requiring 5-10 people and is internal.

The second phase is pre-production, still operating with a relatively small team. At this stage a publisher is usually sought out. In the optimal case, Remedy has such an interesting and well developed idea that the publishers can be tendered. The partnership agreement can include a signing bonus. If so, this is the first time revenue is recognized.

The third phase, production, requires a full team, usually 30-100 people, depending on the size of the project. Here revenue is recognized at a steadier pace, usually tied to development steps that trigger payments.

Post-production is the penultimate phase, mostly having to do with finalizing and polishing the project. The revenue generation is similar to the production phase.

The last phase is publishing the game, where

the sub-contractor model facilitates a possible completion bonus. In addition to this, Remedy may be entitled to royalties based on predetermined proportion of sales. In many cases, royalty income is eligible after the publisher has reached break even with the sales revenue.

Game sales weigh heavily towards the release date. Often most of the revenue is created in the weeks following release. Naturally this means that the timing of the release is critical. A release clashing with the release of a competing or substituting game can have a negative impact on overall sales. Post-release, sales may be boosted with discounts or campaigns. With the increasing add-ons and digital distribution the sales' "tail" is however increasing continuously.

Remedy reaches the end users, or the gamers, with both physical and digital copies. The relevance of physical copies is still substantial especially with console versions, whereas in the PC world, distribution is already mostly digital. Remedy's distribution occurs mostly through large distributors such as GameStop, and digital distributors such as Steam, Playstation Store, and Xbox Store.

## **Business model 2/2**

### **Game development as a subcontractor**

Developing games financed by a publisher manages the risk of a failure and evens out cash flows. The drawback is a smaller portion of sales income. The partners are usually publishers, who are essential especially in the sales of physical copies. Subcontract development is focused on small game studios who lack the resources to finance development themselves. In this instance, the business is similar to tailored software development/IT system development and scalability is weak.

### Self-financed game development

Game development is very scalable for the party carrying the financial risks. The main cost driver for the developer is the mostly fixed employee expense. The profitability scales with the sales of the game. Therefore when self-financed, the business end of development is very sensitive to the game sales, which are focused close to the release and may be difficult to predict. When distributing digitally, a publisher may not be needed at all. When self-financed, the company owns the IP, and can develop sequels. The development of sequels is easier and sales have more visibility. Therefore the best scenario and scalability when self-financing are achieved in such an instance that the developer manages to create a successful game series or franchise.

### **AAA** games' pricing and volumes

Sales volumes are the most critical financial driver in Remedy's line of business if games are developed mainly with self-financing. The pricing of games is largely standardized and dictated by the market. In other words, good

and bad games cost the same, and trying to increase sales volumes of a low quality game with price inflation is difficult. As a rule of thumb, the following volumes apply to AAA games: poor (1 million copies), moderate (2 million copies), good (5 million copies), and large success (10 million copies). High quality AAA games usually sell at 60-70 Euros, so in total sales revenue of a single game can gross anywhere between tens of millions to over 500 million euros.

Remedy's competitive advantages stem from the ability to develop high quality games through both efficient production and a high level of technology on a relatively low budget (some tens of millions). This means that the company's games don't need to reach multimillion sales figures to be profitable. Additionally, this enables the company to develop games for defined consumer groups outside of the mainstream games, shielding the company to some extent from direct competition from larger game studios through differentiation.

## Remedy's value chain and development process





## **Investment profile**

### **Investment profile**

### IPO enables execution of strategy

Remedy enlisted on the Nasdag OMXH First North market place in May 2017. Through the IPO, the company acquired roughly 13 MEUR in gross proceeds to enable the new strategy. The new equity offers both financial freedom and negotiating power towards publishers, as well as enables Remedy to transition towards the multiproject model. This alleviates the risk profile and brings about economies of scale. Through the finance, the company can endure more risk in single gaming projects' finance, thus providing a chance to get a larger portion of the royalties should the games prove successful. The larger portion of self-financing the games also enables Remedy to hold on to the IPR of the game brands.

### Remedy as an investment

Remedy is at an interesting stage of its lifecycle. The company has a strong historical showing in the ability to develop successful games, but due to the single projects and sub-contractor model Remedy has not been financially successful. Additionally, the company has through the years acquired in-house game development knowledge and technologies that provide speed, efficiency, scalability and competitive advantages.

Now Remedy is transitioning to a stronger position in the value chain with its business model. The previous projects' execution business model-wise has been largely project type sub-contracting, where small Remedy has

had limited negotiating power towards the large publishers. This translates to smaller ownership of the IPR, and a smaller portion of sales revenues as the company finances less and carries less risk related to the projects. In addition, the company has been so small that it has been unable to pursue multiple projects simultaneously. Dependency on single projects at a time has made the company quite risky in the past.

Due to the long history, reputation, growth in size, the development pipeline of current projects, and advanced in-house technology, Remedy is for the first time at a stage in its cycle where it can transition to a stronger position in the value chain. Negotiating power towards the publishers has also improved, as the company is a more advantageous and tempting partner for game development. In the case of a gaming company, both the shareholders as well as the publishers financing the projects carry a large risk related to the commercial success of the game. In the case of Remedy, this risk is substantially reduced by the strong historical showing in developing quality games.

Remedy's cash position is strong after the IPO (2017: 22.6 MEUR), which enables the implementation of the new strategy. Carrying a larger portion of the risk on the financial success of the release requires a strong cash buffer. The cash position cannot get in the way of development, as compromising on the quality of the end product will definitely lead to critique from the demanding end users. Reputation is key in this industry. A strong cash position is also important when negotiating with potential partners and publishers, in order to get better

terms. The additional cash acquired through the IPO enables the value chain transition with managed risks.

Remedy began implementing the new strategy after the IPO, and thus far everything has gone according to plan. The company has two projects in development for the first time, and the conceptualization of a third project in under way with a small team. The risk related to the ramp-up of the multi-project model are now substantially smaller than a year ago, when the company still lacked experience on the large scale production of two simultaneous projects. The largest uncertainty is related to the sales numbers of the self-owned P7- project, but with the current share price, market expectancies towards the 2019 release are moderate.

With the in-house Northlight technology platform and locally centralized functions, the company is able to produce top of the line games at a much lower cost than most AAA game competitors. This means that the games don't need to sell as many copies to be able to cover production costs.

We find the risk/reward ratio to be tempting as a whole, considering the notable value creation potential, providing the new strategy proves successful. The risks are high, as is common with gaming companies, and Remedy operates in a market that develops rapidly with changes in technology and consumer behavior.

## Remedy's investment profile

1. Stronger position in the value chain

2. High profit potential if games successful

**3.** Strong showing with quality games

**4.** Growing market

5. Competitive advantages (game quality, positioning, technology)

### **Potential**

- Development of selfowned game brands and sequels
- Higher portion of game sales
- Multi-project model smooths risks and brings economies of scale
- Growing market, especially Asia
- Reputation and technologies result in competitive advantage

### **Risks**

- Business model transition unproven
- Dependency on publishers
- Long development cycles
- The company has to carry more of the developmental risk
- Very competitive and dynamic market

Source: Inderes 15

## Remedy's risk profile

### **Business risk profile**



Estimate of total risk involded with Remedy's business model

## Markets 1/2

### The video game market

### The markets are global

The video game market is global, but the large screen market, which Remedy focuses on, is mostly in the developed markets. The developing markets are growing fast, with console gaming gaining popularity. By sales, the largest markets are China, the U.S., Japan, South Korea and Germany.

Market research company Newzoo has increased its previous outlook for growth, and expects the global gaming market to grow by 13.3% in 2018, reaching 138 BUSD. In 2016-2021 the average annual growth rate is estimated at 11 %.

Geographically, the fastest growing market is Asia, with projected growth of 17 %. Remedy may gain proximity to the Asian market, and specifically China, thanks to developing the single-player story for Crossfire 2 by Smilegate. In China, PC gaming is more popular than console gaming, and PC game digital distributor Steam is growing fastest in Asia and the developing countries.

### Remedy operates in PC and console platforms

In addition to geography, the gaming market can be divided according to platform. The main platforms for Remedy are PC and consoles. The consoles (Xbox one, PlayStation 4, and Nintendo Switch) are the second most popular platform, with a market size of 35 BUSD (24 %) in 2018. Console gaming is growing at about 4 % annually 2016-2021. The third most popular platform is PC gaming with 29 BUSD (22 %),

growing at 4 % annually.

Mobile gaming is the largest and fastest growing platform. Mobile games accounted for 44 BUSD last year, and are expected to further increase to 56 BUSD (44%) this year. The rest (14%) comprises of tablet gaming (e.g. iPad), handheld devices (e.g. PS Vita), and browser-based gaming.

### Mobile didn't kill console and PC gaming

When observing the gaming market it is important to note that despite mobile gaming growing the fastest, the growth has not been achieved at the expense of PC or console gaming growth. Mobile gaming has brought about a completely new "casual gaming" genre, reaching a completely new group. For Remedy's main end-user group this has not had a noticeable effect. New generations of consoles have all seen sales remain steady, with PC gaming seeing increased popularity, thanks to digital market places and distribution.

Out of these platforms, PCs hold the largest user base over PS4 and Xbox One. Steam, a digital market place for PC games, has over 125 million users, of which about 14 million are daily users (Valve 2017). PS4 has sold over 76 million units (Sony 2018), with Xbox trailing at about 35 million units (NPD). What makes the PC market interesting is that distribution has migrated nearly entirely to digital channels, meaning that the distributors' relevance in the value chain diminishes. In consoles, the distributor still plays a prominent role.

The console market still has many growth drivers, and the widely expected demise of the

console market in recent years has not materialized. According to Newzoo (2018), consoles will span 22 % of the 180 BUSD gaming market in 2021. The game catalogue has diversified in recent years, appealing to a larger number of players. In light of recent observations, gaming consoles also seem to be moving toward an iterative model, where instead of the classic 7 year console release cycle Sony and Microsoft are releasing improved versions of their consoles (such as the PS4 Pro and Xbox Project Scorpio). This means that the new console generation won't kill the old one.

From the game studios' point of view, balance between the growth and market size between PC platforms and closed console ecosystems is positive, as console manufacturers are strict gatekeepers on their respective platforms. Big screen gaming migrating more toward consoles would ultimately lead to Sony and Microsoft having a duopoly, potentially deteriorating the value chain position of development studios through weaker negotiation power toward the large manufacturers.

## Markets 2/2

We estimate that the large screen focused console and PC-gaming markets, which Remedy relies on, are currently very stable and have healthy growth drivers. Due to the long production development cycles it is important to be able to predict coming trends. Success for a gaming studio requires the correct long term choices in platforms, game categories, and partners.

### **Business models and value chain**

The predominant business model in the gaming industry for developers such as Remedy has been to develop games from start to finish by themselves. The game developers often partner with a publisher during the development process. The game is then sold as a one-time transaction to the end user, either as a physical or digital copy. In the AAA category the typical price is 60-70 EUR. The commercial success is determined by how many copies are sold during the release year. Additional sales can be generated through digital channels with sales of add-ons.

With the explosive rise in mobile game sales, the so-called "free-to-play" model (F2P) has gained popularity. In this model, players acquire the game for free, with the games' revenues generated by in-game purchases with which the player is able to modify the gaming experience. Currently, nearly all games here are based on F2P. In the PC world, F2P has already gained popularity, but not so much with the console platforms. Vast F2P popularity gains with consoles would pose a threat to studios such as Remedy, as their business model is based on selling games.

Specific players in the gaming industry are solely specialized in publishing, and don't develop games themselves. On the publishing side, the companies often finance a part of the development, utilize their distribution network, and partake in marketing. The publishers can also be a part of the quality control process. They then receive a portion of the revenue from sales, largely derived from how much financial backing they have provided, or in other words, how much risk they carried. The largest publishers are EA, Activision, Blizzard, and Take-Two. They typically operate in both development and publishing segments.

Finally, the games are purchased from the distributors who act as market places to the gamers. These market places include physical distributors (e.g. Amazon and GameStop) and digital distributors such as Steam and PlayStation Store. Out of the digital distributors, the PC market is led by Steam, commanding 75 % of the market (Screen Digest 2013), and the console markets are served exclusively by manufacturers, such as Sony PlayStation store and Microsoft Xbox Store.

Publishers of physical copies receive larger portions of revenue due to larger logistics and material costs, but on the digital side publishers have a smaller role. Remedy lacks its own publishing function, but we estimate that this is not out of the question in the future, should the company choose to publish a game solely in digital form.

## The developer's role in the value chain is growing

Business models in the game industry are

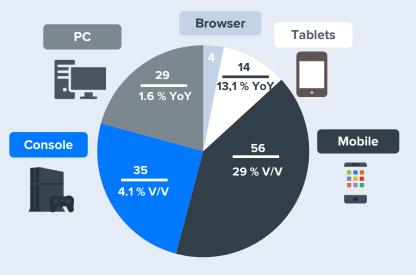
constantly evolving, meaning that the participating companies must be agile. The publishers have traditionally had a strong position in the value chain, as they have acted as gatekeepers between game developers and distributors. The console manufacturers are also at the top end of the value chain in their respective closed platforms. The situation is changing, however, as digital distribution and F2P models open new business opportunities for innovative companies. For instance Supercell's business model is based entirely upon dividing the value chain between the digital market place and the game studio. In Remedy's current console weighted model, the value chain is split between the game studio, publisher and the physical distributor, along with the ensuing logistics expenses.

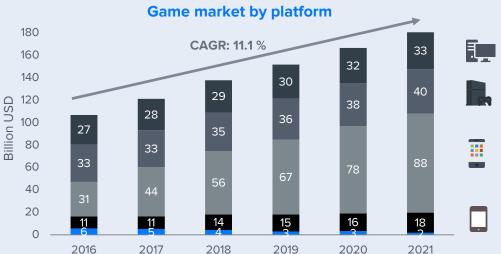
For Remedy, the good news is that the game developers' role in the value chain is not changing, whereas the roles of publishers and distributors may diminish with the digitalization trend. The business models of game developers may change, but their place in the value chain is likely to grow in the future.

A good example of a new model is THQ Nordic, who went public at the end of 2016 on the Stockholm First North list. THQ Nordic focuses on acquiring IP rights from other companies, developing them further by means of outsourcing, after which the games are released on multiple platforms.

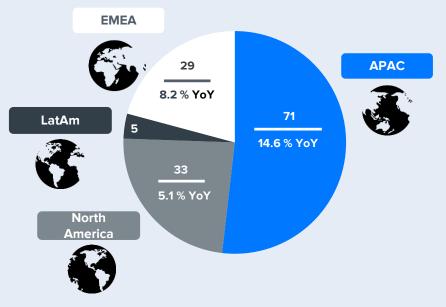
## **Market breakdown**

### Game markets by platform (BUSD) 2018





### Gaming market geographically (BUSD) 2018



■ Browser PC ■ Tablet ■ Mobile ■ Console ■ PC

Source: Newzoo 2018, Inderes

## Market trends 1/2

### **Trends affecting Remedy**

The game industry is relatively young and developing rapidly. As a result, there are numerous trends that are constantly evolving. The predictability of trends is partly reflected in 2016, Newzoo's listing of Gaming trends for 2016-2017 esports, Virtual reality (VR), Augmented reality (AR), and end-user in-game trading as clear mega trends. So far, esports has grown in popularity and AR has gained footing in especially mobile game development. In its 2017 report, Newzoo estimates that the most prominent trends will be gaming as a past time activity, social and community based gaming growth, service based gaming structure (GaaS) will gain more footing, gaming companies transitioning more towards entertainment companies, as well as global consolidation in the industry. We have listed the trends affecting Remedy. They are partially in line and partially offset from those identified by Newzoo.

### Console games are diversifying

The console game offering has diversified, especially during the last console generation. The broader offering appeals to an ever growing customer base, driving sales of console platforms. The manufacturers and game developers are able to lure more people in while retaining existing users. The growing group of players means more potential players for Remedy's games, and thereby growth for Remedy. Sony's PS4 and Microsoft's Xbox One have sold over 100 million units combined.

### **Demographic changes**

Another key trend from Remedy's perspective

are changes in the demographic structure. The first consumers of video games, which were developed in the 80's, are now 30-40 years old, and ever older people are thus playing video games. Simultaneously, new generations start gaming ever younger. Gaming as a hobby has also gained social acceptance.

Yet another demographic change is the gender split between gamers, which has shown signs of evening out. This is due to changes in attitudes.

The demographic trends contribute to global growth in the player base for video games, leading to Remedy's potential target group growth.

### Popularity of console gaming

Console gaming still has a strong position amongst gamers. This is observable in the 2017 Newzoo estimate, in which consoles are expected to hold a 22 % market share in 2021. Consoles gaining overall popularity is also driven by their growth in developing markets, where console gaming is still gaining popularity.

### **Gaming transition towards long term service**

The dominant trend in both console and PC games is the transition towards a much longer experience. Instead of products meant to be played through once, games are taking more and more steps towards the GaaS model (games as a service) where the content is continuously update. This is apparent especially in mobile games. The services try to include community services as well, which help in further committing the players to the games. Additional purchases are also offered in growing numbers, which can account for a notable

portion of the games' total revenue. Remedy has also stated that it is their intention to create games with longer life spans, so we can assume that in-game purchases and add-ons are a part of the companies upcoming releases.

With the GaaS model, players use more money per game, but buy less games per year. This will lead to popular games making more money and unpopular games making less money in the future.

### Digital distribution will grow

According to market research company DFC Intelligence, 92 % of PC game sales in 2013 came from digital distribution. With consoles, physical copies are still much more popular, but digital distribution is growing on consoles at the expense of physical sales there as well. Digital sales are more profitable for game developers as it elevates their position in the value chain in comparison to publishers and distributors, therefore bringing better margins than what would be achievable through physical sales. Physical sales demand a publisher and distributor for the majority of companies the size of Remedy, claiming a large chunk of the revenue.

The relevance of physical distribution is greatest during the first few months. Remedy estimates that during this time, 60 % of sales are physical copies. After this, sales are mainly in digital channels. Digital distribution is especially important in add-on sales, as currently the sales of additional content can be a substantial part of the compound revenue from the game.

## Market trends 2/2

### Free-to-play console possibilities

One of the central trends still coming is the F2P model gaining foot hold in the console market. Should F2P gain footing here, it could adversely impact premium game sales. As an example of F2P in the console and PC market, survival game Fortnite by Epic Games had 45 million users in March 2018, out of which 3 million play daily.

For the time being, publishers believe that premium games will hold their own on consoles. The F2P model's challenge on consoles is that games have to attract a large audience very fast, and only a small portion of users transition to being paying customers. This potential is limited by the relatively small number of consoles (100 million PS4 and Xbox Ones) compared to the active smartphone base of 3 billion (Newzoo estimate). In addition, production costs of console games are much higher and development cycles longer, which also does its part to shield the console market from the F2P model.

### **Other trends**

A part of the trends don't affect Remedy yet, but are sculpting the whole gaming industry regardless. For the reason, investors should be aware of the industry drivers and understand them.

### **Esports**

Esports means competitive gaming between teams or individuals in an event or league organized by a third party, often containing a cash reward sought by numerous players. The athletes in esports are competitors who play the

games for a living. Newzoo estimates that the esports market revenue will grow by 27.4% between 2016-2021 and be worth 1.6 BUSD at the end of the period. Dedicated viewers are estimated at 250 million by the end of 2021 and casual spectators to be about 300 million. Annual growth of 14.4 % between 2016-2021 is expected in number of spectators.

Esports don't directly relate to Remedy, but continued growth in this segment can intrigue interest towards video gaming, thus this has the potential to be a growth driver for the overall market.

### Virtual and augmented reality

Virtual reality (VR) and augmented reality (AR) have increased their appeal in the gaming industry. In 2016 HTC released their HTC Vive headset for PC, Facebook's 1.6 billion dollar acquisition Oculus released their Oculus Rift headset aimed at PC gaming, and Sony released their own PlayStation VR headset for PlayStation 4. On the AR side, Nintendo's Niantec released the AR game Pokemon GO for mobile platforms, gaining large success among mobile gamers.

In 2017 Apple and Google released new AR development tools, which made development of AR applications and games for mobile devices much easier. This will most likely be visible this year and next with the release of multiple games and applications utilizing AR.

VR and AR are at a very early stage as trends. Gamers will likely follow VR and AR market entries with caution. Reviews and opinions from gaming critics will define consumer willingness to purchase the said gadgets for gaming needs. On the other hand, game developers' intentions to develop VR games will likely define the interest towards playing VR and AR games to a great extent. For the moment, it seems that in the premium segment the VR and AR markets are developing slowly, before big releases become available. VR and AR are a new developmental environment, so integrating VR and AR concepts into interesting games can take some time.

According to our understanding, Remedy hasn't ruled out the possibility to develop games for VR and AR environments, but currently the company doesn't seem to be investing in these possibilities. We don't see this as a risk per se, but more as a lost opportunity in the scenario that VR and AR experience explosive growth in the coming years.

## **Trends of the gaming industry**

	Market trend	Effect	<b>Effect on Remedy</b>
<b>B</b> P Ø	Console games diversifying	Consoles gain popularity	
<b>ᢥ∳ᢥ</b> ♠ᢥ <b>ᢥ</b>	Demographic changes	Older and younger play more, as do women	
	Growth in console gaming	Market grows, especially in Asia	
₽ <sub>°</sub> °	Gaming as a service increasing, longer gaming experience	Quality games sell more, poor games sell less	?
	Digital distribution increases	Gaming studios gain in value chain	
<b>&gt;</b>	Free-to-play gains popularity	Business models evolve	
	VR and AR gain popularity	New gaming platforms and technologies will form	?
	Esports	Gaming visibility and popularity will grow	-

## **Summary of the gaming market**

Console



PC



Mobile/tablet



Market and growth\*

Earnings and 5-70 € + additional content,

distribution distribution

~100 million gamers, 100 % pay for games

\$35.6 BUSD.

~4 %

Physical + digital

Products, games as a service (GaaS) gaining popularity > 500 games/y

~200

10-200 MUSD 20-500 employees \$28.6 BUSD. ~4 %

1-70 € + additional content, F2P Digital distribution

~300 million gamers ~75 % pays for games

Products + GaaS > 5000 games / year

~1000

1-20 MUSD 10-100 employees \$70.3 BUSD. ~20 %

F2P, advertising income, Digital distribution

~1500 million gamers ~5 % pays for games

GaaS > 100 000 games / year

> 10 000, many small development teams

0.1-10 MUSD 5-50 employees

**Games** 

Gamers

Number of gaming companies

Production budget and employees

Source: Newzoo 2018, Remedy, \*CAGR 16-21

## **Competition 1/2**

### The nature of the competition

Regardless of the market, genre or platform, gaming companies compete for the consumers' excess cash, but also for attention and available time. Entertainment is the most important competitive edge.

The competition is global and geographical factors play a minor role, especially as digital distribution gains popularity. Competition is instead defined by the platform, genre, and production size. Remedy has focused on AAA premium games, which can be considered a very different market to mobile games. The entry barrier is higher, there are only a few competitors globally, and production size and value are greater. Especially console manufacturers are stringent gatekeepers in terms of quality.

Measured by revenue, Remedy is a small player in the industry, but it faces the biggest players (e.g. Ubisoft and Take-Two Interactive) in competition. AAA games have been split into sub-categories, with developers focusing on their own strengths to create a very specific kind of AAA game. For Remedy, this focus is in story-driven action games.

### Competitive advantage is gained by quality and differentiation

In AAA games, the game studios pursue creating competitive advantages with quality and by positioning themselves into specific genres (e.g. action, adventure, driving). Consumer attention is also fought over. Furthermore, consumer attention is caught by reviews and discussion. Especially in the pricy premium segment, consumers follow reviews closely to be able to assess the entertainment value of the game thoroughly before deciding to purchase.

### Remedy's competition

The competitive field for Remedy is not easily defined. On one hand, the company competes for the best publishing contracts against other studios. There are only a few dozen potential publishers globally. On the other hand, Remedy competes for the end users' money and time against other games. It faces off with other action games and completely different alternate categories, between which the consumer decides.

Independent studios similar to Remedy, that develop quality differentiated games for the big screen, are scarce. Out of these, an ever smaller group is formed by studios developing story-driven action games similar to Remedy. Some competitors that fit the bill are Gearbox Software, Frontier Developments , and Yager. New competitors are not common due to the high entry barrier. For example, a studio specialized in driving games cannot effortlessly switch to action games, as developing them requires notably different technology and knowhow.

When the publishers are vetting out game developers to partner with, experienced teams, high technological competence, and track record are key.

### Competing will become more challenging

One of the trends in AAA games is that the game offers a pleasurable gaming experience for a longer period of time. Therefore gamers will purchase less and less games, but are willing to use more money per game. This will probably lead to high-quality games faring better commercially, and low quality releases doing worse than before. From a competitive point of view this raises the bar further, as it also means that only the best game studios can thrive.

### Remedy's competitive advantages

Remedy's competitive advantages are surprisingly strong, considering that the general perception of the game industry is one of a hit or miss business. Remedy is unique as it competes with billiondollar revenue gaming companies (e.g. Ubisoft, Take-Two, Konami) despite its much smaller size. They have managed to make world class games despite the size disadvantage in a fiercely competitive market, and this shows that the company possesses a competitive edge even against the biggest players.

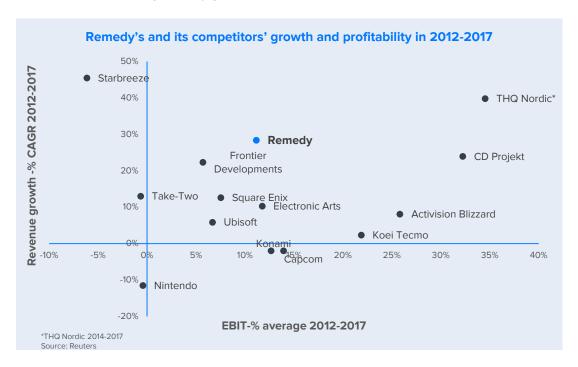
Remedy's competitive advantages are the following:

- Remedy has historically proven to be capable
  of developing well received quality games,
  measured by the value perceived by end
  users. The good reputation and high regard
  offers some leverage when negotiating with
  publishers, but also helps attract the best
  talents in the business to join Remedy.
- There is a very strong culture of game development present, and it is built upon developing unique, story-driven action games. In their own words, Remedy can create a deeper, more profound dimension that presents a gripping environment with deep, absorbing characters and stories. In the highly competitive market, differentiation creates a competitive advantage for Remedy. Differentiation is easier as the Remedy doesn't try to make games aimed at sales in the double digit millions, which enables the games to have more differentiating factors as the target group is smaller. When successful in creating a clearly differentiated experience for a more focused group, Remedy games have a good chance to hit 2-5 Million units in sales.

## Competition 2/2

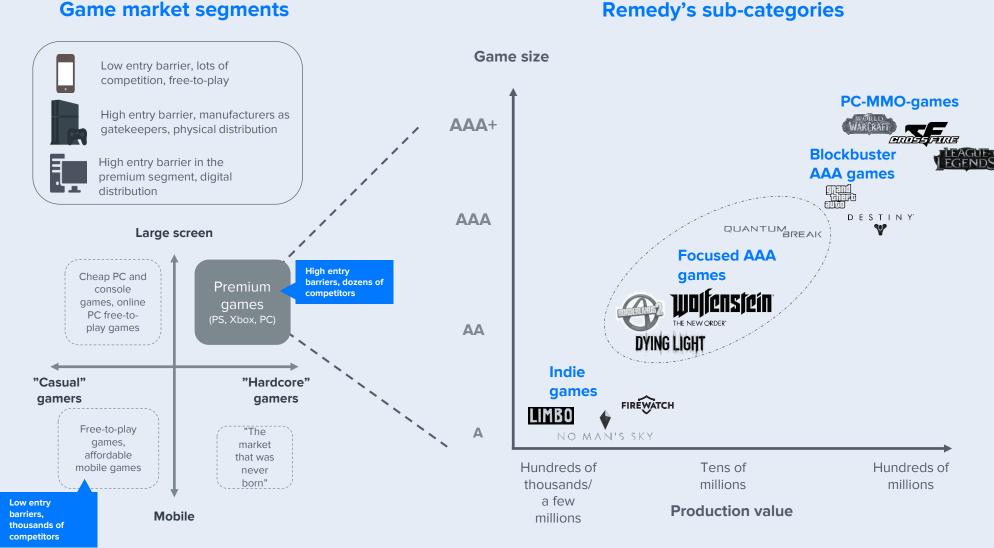
- The company has its own Northlight-technology platform and tools for game development (game engine). Good development tools provide for better efficiency, and people can concentrate on things that are essential. Games can also be developed faster and more efficiently, thanks to the in-house technology. As the company transitions toward the multi-project model, the technological platform can be scaled. Inhouse technology also offers continuity, as development of a new game doesn't need to be started from scratch.
- Due to its own technology platform and centralized functions in Espoo, the company is able to produce high quality games at a

- much lower cost than most of its AAA rivals, meaning that unit sales don't need to be as high as with many competitors to reach profitability. Due to its history, the company has competence in leading challenging and long-term game development projects.
- Remedy has established a strong brand as a game developer amongst gamers. Gamers buy games not only driven by game-specific brands, but also by the brand of Remedy. Out of the game brands Remedy owns, for instance Alan Wake is very well known, and the fans of the game are eagerly awaiting Remedy to develop a sequel.



## Remedy's positioning

Source: Inderes



## **Strategy 1/3**

## Towards a stronger value chain position

Remedy has been very dependent on publishers and partners, mainly developing games as a subcontractor. Now the cornerstone of the strategy is to move up in the value chain and manage risks by transitioning to a multi-project model. The conclusion of the transition would be Remedy developing mainly own IPs, and in subcontracting partnerships focusing on strategic partnerships, such as Smilegate. The transition will advance in stages over the next few years. Breaking the transition down to phases enables smaller and more managed risks, compared to an all-at-once overhaul.

The decision to focus on improving the relative position in the value chain at this time seems logical. Remedy has shown they have the capability and capacity to develop quality games, but this success has not fully translated into growth and profitability. The partnerships in the past have left Remedy with a slim share of sales. Additionally, the dependency on individual projects has rendered Remedy vulnerable to unsuccessful projects. As in the case of Alan Wake, a one-year delay resulted in the company missing out on revenue for a whole year. Any single failure in previous large productions could have led to a cash crisis. The multi-project model evens out the risk to some extent.

## Larger self-financing leads to larger share from game sales

The company will implement the strategy transition in phases by developing both self-owned IPs and sub-contracted projects. In self-

owned IP projects the company finances a larger share of the development and consequently receives a larger part of the revenue from game sales. The risk level is equally higher, as the company carries the risk of commercial success. The company signed a publishing contract concerning P7 with Digital Bros subsidiary 505 Games. 505 Games will fund the project with 7.75 MEUR, and Remedy is entitled to 45% of net sales revenue.

In the subcontracting model, Remedy aims to partner with leading publishers with whom to develop profitable projects. At the moment, the company is developing Crossfire 2 for Smilegate.

### Self-owned IP's and sequels

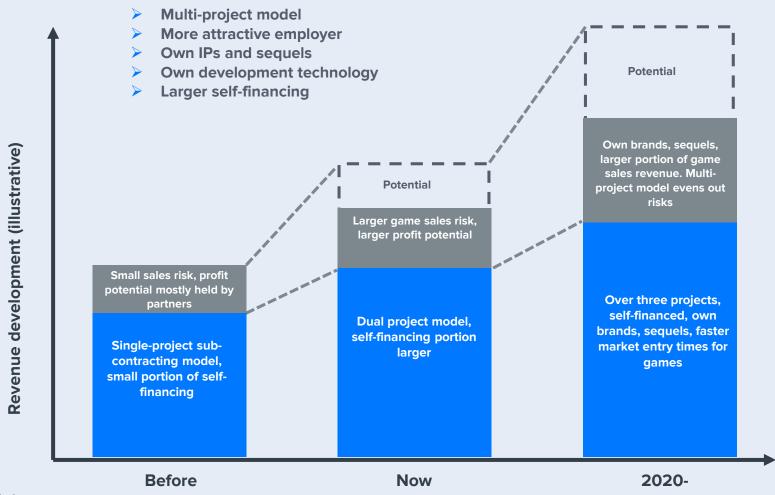
IPs for games owned by Remedy are an integral part of the company's strategic objectives. The main benefit of own IPs is the possibility to develop sequels. Sequels typically have sales that surpass those of the original game, mainly due to the enhanced player experience and existing fan base. This helps in estimating demand and improves sales visibility. The developers have also usually already tackled the main challenges having to do with the development process, and also creating the game world is easier. The development cycle is thus shorter than the normal 2-3 years. The technical performance across gaming platforms may also have evolved, further supporting enhancing the experience. If all goes well, selfowned IPs can be cultivated to provide income in the form of brand licensing.

## The multi-project model and technological platforms

Remedy develops the game engine in-house, which will provide economies of scale once they transition to the multi-project model. The technology is developed by a 25-person team. Multiple simultaneous projects diversify risks related to development and future sales. If one game were to fail, it would not be necessary to wait the typical 2-3 year cycle to release another game. At the same time, the multi-project model increases the potential for financial gains, should multiple games fare well simultaneously.

Remedy has already begun the transition after the completion of Quantum Break. They currently have two development teams, split between Crossfire 2 and P7, and a small team of 5-10 people working on the conceptualization phase of a third unnamed project that is expect to rampup fully during this year. In the multi-project model we believe that the company is aiming to release a new game or a seguel every year. The transition has gone well so far, and according to Remedy, it has also been very important in terms of employees developing as well. The multiproject model offers more room for personal improvement and transitioning upwards inside the company, as well as transitioning between projects. We believe that this has increased the attractiveness of the company as an employer as well as further improving employee commitment.

## **Transition of Remedy's strategy**



Source: Inderes

28

## **Strategy 2/3**

### Longer term gaming experiences

Remedy aims to create longer lasting games that bring together high quality gameplay and multidimensional story driven gaming experiences. The content and quality in AAA games have both increased over the years, and nowadays games must be able to offer quality content for dozens of hours. The longevity is also supported by the GaaS model, which enables the revenue to be distributed over a longer period by producing additional content over the years. One must however remain vigilant in terms of additional content, so as not to make the players feel like they are being ripped off. Quality additional content offers added value to players, but does not limit or discriminate the experience of those players who choose not to purchase it.

### More gaming platforms

In addition to the multi-project model, Remedy also wants to expand its games to all the central gaming platforms (PlayStation, Xbox, and PC). Releasing the game on multiple platforms increases the potential target group and also alleviates dependency on single platforms. Developing games for the current generation of consoles is technologically now easier than ever due to standardization.

### Honing technology and know-how

In order for Remedy to maintain its competitive advantages, it is important to continuously cultivate and hone both the company's technology and knowhow. New areas of expertise facilitate expanding the game portfolio, as well as differentiating from the competition. In the subcontractor model, Remedy aims to

choose partners with whom the company can also develop technology and new areas of expertise. With Smilegate for instance, Remedy gains knowhow in online games and the Asian market. In addition, Remedy was one of the first game developers to gain access to Nvidia's new raytracing technology at the beginning of 2018 and integrate it into its Northlight engine. Taking advantage of said technology is still in the research phase, but could if successful result in even higher quality graphics in the future.

Perfecting and developing proprietary technology and tools is strategically very important. With competent and continuously developing technology, one has the opportunity to streamline the whole development process by automating laborious segments. A strong technology team also paves the way for a strong development team, which in turn facilitates certain scalability through shared production and action models. With strong in-house technology, game development cycles can also be shorter.

### **Asian market**

Asia, as a growing and developing market, is very tempting for Remedy from a strategic point of view. With the collaboration with Korean Smilegate in the Crossfire 2 project, Remedy faces an exceptionally fascinating option into Asian and specifically Chinese markets. Remedy also benefits by gaining valuable experience in developing games for the Asian market. According to our understanding, the Asian market differs quite a bit from its western counterparts. The gamers expect a very different gaming experience than what Western gamers do. Because of this, the American pop culture driven stories Remedy is known for may not work

as such in Asia. With the Crossfire 2 project, Remedy is gathering experience in operating in the Asian market. This may prove useful in game development later on.

### Remedy's strategy has gone forward as expected after IPO

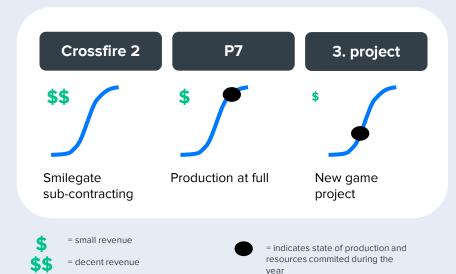
Remedy set out to fulfill its new strategy in the wake of the IPO, and so far everything has gone according to plan. The company has succeeded in recruitment, and has two projects in full development for the first time ever. The third project is also in the conceptualization phase, and will most likely enter pre-production by the end of this year. The company also relocated to bigger premises in Espoo to be able to meet the needs of the grown labour force, as well as be ready for future growth.

In terms of numbers, we will be able to assess the success of the new strategy next year with the release of the P7 project. The release will dictate the next strategy steps to be taken, as a successful release will most probably lead to starting development of a sequel. The risk related to sequels is always smaller than the first entry in a series. Should P7 fail, Remedy would need to develop a whole new world space and gaming environment as a new project, resulting in a longer developmental cycle as well as more risk involved in the next project.

## Remedy's strategy from a pipeline perspective



### 2018 Inderes estimate



= substantial revenue

### 2019 Inderes estimate



## Advantages of the multi-project model

### **Before**

Project (80 ppl)

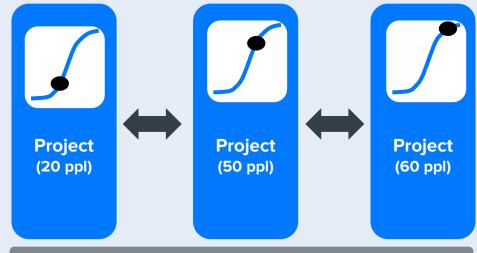
Technology and tools (25 ppl)

Administration (10 ppl)



Before, Remedy's game development tied up more people per project with the technology team supporting one team

### **Multi-project model**



### **Shared resources**

Technology and tools (30 – 35 ppl)

Sales, marketing and administration (20-30 ppl)



In the multi-project model a small addition to the technology team facilitates scalability in personnel due to shared technologies and tools. With own IPs the company has to focus more on sales and marketing

## **Strategy 3/3**

### **Risks**

The key risks involved in successfully implementing the new strategy are in our view:

- Rapid market and technological trends.
   These relate to impulsive consumer behavior and quick developments in technology. The risk is highlighted by the long development cycles. The company may pursue the wrong path in development platforms, game types, or technologies for example. New technologies can be for instance VR or AR.
- Remedy is dependent on the commercial success of single games, adequate quality and completing development on time. This inevitably raises the risk profile of the company and the volatility in value creation. This risk is further underscored by transitioning towards a model where the company self-finances a larger portion of the development projects.
- Remedy is dependent on its publishing partners, their success and the contract terms agreed upon with them. At the moment for instance, Remedy's success in the next few years is largely determined by the fate of Smilegate's Crossfire 2. The company's visibility into royalty payments agreed upon in contracts may be limited.
- The company's cash flow is very cyclical, and largely driven by the timing of game releases and their commercial success. This complicates financial planning, essentially requiring a strong balance sheet at all times.
- Free-to-play models gaining notable footing

in premium PC and console games can force Remedy to alter its business model. The company has no experience with F2P models.

- Remedy's transition of its business model towards the multi-project model and a stronger position in the value chain is unproven as of yet. The uncertainty relating to Remedy's competence to execute the process flawlessly translates into a risk factor which has an adverse effect on valuation. In our opinion, potential challenges can arise from organizational change related to the multi-project model, the company's ability to negotiate better terms with partners, and ensuring adequate financing and cash flows.
- The transition towards three teams and the multi-project model are heavily influenced by the company's ability to either internally cultivate or recruit experienced team leaders. The availability of the said key members is crucial and uncertainty surrounding them during the transitional period is a risk.
- As stated, Remedy is dependent on publishers and the publishing contracts negotiated with said parties. In the earnings logic where prices are to a reasonable extent given, Remedy can influence the sales volumes (through quality of games) and the share or revenue from game sales (partnerships). As quality is quite stable with Remedy's track record, the main risk here relates to the terms of the agreement signed with the publisher.

### What to pay attention to in the strategy implementation

We estimate that the key points to monitor from an investor's point of view in the successful implementation of the strategy are:

- Smilegate's Crossfire 2 post-launch success in the Asian market. If the game is successful, it can generate additional income and revenue with future development. The release date is unknown.
- P7 success and reception are one of the most important factors commercially for Remedy. The game will most probably be released in early 2019. Success would enable profitable sequels and/or add-ons.
- The progression of the transition towards the multi-project model. We expect the third game project to be underway this year.
- Revenue development in 2019. The company had good profitability in 2017 (EBIT-% 11.7%) due to milestone payments, but we expect to the strategy dictated investments to bring this year close to zero in profits. 2019 will be the first proper year to assess the success of the new strategy with the release of P7, which we expect to elevate revenues and result in good profitability.

## **Financial situation**

### **Historical development**

### Historically modest but profitable earnings

Remedy's annual revenue has alternated between 4-17 MEUR between 2011-2017. In the same period, the company has been profitable every year since 2010. We consider this a good feat for a project-driven game studio. In general, taking into account the success and quality of Remedy's games, the company's profitability has been adequate during 2011-2017, with the average operating profit margin of about 10 % with profitability between 1.7-24 % during the period. Therefore transitioning towards a more profitable business model, as outlined in the strategy, is the logical step forward.

Historically, growth and profitability have been largely defined by the project driven business model and the nature of the publishing contracts that define the development projects. The trend in revenue growth has been steady in the last few years, apart from the spike in 2012 when the add-on to Alan Wake was released.

The revenue in 2015-2016 has been driven by Quantum Break, which was developed for Microsoft, and by the diminishing royalties from sales of Alan Wake. We estimate that the two mobile games Remedy developed didn't meaningfully contribute to revenues.

The revenue CAGR for 2011-2017 has been 28 %, largely due to the low revenue of 2011. In terms of profitability, the company achieved an EBIT margin of 19 % in 2012, thanks to Alan Wake: American Nightmare, and 24 % in 2016 when Quantum Break was released. In our view

the release of Quantum Break supported the revenue and profitability in 2016 to some extent, despite the game being largely a subcontracted development for Microsoft. The company reached 17 MEUR revenue in 2017, with a profit margin of 11.7%. When compensating for IPO expenses, the adjusted EBIT margin would have been 15 % and adjusted EPS 0.16 EUR, which can be considered an exceptional feat considering that 2017 revenue was made up mostly by milestone payments for P7 and Crossfire 2.

Remedy's cost structure consists of mostly fixed personnel costs, other operating expenses, and outsourcing services' related costs.

## **Balance sheet and need for finance**

### **Balance sheet structure**

Remedy's balance sheet is very strong after the IPO, and the 2017 equity ratio stood at 82%. Net gearing was -95%, with interest bearing liabilities (TEKES loan) at 1.0 MEUR. The balance sheet assets were mainly composed of the company's 22.6 MEUR cash and cash equivalents, as well as 3.1 MEUR sales receivables. Remedy does not capitalize development costs, so the balance sheet structure is very simple and straightforward.

The business model requires an unconventional balance sheet structure. The company has to operate with a large cash position because of the possibility of delays or failures in development, thus a sufficient buffer is required. As an example, in 2008 the company had to

develop Alan Wake for a full year from its own pocket when they ran into unexpected developmental delays. Suffering a year's worth of losses was, however, a better option than releasing an unfinished product, as was evidenced by the success and income the following years. Game sales falling short of expectations can also negatively impact the cash position as the company transitions towards self-finance projects. The company has to have a strong enough cash position to continue on with the development of subsequent games regardless of the success of the previous release. The strong balance sheet is also an asset when negotiating financing with publishers and partners.

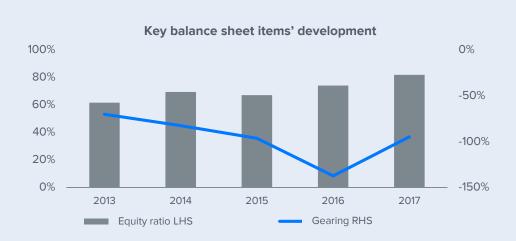
### **Cash flow and cash requirements**

Remedy's profit and cash flow are virtually the same because the company doesn't capitalize its development costs. In the wake of the IPO, Remedy can continue implementing the new strategy, and thanks to the large cash buffer is able to finance a larger portion of game development itself. This enables the company to receive a much larger portion of sales revenue than was possible before. The strong balance sheet enables more risk-taking, as the company is not as dependent on a single project being successful. One failure in our view would not cause a dramatic adverse impact on the financial stance as a whole. Additionally, subcontracted and projects financed by publishers bring cash flow during years that the company doesn't have any releases, such as this year.

## **Historical development**



Key Figure	2012	2013	2014	2015	2016	2017
Revenue growth-%	304,1 %	-32,4 %	13,9 %	15,1 %	19,4 %	4,6 %
EBITDA-%	27,3 %	7,9 %	4,2 %	7,4 %	25,1 %	12,9 %
EBIT-%	18,9 %	4,7 %	1,7 %	6,1 %	24,0 %	11,7 %
ROE-%	102,5 %	14,0 %	34,7 %	14,2 %	49,0 %	10,0 %
ROI-%	78,7 %	12,7 %	3,8 %	15,0 %	60,0 %	12,8 %
Equity ratio	54,3 %	61,6 %	69,4 %	67,1 %	74,1 %	81,9 %
Gearing	-77,0 %	-70,2 %	-82,6 %	-96,5 %	-137,3 %	-94,8 %





Source: Inderes

## **Estimates and valuation 1/3**

### **Estimates**

### **Short term estimates**

Remedy's development should be viewed over the long-term. Performance of any single year can give a misleading picture due to the nature of the business model.

Remedy's earnings' visibility for 2018 is quite stable. They have two game development projects underway, which in our estimates provides stable revenue with milestone payments. The third project ramping up this year can bring in some additional revenue, if a contract with a publisher is signed during 2018. At the same time, costs are on the rise as the company is in full development of two gaming projects. Our 2018 revenue estimate is 20.9 MEUR (+21.5 %) with a corresponding EBIT of 0.0 MEUR (EBIT-% -0.2 %). We estimate the number of employees to rise to about 180 people by the end of 2018. This investment in recruiting will eat up a significant part of profits in the next few years. The P7 project will be the main cost driver in 2018, with the corresponding expected revenue starting 2019.

Remedy has an ongoing development project with Korean Smilegate concerning the upcoming Crossfire 2 game, which we expect to generate steady revenue in the coming years. We believe that the development will be continuous by nature, if the game receives sequels or add-ons. It is also our understanding that Remedy can achieve additional income on the Crossfire 2 project, if it is financially successful. However, the visibility is limited

concerning this additional income, and we estimate it to be in the range of a few million euros in the coming years.

Concerning the P7 project, we expect it to be released at the beginning of 2019, and thus generate income mostly in 2019. We also expect the third unnamed project to start to generate income in 2019. Visibility into this project is however weak. We expect the Smilegate collaboration to continue to be a stable revenue driver in 2019 also.

We estimate 2019 revenue to be 31.2 MEUR (+50 %) and our EBIT estimate is 7.7 MEUR (EBIT-% 24.7 %). We cautiously expect sales of about 1.5 million units for P7, generating 11 MEUR in revenue. The estimate is extremely sensitive to sales volumes. Should the game reach 5 million units in sales, the corresponding revenue would be in excess of 50 MEUR, of which the majority would be profits.

### Long term estimates

From 2019 onwards, growth and profitability are supported by Remedy's transition to three teams and a multi-project model. We expect to see a new release each year after 2019 thanks to the multi-project model. If the company succeeds in creating strong game brands and sequels to those, it will result in accelerated revenue growth and increased profitability.

Our estimates of long term (2020-) profitability are based on:

 In the pessimistic scenario the company continues with a subcontractor-based project model and game sales are weak (1 million unit range). The operating profit margin is 10-20 %, similar to high value-added IT consultancy business.

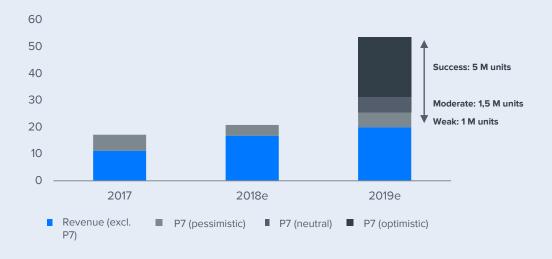
- In the neutral scenario the transition to the multi-project model is a success, and releases also fare moderately well (2-3 million units' range). The operating profit margin is between 20-30 %.
- In the optimistic scenario the transition to the multi-project model is successful, with game releases and subsequent sequels all performing well (3-5 million units' range). The operating profit will be between 30-40 %.

Long term visibility for revenue and earnings is very weak, requiring trust in the successful implementation of Remedy's current strategy. Our long term estimates rely on relatively successful releases annually, which enable strong growth and strong profitability. We expect to see revenue at 41 MEUR in 2021 and henceforth increase by 7% annually until 2026. After, our terminal growth is set at 3 %. The large uncertainty related to the estimates is compensated by the high required rate of return (WACC 12.2%).

## **Earnings estimates**



Key figures	2017	2018e	2019e	2020e	2021e
Revenue	17,2	20,9	31,2	33,2	41,3
EBITDA	2,2	0,2	8,0	8,4	10,8
EBIT (adj.)	2,6	0,0	7,7	8,1	10,4
EBIT-% (adj.)	15,0 %	-0,2 %	24,7 %	24,2 %	25,2 %
EBIT	2,0	0,0	7,7	8,1	10,4
Pretax profit	1,8	-0,2	7,6	8,0	10,4
Net Income	1,5	-0,1	6,1	6,4	8,3
EPS	0,16	-0,01	0,50	0,53	0,69
Free cash flow	10,7	1,5	5,1	8,1	8,7
Source: Inderes	, ,				
R&D not ca	apitalized				



2019 revenue and profit are extremely sensitive to the reception of P7

Source: Inderes

## **Estimates and valuation 2/3**

### **Valuation**

### **Investment profile**

2018 will consist of Remedy building the multiproject model and ramping up its new strategy, which will both have a negative impact on profitability. 2019 will be the first large mile marker in terms of the strategy's success with the release of the self-owned P7 project, which will largely dictate the next steps. Therefore Remedy's value until then will largely be driven by market expectancies on the success of the release. In our view, Remedy should be valued with 2019 in mind.

In our view, the valuation is supported by the following:

- The scalability of the business model and growth will kick in during 2019, assuming the strategy is successful. The P7 game offers good value creation potential.
- Due to reputation, technology, and knowhow, the company has lasting competitive advantages. The track record for successful quality games decreases the risk of poor releases.
- As the gaming industry consolidates, Remedy may be an interesting acquisition target for a larger game developer or publisher.
- The gaming industry has a good growth outlook paired with currently high relative valuation multiples.
- After the IPO, Remedy has successfully

transitioned to the multi-project model, and current projects under development have progressed as planned.

The following have a negative impact on valuation in our estimates:

- High risk level due to small size and current business model.
- The transition towards the multi-project is still incomplete with the third project only in conceptualization, and risks relating to the ramp up of the aforementioned still exist.
- The 2018 result will be weak due to the strategy mandated investments. We will have to wait until 2019 for earnings growth.

### Peer group

Compiling a relevant peer group for Remedy is challenging because there are not many public game companies similar in size, and those that are, are listed in foreign markets far away. In addition to size, the PC and console focused business model makes comparison difficult, as it differs substantially from e.g. mobile game developers.

We have compiled our peer group from listed gaming companies, which have increased in numbers during the last year (e.g. Next Games, Rovio, Sumo Group). The interesting addition from Remedy's perspective is Sumo Group, which is listed in London and is an AAA game developer as well, mostly operating with the sub-contractor model. Sumo Group achieved a 35 MEUR revenue last year, and is priced with a 4.7x

EV/revenue multiple.

The most important valuation multiples for Remedy are EV/Sales, EV/EBIT and P/E.

The peer group median for EV/Sales is about 4.3x for this year, with the scope ranging from 1.2x-27x. The median EV/EBIT is 24x and the median P/E 34x. In our opinion the sector cannot be considered inexpensive from a valuation standpoint, with the relative valuation reflecting high future expectations for earnings growth. This is partially due to the new earnings opportunities introduced through new business models recently (e.g. GaaS model and F2P) and new categories (e.g. AR mobile games) opening up new tempting earnings' possibilities. On the other hand, the higher valuation multiples also reflect the presumably lower risk weight involved when pricing the sector companies. In a sense this is normal as a bull market often makes investors neglect parts of the risk associated with companies embodying high profit potential. For instance, in 2012 the sector's EV/Sales multiple was about 1x.

With our 2018 estimates, Remedy's result will be at about zero, so earnings based multiples are not viable. With the EV/Sales multiple, Remedy is priced at about 26% below the peer group. In 2019, providing our estimates are met, Remedy's EV/EBIT is 7.9x and the corresponding P/E-estimate is 14.5x, in turn translating to about 55%:n and 38%: discounts when compared to the peers. The EV/sales with 2019 estimates reflects a 48% discount to the peer group.

## **Estimates and valuation 3/3**

### M&A peer group

We also look at completed M&A transactions of video game companies in our analysis. The comparability of the multiples extracted from the transactions are distorted however, by timing, state of the acquired company and buyer profile. The video game industry is experiencing strong growth, and especially in the case of small acquisition targets, premiums are not at all unrealistic if the acquiring larger companies are looking for new growth prospects. We have limited acquisitions to 2009-2017 in order to exclude the effects of the financial crisis to the multiples.

The median multiples for M&A transactions were 15.7x for EV/EBIT with a scope ranging between 5x-58x. The corresponding median for EV/Sales is 2.7x, averaging at 5.1x and ranging between 1x-29x. The large diversity in valuation multiples reflects that buyers are sometimes willing to pay very high multiples, should they find the strategic value and future growth prospects attractive enough.

### **Multiple based valuation**

We value Remedy throught the EV/Sales and EV/EBIT multiples. In our view Remedy should be priced according to the 2019 expectancies, as 2019 will reveal the first results on the success of the new strategy and the success of the P7 project release.

We have modeled three scenarios for 2019, where the earnings are effected by the sales of P7. We will use the peer group's EV/sales and

EV/EBIT medians as multiples. Due to Remedy's small size, we will use 10%, 20% and 30% lower multiples than the peer group in the optimistic, neutral, and pessimistic scenarios respectively. Our neutral scenario is based on our estimate of 1.5 million units sold for P7. The optimistic scenario reflects Remedy's potential should sales reach 5 million units. The pessimistic scenario reflects a situation where sales fall from expected with one million units sold, resulting in investors suffering negative returns.

The EV/Sales multiple for the neutral scenario values Remedy's equity at 116 MEUR (9.5 EUR/share) with a range of 90-204 MEUR. The utilised multiple in our pessimistic scenario is 2.7x, 3.0x in the neutral scenario and 3.4x in the optimistic scenario.

The EV/EBIT multiple in the neutral scenario values Remedy's equity at 129 MEUR (10.6 EUR/share) with a range of 73-367 MEUR. The utilised multiple in our pessimistic scenario is 12.3x, 14x in the neutral scenario and 15.8x in the optimistic scenario.

### **DCF** valuation

In Remedy's case, a DCF model is highly sensitive to the amount of units sold per games released and the visibility of cash flows is weak. Our DCF model relies on different estimates varied by scenarios. In the model, revenue growth is much slower after 2021, and profitability stabilizes at a roughly 20 % EBIT margin. The terminal growth rate is 3 % and the operating profit margin is 20 % in the neutral scenario. The cost of capital (WACC) has been

set at 12.2 %. The high cost of capital reflects a high liquidity premium due to the level of risk involved. The DCF value for equity in the neutral scenario is 102 MEUR (8.39 EUR per share). The range from pessimistic to optimistic scenarios is 57-205 MEUR, further emphasizing how sensitive the value is to game sales.

### **Valuation summary**

Based on all the valuation methods we have used, the value of Remedy's equity comes out at 115 MEUR, or 9.5 EUR per share. We are setting our target price below this at 8.5 EUR (previously 7.5 EUR), due to the risks still related to the strategy and high uncertainties related to game sales. Our target price corresponds to 2.4x EV/Sales and 10x EV/EBIT- multiples for our 2019 estimates. The multiples are moderate should the strategy succeed.

Remedy's value in the pessimistic scenario is 73 MEUR (6.0 EUR/share) and 258 MEUR (21.4 EUR/share) in the optimistic scenario. The range is exceptionally wide, and reflects the sensitivity of the valuation, not only to investor confidence and sentiment, but also game sales.

## **Valuation results**

### Valuation in different scenarios with different methods

EV/Sales-multiple	Pessimistic	Neutral	Optimistic
Revenue 2019	25,9	31,2	53,6
x valuation multiple	2,7x	3,0x	3,4x
Enterprise value	69	95	183
- Net debt 2017	-21	-21	-21
Equity value	90	116	204
Per share (EUR)	7,4	9,5	16,8

EV/EBIT-multiple	Pessimistic	Neutral	Optimistic
EBIT 2019	4,2	7,7	22,0
x valuation multiple	12,3x	14,0x	15,8x
Enterprise value	51	108	347
- Net debt 2017	-21	-21	-21
Equity value	72	129	367
Per share (EUR)	5,9	10,6	30,3

Summary	Pessimistic	Neutra	l Optimistic
EV/Sales	69	95	183
EV/EBIT	51	108	347
DCF	36	81	184
Average	52	95	238
- Net debt 2017	-21	-21	-21
Equity value	73	115	258
Per share (EUR)	6,0	9,5	21,4

### **Valuation multiples**

Valuation	2017	2018e	2019e	2020e	2021e
Share price	6,44	7,30	7,30	7,30	7,30
Market cap	78	88	88	88	88
EV	57	66	61	56	50
P/E (adj.)	40,3	neg.	14,5	13,9	10,7
P/E	52,9	neg.	14,5	13,9	10,7
P/CF	7,3	57,2	17,4	10,9	10,2
P/B	3,6	4,1	3,2	2,8	2,4
P/S	4,5	4,2	2,8	2,7	2,1
EV/Sales	3,3	3,2	2,0	1,7	1,2
EV/EBITDA	20,5	404,1	7,7	6,6	4,6
EV/EBIT	22,1	neg.	7,9	6,9	4,8
Payout ratio (%)	0,0 %	0,0 %	40,0 %	40,0 %	40,0 %
Dividend yield-%	0,0 %	0,0 %	2,8 %	2,9 %	3,8 %
Course Indores					

Source: Inderes

### Valuation multiples with 8.5 EUR target price



## Peer group valuation multiples

			E) (	E\//	EDIT	E) (/E		E) //c			/ <b>-</b>	D:		D/D
	Share price	Мсар	EV		EBIT		BITDA		Sales		/E		ield-%	P/B
Company		MEUR	MEUR	2018e	2019e	2018e	2019e	2018e	2019e	2018e	2019e	2018e	2019e	2018e
Frontier Developments	1805,00	762	758	491,0	43,1	87,6	29,2	21,5	10,8	500,0	49,5			12,5
Zynga	4,52	3229	2685	22,2	16,4	17,8	13,9	3,3	2,9	31,1	24,1			2,4
CD Projekt	149,50	3231	3135	55,7	16,4	54,4	13,9	27,1	8,5	64,3	21,8		0,2	13,1
Focus Home Interactive	28,50	142	139	9,2	9,2	9,2	9,2	1,3	1,2	14,0	13,8	2,6	3,2	2,8
THQ Nordic	205,00	1429	1419	23,9	17,6	15,4	10,3	4,0	4,1	37,7	26,7			10,3
Starbreeze	13,83	442	419	36,4	19,0	13,8	8,1	4,3	3,5	73,1	25,8			2,7
G5 Entertainment	575,00	494	484	26,6	18,7	18,2	13,9	3,0	2,4	32,1	22,8	0,6	0,9	14,0
Stillfront Group	253,00	593	629	21,2	14,7	14,5	10,8	4,4	3,8	34,2	22,3		1,5	6,0
Ubisoft	92,24	10310	10850	38,5	25,3	13,5	10,5	6,3	5,2	53,3	34,3			8,1
Take-Two Interactive	114,07	10966	9757	23,4	17,4	21,8	16,1	5,6	4,1	34,4	25,1			9,4
Next Games	5,95	109	83		31,1		7,5	1,9	0,8		16,4			4,0
Rovio	5,48	436	338	12,2	8,9	7,7	7,0	1,2	1,1	20,4	14,6	1,8	2,1	2,8
Sumo Group	140,00	236	224	18,9	14,5	16,8	12,7	4,7	3,8	27,5	21,0			
Paradox Interactive	193,00	2343	2306	42,3	33,4	32,1	24,7	19,6	15,5	55,2	46,4	0,7	0,7	25,9
Remedy (Inderes)	7,30	88	66	-1846,2	7,9	404,1	7,7	3,2	2,0	-708,5	14,5	0,0	2,8	4,1
Average				63,2	20,4	24,8	13,4	7,7	4,8	75,2	26,0	1,4	1,4	8,8
Median				23,9	17,5	16,8	11,8	4,3	3,8	34,4	23,4	1,2	1,2	8,1
Diff. to median (%)				-7834 %	-55 %	2306 %	-35 %	-26 %	-48 %	-2162 %	-38 %	-100 %	128 %	-49 %
Source: Reuters / Inderes														

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## **M&A** valuation multiples

			EV				
Buyer	Target	Date	(MEUR)	EV/Sales	EV/EBITDA	EV/EBIT	P/E
Stillfront Group	Goodgame Studios	12/2017	270	1,9x	7,8x	10,6x	
Aristocrat Technologies	Big Fish Games	11/2017	835	2,2x	11,9x		
MTG International	InnoGames	5/2017	260	2,0x			
Supercell Oy	Space Ape Inc	5/2017	90	1,0x			
Take Two Interactive	Social Point	2/2017	260	3,1x	14,1x		
Tencent Holdings Limited	Supercell Oy	6/2016	8313				7,0x
Stillfront Group	Simultronics	6/2016	3	1,8x			
ActivisionBlizzard	King Digital Entertainment	11/2015	4483	2,3x	6,8x	6,9x	10,0x
Leyou Technologies Holdings Limited	Digital Extremes Ltd	7/2015	88	4,7x		20,8x	28,5x
Tencent Holdings Limited	iDreamSky Technology Limited	6/2015	428	2,5x	141,0x		
Microsoft	Mojang	9/2014	1931	7,7x			
GungHo Online Entertainment	Supercell Oy	8/2014	2540	3,7x	10,3x		
Glu Mobile Inc	Cie Games Inc	8/2014	73	4,7x	42,1x	44,8x	56,1x
GungHo Online Entertainment	Supercell Oy	10/2013	2225	29,0x		57,9x	75,8x
Netmarble Games Corporation	Softmax Co Ltd	5/2012	38	6,8x			18,0x
Koei Tecmo Holdings	Gust Co Ltd	12/2011	21	1,8x		4,5x	7,0x
Glu Mobile Inc	Griptonite Inc	8/2011	41	2,7x			
Konami Holdings Corporation	DIGITAL GOLF Inc.	3/2011	2	0,8x			
Joymax Co Ltd	IO Entertainment Co Ltd	3/2011	12	12,8x			27,4x
Ubisoft	Nadeo	10/2009	10	4,9x			10,1x
Median			175	2,7x	11,9x	15,7x	18,0x
Average			1096	<b>5,1</b> x	33,4x	24,3x	26,7x

Source: Capital IQ, Inderes

## **DCF**, neutral scenario

DCF model (MEUR)	2017	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	TERM
EBIT (operating profit)	2,0	0,0	7,7	8,1	10,4	10,6	10,8	11,6	11,8	11,9	12,2	
+ Depreciation	0,2	0,2	0,3	0,4	0,4	0,5	0,6	0,6	0,7	0,7	0,7	
- Paid taxes	-0,4	0,0	-1,5	-1,6	-2,1	-2,1	-2,2	-2,3	-2,4	-2,4	-2,4	
- Tax, financial expenses	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
+ Tax, financial income	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
- Change in working capital	-3,6	1,6	-0,8	1,7	0,6	1,2	1,4	1,1	0,3	0,2	0,2	
Operating cash flow	-1,8	1,8	5,6	8,5	9,3	10,2	10,6	11,0	10,4	10,5	10,7	
+ Change in other long-term liabilities	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
- Gross CAPEX	-0,5	-0,3	-0,5	-0,4	-0,6	-0,6	-0,7	-0,7	-0,8	-0,8	-0,8	
Free operating cash flow	-2,3	1,5	5,1	8,1	8,7	9,6	10,0	10,2	9,7	9,7	10,0	
+/- Other	13,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
FCFF	10,7	1,5	5,1	8,1	8,7	9,6	10,0	10,2	9,7	9,7	10,0	111,2
Discounted FCFF		1,4	4,2	6,0	5,8	5,6	5,2	4,8	4,0	3,6	3,3	36,9
Sum of FCFF present value		81,0	79,6	75,3	69,3	63,5	57,9	52,6	47,8	43,8	40,2	36,9
Debt free DCF		81,0										

Debt free DCF	81,0
- Interesting bearing debt	-1,9
+ Cash and cash equivalents	22,6
-Minorities	0,0
-Dividend/capital return	0,0
Equity value DCF	101,7
Equity value DCF per share	8,39

WACC	
Tax-% (WACC)	20,0 %
Target debt ratio (D/(D+E)	0,0 %
Cost of debt	5,0 %
Equity Beta	1,10
Market risk premium	4,75 %
Liquidity premium	4,00 %
Risk free interest rate	3,0 %
Cost of equity	12,2 %
Average cost of capital (WACC)	12,2 %



Source: Inderes 42

## **DCF** by scenario

### **Pessimistic**

- In the pessimistic DCF, P7 is expected to sell around 1 million copies. Consequent games are expected to perform the same.
- Enterprise value is 36 MEUR.
- Equity is worth 57 MEUR.

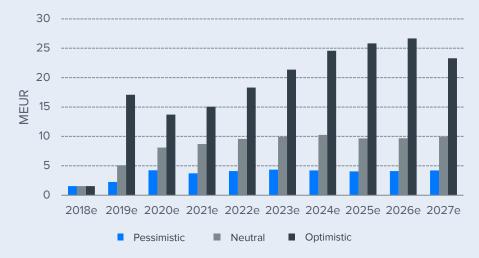
### **Neutral**

- In the neutral DCF, P7 is expected to sell around 1.5 million copies. Consequent games are expected to perform the same.
- Enterprise value is 81 MEUR.
- Equity is worth 102 MEUR.

### **Optimistic**

- In the optimistic DCF, P7 is expected to sell around 5 million copies. Consequent games are expected to perform the same.
- Enterprise value is 184 MEUR.
- Equity is worth 205 MEUR.

### Free cash flow in different scenarios



## Profit and loss statement, balance sheet

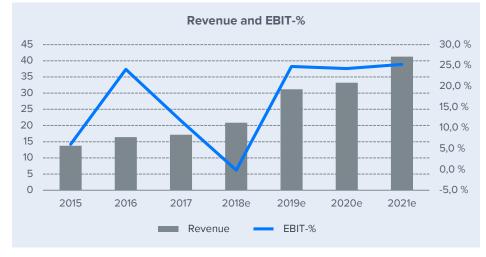
### Income statement

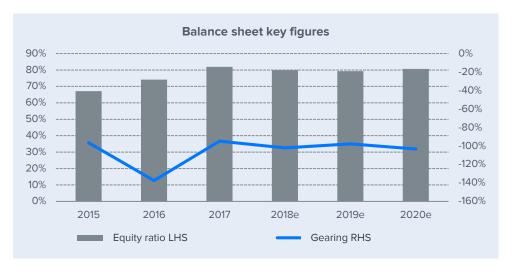
(MEUR)	2017	2018e	2019e	2020e
Net sales	17	21	31	33
Costs	-15	-21	-23	-25
EBITDA	2,2	0,2	8,0	8,4
Depreciation	-0,2	-0,2	-0,3	-0,4
EBIT	2,0	0,0	7,7	8,1
NRIs in EBIT	-0,6	0,0	0,0	0,0
EBIT (excl. NRIs)	2,6	0,0	7,7	8,1
Net financial items	-0,4	-0,3	-0,2	-0,1
Associated companies	0,0	0,0	0,0	0,0
Pre-tax profit	1,8	-0,2	7,6	8,0
Other items	0,0	0,0	0,0	0,0
Taxes	-0,4	0,0	-1,5	-1,6
Minorities	0,0	0,0	0,0	0,0
Net earnings	1,5	-0,1	6,1	6,4
Net eamings (excl. NRI)	2,0	-0,1	6,1	6,4
Extraordinaries	0,0	0,0	0,0	0,0
Profit for period	1,5	-0,1	6,1	6,4
EPS	0,12	-0,01	0,50	0,53
EPS (excl. NRIs)	0,16	-0,01	0,50	0,53

### **Balance sheet**

Assets (MEUR)	2017	2018e	2019e	2020e
Non-current assets	1	1	1	1
Goodwill	0	0	0	0
Intangible assets	0	0	0	0
Tangible assets	0	1	1	1
Associated companies	0	0	0	0
Other investments	0	0	0	0
Other non-current assets	1	1	1	1
Deferred tax assets	0	0	0	0
Current assets	26	26	34	38
Inventories	0	0	0	0
Other current assets	0	0	0	0
Receivables	3	2	5	3
Cash and equivalents	23	24	29	35
Balance sheet total	27	27	35	39

Liabilities (MEUR)	2017	2018e	2019e	2020e
Equity	22	22	28	32
Share capital	0	0	0	0
Retained earnings	8	8	14	18
Shares repurchased	0	0	0	0
Revaluation reserve	0	0	0	0
Other equity	14	14	14	14
Minorities	0	0	0	0
Non-current debt	2	2	2	2
Deferred tax liabilities	0	0	0	0
Provisions	0	0	0	0
Long term debt	2	2	2	2
Convertibles	0	0	0	0
Other long term liabilities	0	0	0	0
Current debt	3	4	5	6
Short term debt	0	0	0	0
Payables	3	4	5	6
Other current liabilities	0	0	0	0
Balance sheet total	27	27	35	39





Source: Inderes

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Inderes' recommendation policy is based on the following distribution in relation to the upside potential of the stock's 12-month target price:

Recommendation potential*		Upside
Buy	> 15 %	
Accumulate	5 - 15 %	
Reduce	-5 - 5 %	
Sell	< -5 %	

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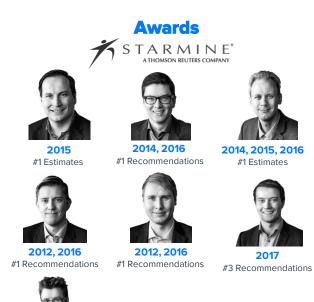
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### **Recommendation history, LTM**

Date	1	Recommendation	Target price	Share price
30.5.20	017	Accumulate	7,40 €	6,69€
17.8.20	17	Buy	7,50 €	6,31€
19.2.20	17	Buy	7,50 €	5,90€
4.6.201	18	Buy	8,50€	7,30 €

## **Inderes Oy**



**2017** #1 Recommendations

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