

## artec technologies

### Patented logging and surveillance

artec technologies is a small company that specialises in the recording and storage of audiovisual information for a range of applications. The company can trace its roots back over 20 years, and has established an enviable customer base along with some excellent case studies. However, it has been challenging to drive profitable growth. Backed by targeted investment in FY16, artec is shifting to a cloud-based business model, which we believe will better enable management to scale the business.

### Investment case: High-quality success stories

artec has a number of superb case studies, which provide a strong endorsement to the group's technological offering. Examples include: 1) Qatar-based media group uses artec's technology to monitor global broadcast media in real time to ensure that its broadcasting rights have not been impinged. 2) One of the world's largest cruise lines uses the combined broadcast and surveillance offering to train its cabin crews in conjunction with Transas, a major maritime systems integrator. 3) The interior ministry of an EU member state recently purchased the company's new range of MULTIEYE mobile video recorders for use by its special forces. The challenge for artec is to use the know-how created through these projects to scale the business and transition into a strong, profitable growth story. One possibility is for artec to use its cloud platform to create a database of channels that all media companies could use, paying a recurring monthly fee, to manage their broadcasting compliance as well as to ensure their broadcasting rights have not been impinged.

### FY16 results: A year of heavy investment

FY16 revenue slipped by 29% to €2.5m, while the group swung to an operating loss of €0.4m from a €0.6m profit. This reflects the fact that management focused on a handful of projects in FY16, a couple of which were problematic, with no off-the-shelf software sales to make up the difference. Furthermore, there was significant investment in product development, including a new XENTAURIX cloud platform. We note that management's attention was focused on significant product development activities in FY16, launching a new range of MULTIEYE solutions and the new cloud-based Media Analysis platform in February.

### Valuation: An option on a massive opportunity

The group's target markets are huge and we see artec's modest €10m market capitalisation as an option on management's ability to leverage the company's significant success stories into a more scalable and profitable business model.

Consensus estimates						
Year end	Revenue (€m)	EBITDA (€m)	EPS (€)	DPS (€)	P/E (x)	Yield (%)
12/15	3.5	1.0	0.22	0.0	19.8	N/A
12/16	2.5	0.1	(0.13)	0.0	N/A	N/A
12/17e	3.8	0.5	0.11	0.0	39.5	N/A
12/18e	5.1	1.0	0.29	0.0	15.0	N/A

Source: Thomson Reuters.

Technology

04 July 2017

Price €4.35  
Market cap €10m

#### Share price graph



#### Share details

Code A6T  
Listing Deutsche Börse Scale  
Shares in issue 2.35m  
Last reported net cash as at 31 December 2016 €0.23m

#### Business description

artec technologies develops and produces software and systems solutions for the transmission, recording and analysis of video, audio and metadata in networks or on the internet.

#### Bull

- Very strong customer list and some excellent case studies.
- Heavily invested in IP, through many years of experience, supported by a German patent.
- Shifting to a more scalable cloud business model.

#### Bear

- Small scale and limited staff resources for projects.
- Small balance sheet position, with limited cash resources.
- Volatile trading record.

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## **Company description: Combining broadcast compliance with surveillance/security technologies**

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artec technologies is a specialist in the recording and storage of audiovisual information. The company operates in two market segments with two key products – video security (MULTIEYE) and media analysis systems (XENTAURIX). Its revenues are largely (customised) projects, historically supplemented by off-the-shelf software, although sales of the latter are modest. Historically, video surveillance was the predominant target market, though the focus is now shifting to media analysis systems. This is due to the Chinese domination of video surveillance with commoditised products (although artec has found a new niche in public sector security after recent terror attacks), along with artec's recent successes in the media analysis systems end-market.

Both products are based around the same technology and the IP is supported by a German patent (see below) that was registered in 2000 and granted in 2006. Management states that the technology is difficult to replicate. The group can deliver both onsite and hosted (cloud) solutions. artec generally uses resellers, with c 80% of sales made indirectly via systems integrators with the balance through direct sales. Occasionally, it has been a mix – as some broadcasters require their suppliers to be on a preferred suppliers list. Customers will often come to artec with a specific requirement. The group's video surveillance product has been significantly refreshed over the past two years while the company has recently launched a cloud-based media analysis platform. The solution's functionalities can be accessed via HTML5 compliant browsers.

Customers expect perfect reliability and, to this end, artec has made significant investments in the past 12 months in its technology platforms. artec now has proven complex technology solutions installed and operating in the marketplace. In the wake of heavy investment in FY16, the company plans to accelerate sales and marketing in FY17, to fully exploit the new products.

The average number of employees during FY16 was 27. The approximate breakdown is as follows: research and development (nine), administration (six), sales (four), professional services (six) and management (two). The small scale of the business severely limits the number of projects the company can take on. However, the shift to a cloud model will make the business significantly more scalable.

### **Company history**

Diepholz, Bremen-based artec technologies traces its roots back to the mid-1990s, when its core IP was developed. The company originally built products for the recording and storage of rich data for video surveillance in the mid-1990s and later built products for media analysis, which involves the reparation and analysis of audiovisual information, including voice and text. The company was founded in 2000 by brothers Thomas and Ingo Hoffman; the Hoffmann family stake now stands at 65%. The company listed on the m:access segment of the Munich Stock Exchange in 2006. It later transferred to the Entry Standard of the Frankfurt Stock Exchange and is now listed on the Scale segment.

### **Two divisions - media analysis systems and video security**

#### **Media analysis systems (XENTAURIX)**

Until recently, XENTAURIX was primarily used as a test facility for new developments and a demonstration system for new potential customers. The technology can be used to find content via keywords, or it can be used for competition monitoring, content matching and audience analysis. XENTAURIX is used for network/internet-based transmission, recording and playback of TV, radio,

video and metadata in different fields of application, such as: TV/radio stations, IPTV and cable network operators.

XENTAURIX has a range of applications:

- broadcast logging for TV and radio broadcasters monitoring legality of broadcasts,
- advertising compliance – verification of advertisements aired,
- information capture for news agencies and distribution to broadcasters,
- OTT and IPTV multi-screen services for TV stations, operators and content owners,
- audience ratings and analytics for broadcasters and content owners, and
- behavioural training monitoring and recording for simulation markets.

The product also has applications in e-learning, where customers include London Metropolitan University and Dublin University.

An important functionality of XENTAURIX is in the measuring of TV ratings. These data can be compared with social media to optimise the programme qualityng schedule for an evening, and they can be used to target commercials. The primary focus of activity is in the Middle Eastern markets. XENTAURIX monitoring systems have been installed in Baghdad, and artec also has business in Qatar and Abu Dhabi. The company has obvious limitations on the work it can take on due to its size and there were a couple of recent opportunities in South Africa that it had to let go. Customers include a Qatar-based media group and news agencies. artec has deployed a large monitoring system in a Qatar news agency and Aspire Zone Foundation, the leading supplier of infrastructure for large sports events in Qatar, is a customer. There are also a number of installations in Germany where all the major media players are on the customer list. Consequently, artec has a lot of high quality references. artec has also had enquiries from the music industry relating to its broadcast logging functionality.

A quality encoder system has been developed through a partnership with a UK company. The encoder offers a number of new functions, most notably in 'fingerprinting'. This function enables video clips to be referenced much more efficiently. XENTAURIX has been modified for cloud delivery. artec's aim is to be a one-stop shop, delivering multiple internet features and functionality in a single system.

#### **Video security (MULTIEYE)**

artec offers a comprehensive range of products for the creation of video surveillance and information systems with high image resolution. A range of software modules are available, including MULTIEYE PrivacyShield (privacy-protected video surveillance through anonymization of people), MULTIEYE licence plate recognition (the recognition and analysis of number plates) and MULTIEYE PeopleCounter (measuring customer frequency in shops).

MULTIEYE has historically targeted a very broad market (eg stores, shopping malls, gas stations, city centres, parking lots, parking decks, airports, train stations, production sites, factory premises, museums, banks and distribution centres). However, Chinese companies have made major inroads in this market with cheap off-the-shelf solutions. Therefore, artec has recently shifted its focus to the public sector, including public authorities, special services and the police. This market came alive two to three years ago following recent terrorist attacks, which led to a significant increase in government budgets. artec's regional focus is on the DACH countries and Benelux. These customers need the certainty of watertight technology from a trusted local operator (eg they want to be sure there is no spyware embedded in the solution) and artec can deliver tailored delivery according to their specific requirements. In November 2016, artec announced it had won a contract to supply mobile video technology to the interior ministry of an undisclosed EU member state. This large deal covers special forces, relating to cars and secret observation. Given the sensitive nature of this deal, artec is unable to add any detail of the application. artec is confident this market will remain very strong given the ongoing security concerns in Western Europe.

The overall market size for video surveillance and information systems is huge, albeit difficult to quantify, while the public sector is a relatively modest slice, although growing at pace.

### **artec's patent**

artec has a German patent: 'Method and apparatus for recording and reproducing multimedia data' (DE 10129120). artec developed the process in 2000, applied for a patent in 2001 and the German patent and trademark office issued the patent in 2006. A distinctive characteristic of the patented process is its ability to record live contents continuously and – while still recording – to call up and play back those contents with time shifting. If a viewer switches on a running programme after it has already started, they can still view the programme from the very beginning, pause the programme at any point, and rewind or fast-forward it to any specific scene desired. Functions of this kind are usually designated as 'time-shifting' on recorders with integrated hard drives and/or set-top boxes. In contrast to these time-shift functions on such recorders and set-top boxes, the live recordings made by the process developed and patented by artec technologies are not recorded and stored on the device itself, but rather on a central server. The contents stored on the server can then be called up by a multitude of users even during the actual recording itself. This makes temporary storage on devices placed in the living room superfluous.

### **Business model**

artec sells the technology and projects, and project size for XENTAURIX is usually €200k to €1.5m. Most of the projects need customisation and one to two projects per year keep the company busy. One of artec's challenges in achieving a step change in revenues lies in the need to augment its technology investment for growth with an increase in the workforce. A typical project is in the low seven-digits (euros), involving a combination of hardware and software, and usually follows a tender or a request for proposal. A large project, such as the recent Qatari project, can take 12-18 months to deliver. Following installation, artec generates c 10-15% support fees and customers will usually upgrade to new versions.

Management believes that more and more potential customers prefer a cloud delivery. While artec has offered cloud delivery for many years, the company has spent c €0.6m developing a new extended product for the cloud. Since artec can offer the payout on mobile phones and tablets, the company has the potential to track across the entire world. artec believes it can offer more and more value from the cloud. The aim is for contracts to be for three to five years, with a minimum of one year.

### **Strategy: Cloud offers an opportunity to scale the business**

The plan is to scale the business by moving XENTAURIX to a cloud-based business model. This would involve putting all the technology and intelligence into the platform. This would enable the group to target new geographies, notably Hong Kong, South Africa and the US, and therefore significantly broaden the customer base. Management's aim is to target international markets, largely driven by regulatory factors. However, artec cannot predict where there is a customer with specific need. While cloud product delivery would enable customers to use many features without the need for customisation, any customisation would need to be carried out by artec, but this could all be handled remotely. Additionally, artec believes there is also an opportunity to sell on an OEM basis. This would involve selling via a large telecoms network operator.

One aim is to build out a proprietary channel network, driven off the customer base. Ideally, artec would need to maintain at least 350-400 decrypted channels, many of which are not free on air. This could be used for customers to test for broadcast right impingements.

Management's target is to generate an 80% gross margin in the medium term, on the back of the shift to cloud software delivery, along with an EDITDA margin of c 30% (compared with 4% in FY16 and 30% in FY15) and an EBIT margin of 18-20%.

### **Case study: Qatar-based media group**

A major customer of artec, this company is a spinoff of the Al Jazeera network and has a global network of sports channels.

The customer originally purchased off-the-shelf software from artec, but this turned into a customised project, as it needed artec to customise the software. The Qatar project involved a combination of hardware and software along with input from a third-party systems integrator, as the project was too large for artec to handle on its own.

The customer uses the application to monitor other stations, checking if they broadcast any of its copyrighted material. A contract for this type of deal is based on the number of channels covered and would typically last for three years. The Qatar project was delivered remotely. Previously, artec offered off-air solutions, but this contract was for an on-air solution that operates in real time. It took six to seven weeks to have the whole system installed. No ongoing support is required for this contract, but there are opportunities for upselling by adding more channels.

### **Case study: Transas in conjunction with one of the world's largest cruise lines**

In FY15, artec received an order from Transas Marine to develop a professional 200 channel AV recording system for one of the world's biggest maritime simulation training projects, at the huge [Arison Maritime Center](#) in Almere in the Netherlands. Arison is owned and operated by one of the world's largest cruise lines, which is a customer of Transas. The contract value is estimated in the low seven digits (euros).

Transas, based in Cork, Ireland, is a world-leading provider of high-tech equipment, software applications, integrated solutions and services for the maritime industry. Its offerings include navigation systems and integrated bridge solutions along with recognised training and simulation solutions. Transas simulators are used to train 4,000+ captains on its technologies.

The artec solution is synchronised with the Transas simulation systems and used for live surveillance and debriefing during training exercises. The project combines artec's expertise in both media analysis and surveillance technologies in order to generate a high-class monitoring system. The ability to combine these functions helped artec to win the contract. The solution monitors the activity on the captain's bridge and there is a requirement to be able to deal with any situation in any harbour. It involves a special camera with low resolution and a wide view.

### **Recent newsflow and upcoming catalysts**

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In February, artec launched its new cloud platform for integrated TV and online audience analyses. In April, artec announced that an un-named international media corporation had chosen its cloud platform for TV analysis. The customer will use artec's cloud platform to document and analyse its European TV stations. Clearly, the take up of the cloud platform is crucial for the group's value proposition and the contract win with an international media corporation is a positive start.

## Market overview

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The video surveillance market has become extremely competitive in recent years as Chinese companies have moved in and now dominate the space with off-the-shelf software. However, public sector security is a different market and there are only a handful of competitors in this space, including Siemens, Bosch, Dallmeier and Geutebrück.

The media analysis segment has been evolving rapidly, particularly in the move from mobile phones to smart phones and tablets. Direct competitors are hard to identify, particularly since artec operates across two segments. However, we note Verizon bought a competitor called Volicon in early 2016. Another competitor is Actus Digital, and IBM who bought a related business in the space of cloud-based live video streaming called Ustream. artec argues that most of its competitors lack a stable system.

## Management

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The artec technologies team is run by Ingo Hoffmann and Thomas Hoffmann, who, as managers with international experience, have a high degree of expertise, marketing knowledge and technological competence.

**Ingo Hoffmann** graduated in civil engineering and is also an inventor. As CTO he is responsible for research, development and product design. After studying electrical engineering at the University of Berlin, and mathematics and physics at the University of Osnabrück, he worked from 1978 as a member of higher management at Stiebel Eltron. After that, he led the sales department of aerospace industry at AEG-Telefunken.

**Thomas Hoffmann** is a trader and a manager with international experience. After training in business management in London he worked abroad as a technical trader. As a member of the management board, he is responsible for business development, sales and distribution, marketing and human resources management.

The Hoffmann family and friends holds 65% of the company, while the balance of 35% is free float.

## Financials

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The company has had a relatively volatile trading record, with profitability defined by the successful delivery of projects, supported by some off-the-shelf software sales. Nevertheless, management has kept good control on costs, and cash burn has been minimalised. artec does not pay a dividend. There was heavy investment in product development in FY16 (c €0.6m or c 24% of sales). The new cloud platform is likely to be a key determinant in the company's success.

**Exhibit 1: Financial summary**

(€000s)	FY11	FY12	FY13	FY14	FY15	FY16
Year ended 31 December	HGB	HGB	HGB	HGB	HGB	HGB
<b>Income statement</b>						
Revenue	1,750	2,220	1,832	2,436	3,469	2,475
Operating profit/(loss)	(203)	175	(424)	108	637	(415)
Operating margin	(11.6%)	7.9%	(23.1%)	4.4%	18.4%	(16.8%)
Pre-tax profit (loss)	(169)	205	(410)	108	636	(414)
EPS (€)	0.0790	0.0450	(0.1129)	0.2425	0.2150	(0.1311)
DPS (€)	0.00	0.00	0.00	0.00	0.00	0.00
<b>Balance sheet</b>						
Total non current assets	1,206	1,610	1,537	1,797	2,152	2,100
Total current assets	918	729	1,159	566	899	1,189
Total assets	2,125	2,338	2,696	2,363	3,051	3,288
Total non-current liabilities	0	0	0	0	0	(57)
Total current liabilities	(104)	(149)	(408)	(276)	(487)	(202)
Total liabilities	(104)	(149)	(408)	(276)	(487)	(260)
Net assets	2,021	2,190	2,288	2,087	2,565	3,029
<b>Cash flow statement</b>						
Net cash from operating activities	270	(116)	271	227	963	(294)
Net cash from investing activities	(345)	(156)	(328)	(331)	(506)	(702)
Net cash from financing activities	1	64	51	104	(218)	989
Net cash flow	(74)	(208)	(6)	(1)	239	(7)
Cash & cash equivalent end of year	215	8	2	1	240	233

Source: artec technologies accounts. Note: HGB = German GAAP.

## Income statement

Revenue slipped by 29% to €2.5m in FY16 while the group swung to an operating loss of €0.4m from a €0.6m profit. This reflects the fact that management focused on a handful of projects in FY16, a couple of which were problematic, and there were no off-the-shelf software sales to make up the difference. This compares with seven off-the-shelf software sales in FY14.

## Balance sheet and cash flow

While revenues and profits have been quite volatile, management has been prudent with its cash flow management and the company has a modest cash position and no bank debt.

In March 2016, artec privately placed 215,000 new shares at a price of €4.60 per share with institutional and private investors. The capital increase raised gross proceeds of €989,000. The funds were used to modernise the software in both divisions (c €600k was spent on R&D in FY16). Additionally, there has been investment in the encoder via a third party.

## Valuation

We are not aware of any direct quoted peers. Nevertheless, we feel that any peer comparison is irrelevant for a company at this stage of development and we see artec's modest €10m market capitalisation as an option on management's ability to leverage the company's significant success stories into a more scalable and profitable business model. Clearly, the move to the cloud is a crucial component of this strategy.

## Sensitivities

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We highlight the following sensitivities:

- **Economic downturn:** artec's businesses are sensitive to IT spending patterns.
- **Competition:** the group faces competition from larger, well capitalised players, including independent software vendors. However, artec gains an edge from its domain knowledge, independence and partnerships.
- **Technological change:** the group's software solutions are at risk of being surpassed by competitors. artec benefits from a single patent protection in Germany, which lasts for around another four years.
- **Sales cycles and delivery:** given the group's small size, business can be lumpy, and there are limitations on how many projects can be delivered.
- **Project risk:** there is a risk of project over-runs as it can be difficult to judge the complexity of integration work.
- **Political risk:** possible risks relating to clients based in Qatar.
- **Staff issues:** as a small company, the gain or loss of key staff could have a significant impact on this business.



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