22 August 2019

Technology

Source: Refinitiv

Market data

EPIC/TKR	**ASAI.SE**
Price (SEK)	**23.0**
12m High (SEK)	90.0
12m Low (SEK)	15.2
Shares (m)	24.7
Mkt Cap (SEKm)	568
EV (SEKm)	684
Free Float*	30%
Market	Nasdaq First North

**As defined by AIM Rule 26*

Description

Artificial Solutions is a leading global vendor of artificial intelligence (AI) software to large enterprises. Headquartered in Sweden, the company comprises around 106 people.

Company information

CEO	Lawrence Flynn
CFO	Chris Bushnell
Chairman	Åsa Hedin

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Diary

14 Nov 2019	3Q results
27 Feb 2020	FY19 results

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ARTIFICIAL SOLUTIONS

2Q'19 results – customer wins, accelerating order intake

Artificial Solutions' 2Q results announcement for the three months ended June 2019 confirmed strong progress on major client wins, usage revenue growth and new engagements with major Systems Integrator (SI) partners. Order intake growth of 200% was driven not only by direct and indirect customer wins, but also by contract extensions and renewals from the existing customer base. The completion of the SEK65.7m (€6.1m) fundraising in early July provides funding for future growth to meet customer demand. Consistent strategic execution is facilitating the establishment of Artificial Solutions as a recognised international leader in the conversational AI segment.

- **2Q'19 results:** All key financial metrics showed favourable trends. Order intake growth was particularly strong, at 200% YoY to SEK22.8m (€2.1m), while order backlog was up 79% YoY to SEK50.7m (€4.7m). Net sales for the quarter were SEK12.6m (€1.2m), up 11% YoY, with an adjusted EBITDA loss, as expected, of SEK27.7m (€2.6m). (We use a 10.7 SEK:€ conversion rate.)
- **Seven significant new customers added in 2Q:** these included Swisscom (which will also resell Teneo in its IT Services business), a major European bank, an additional automotive brand within the VW group, a major US Government entity, a Nordic convenience store/gas station operator, and a large US-based global tech vendor. Management expects each of these to deliver significant usage revenue over time.
- **Strategic emphasis on revenue from SI partners working:** this is confirmed by i) deployments with clients that would otherwise be inaccessible, e.g. wins with a US Government department and a major US tech company, and ii) margin expansion – 2Q gross margin of 60% – due to a greater proportion of software licences within the revenue mix. 34% of 2Q revenue came from partners (vs. 25% in 2Q'18).
- **Valuation:** Artificial Solutions trades on the Nasdaq First North exchange in Stockholm. A DCF analysis produces a mid-point-implied fair equity value of €97m, while a detailed valuation of the company's intellectual property (IP) assets, comprising patents and software licences, undertaken in 2016, came in at $96m.
- **Risks:** Competing with some of the world's largest technology companies brings challenges, such as keeping pace with developments, retaining talented people and creating enterprise mindshare vs. strong brands. SIs are a route to market but may reduce the company's visibility into potentially lengthy sales cycles; however, to date, Artificial Solutions has proven adept at managing these factors.

Financial summary and valuation

Year-end Dec (€m)	2017	2018	2019E	2020E	2021E
Revenue	7.1	6.1	8.4	11.5	18.0
EBITDA	-6.8	-9.3	-6.9	-2.7	3.4
EBITDA margin	-96%	-152%	-82%	-24%	19%
EBIT	-9.4	-11.6	-9.4	-5.5	0.3
PTP	-10.9	-14.2	-8.8	-4.8	1.4
Net income	-10.9	-14.2	-8.8	-4.8	1.4
EPS, diluted (EUR)	-0.5	-0.6	-0.4	-0.2	0.1
EV/Revenue	9.2	10.7	7.8	5.7	3.6
EV/EBITDA	-9.6	-7.0	-9.5	-24.1	19.0
EV/EBIT	-6.9	-5.6	-6.9	-11.8	186.9

Source: Hardman & Co Research

Investment summary

Artificial Solutions is in the midst of a very busy and productive period, using its public market listing and further funding to expand its presence in additional geographies, scale sales and marketing headcount across markets, build a base of major SI partnerships, and add to an already extensive list of large customers, with seven names added in 2Q'19. Momentum is tangibly accelerating, as evidenced by the strong order intake and order backlog metrics reported in 2Q'19. Notably, management has laid out some clear strategic tenets, and is increasingly in a position to demonstrate progress on these fronts.

SIs are an important barometer of product quality for any software vendor seeking to sell to major enterprises, as they are highly knowledgeable and have an enormous understanding of enterprise IT infrastructures, decision-making criteria, and the inevitable implementation complexities. In this regard, it is highly noteworthy, in our view, that Artificial Solutions' roster of SI partners now encompasses some of the world's largest names – Capgemini, Deloitte, Accenture, KPMG, Sapient, Teleperformance and Cognizant – a very healthy list for a company of this size. These relationships are evolving quickly from an implementation-led set of relationships with the SIs to growing evidence that the latter are able to sell the Teneo platform without significant or, in some cases, any input from Artificial Solutions (two such deals in 2Q). Notably, new SIs are seeking out Artificial Solutions to meet their own customers' requirements.

Artificial Solutions has consistently achieved strong rankings within the AI industry, and more widely in the technology sector. In a previous research report, *'1Q'19 results – customer traction, numbers on track'*, we referenced the 2018 ETR Research survey of ca.700 enterprise CIOs, which ranked Artificial Solutions third among all "emerging technology companies to keep an eye on", and, perhaps even more significantly, considered it to be the best positioned company its sector. More recently, at the AI Summit, Artificial Solutions was classed as a member of the "Tech Elite", alongside some of the largest technology companies in the world.

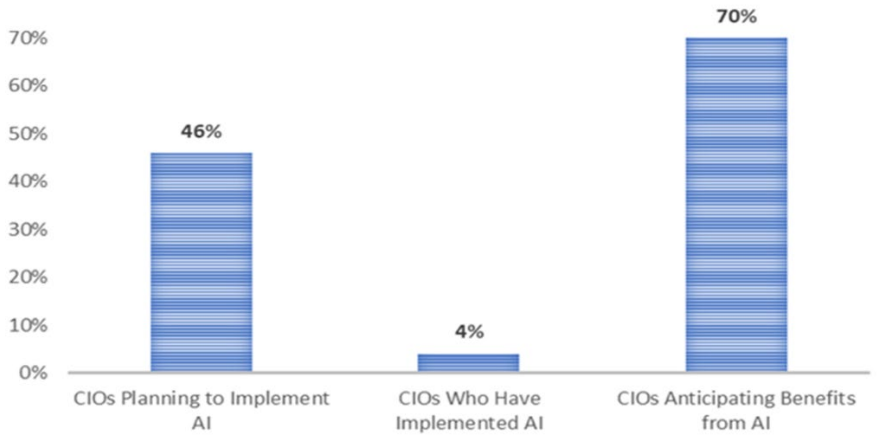
AI Summit 2019 – Tech Elite

Source: AI Summit

Gartner estimates that, by 2020, 25% of customer services and support operations will integrate virtual customer assistant technology. IBM has produced even bolder estimates, proposing that, within the next two to three years, 85% of customer service interactions will be handled by automated customer service agents, i.e. chatbots.

It is also helpful that Artificial Solutions and its partners are knocking on open doors. Enterprises are eager to adopt AI in response to a clear understanding that the potential benefits are substantial. This was reflected in Gartner's 2018 survey of CIOs, in which 70% of CIOs anticipated benefits from adoption of AI technologies. However, only 4% of these same enterprises had actually deployed AI, while 46% indicated that they intended to do so. These metrics are representative of the opportunity that lies ahead for Artificial Solutions. Indeed, it remains likely that customer-facing, revenue-generating applications will remain a priority for most enterprises, favouring conversational AI applications such as those being developed on Artificial Solutions' Teneo enterprise AI platform.

Gartner 2018 CIO Survey



Source: Gartner, Hardman & Co Research

The Teneo platform is designed to allow *non-specialists* to build conversational AI solutions with relative ease, which can be deployed in multiple languages across multiple channels and platforms. At the heart of the Artificial Solutions Teneo platform is the ability for enterprises to put conversational AI interfaces into their customer interaction systems. These might be online chat or voice-based customer support lines for financial institutions, retailers or telecoms service providers. The potential returns on investment are clear and substantial, as relatively expensive human customer interactions can be reserved for more complex matters, while being replaced by automated chatbots for straightforward enquiries. The latter might include a customer's current balance or a request for another copy of a bill.

The combination of machine learning with linguistic learning is central to the technology proposition, and the company believes that this combination is key to delivering optimal performance. While the Teneo platform incorporates learnings from over a million prior customer transactions, it continues to learn from the customer interactions of its client deployments and gets better over time. This self-improvement process is a critical feature of AI and allows success rates to keep improving over time. Success in this context is defined as the proportion of customer interactions, regardless of channel, that can be handled by the chatbot without human intervention. This is a key metric and, in a number of Artificial Solutions' contractual arrangements, this proportion is a driver of usage-based revenue, which, as we discuss below, will grow as a proportion of total revenue over time, as large deployments of the Teneo platform mature.

The April 2019 launches of the Teneo Fusion platform and the Teneo Developers application were designed to facilitate ease of use by partners and end-enterprises. Management notes that sales cycles are already being compressed by this offering. An example provided on the earnings call is that of an automotive manufacturer which deployed the platform on the basis of a 30-day trial as part of a fast-track evaluation process and subsequently moved directly to a full contract, rather than engage in a time-consuming proof-of-concept process. Understandably, the SIs are responding positively to these initiatives to make it easier to sell and deploy the Teneo platform.

Financials

2Q'19 results highlights

- Sharp acceleration in order intake growth to 200%, reflecting more new customer wins, larger deals and extensive renewal/contract extension activity among the existing customer base.
- Lengthening contract periods are a feature of the 2Q'19 new deals, consistent with growing customer confidence in the Teneo platform. Around 30% of order backlog will convert into revenue beyond two years.
- Continuing transition away from consultancy/professional services revenue to platform licence sales, the latter accounting for 81% of order backlog, versus 62% a year ago.
- Consistent growth in the contribution from SI partners, which represented 55% of order intake in 2Q, compared with 10% in 1Q, notably encompassing some large US deals where the company remains in the process of scaling resources.
- Material uplift in the gross margin to 60%, from 46% a year ago, reflecting the growing licence component within revenue and the reduction in professional services activity due to more SI involvement.
- Relatively stable headcount, at 106, up slightly from 103 a year ago, but within which there has been a market transition away from services-centric people to greater pre-sales, sales and marketing heads.
- Personnel costs up 7% YoY, in line with headcount increases, and reflecting the cost of shifting the mix of heads and the hiring of employees in the US and Asia-Pacific.
- Cashflow from operating activities decreased to €4.9m, due primarily to residual non-recurring costs associated with the Reverse Takeover transaction completed in 1Q'19. Management guidance remains for operating cashflow to turn positive in 2H'20.

Artificial Solutions – 2Q'19 results

(€m, SEK:€=10.7)	2Q'19	2Q'18	FY'18
Order intake	2.1	0.7	5.2
Order backlog	4.7	2.7	3.3
Net sales	1.2	1.1	4.4
Gross profit	0.7	0.5	2.0
Gross margin	60%	46%	45%
EBITDA	-2.8	-2.3	-9.3
Adjusted EBITDA (excl. capitalisation)	-2.6	-2.3	-9.8
Operating profit/(loss)	-3.1	-2.3	-11.6
Adjusted operating profit/(loss)	-2.9	-3.0	-11.6

Source: Company data, Hardman & Co Research

July 2019 fundraising

After the end of 2Q, Artificial Solutions completed a fundraising through the issue of 2.74m new shares at €24.0, producing gross proceeds of SEK65.7m (€6.1m). These funds are not reflected in the balance sheet reported at the end of 2Q.

Transition away from consultancy revenue

The revenue mix continues to trend towards licences. Since completing the initial development of the core software platform, Teneo, in 2013, the company has focused on reducing its proportion of services revenue through engaging with SI partners to sell and implement its Teneo platform. Three primary drivers of this shift were:

- the higher margins associated with software licence revenue;
- the greater predictability of term licence and usage-based revenue streams; and,
- the scope to scale the customer base at a faster rate, with the benefit of SI partners actively selling the platform through dedicated AI practices worldwide.

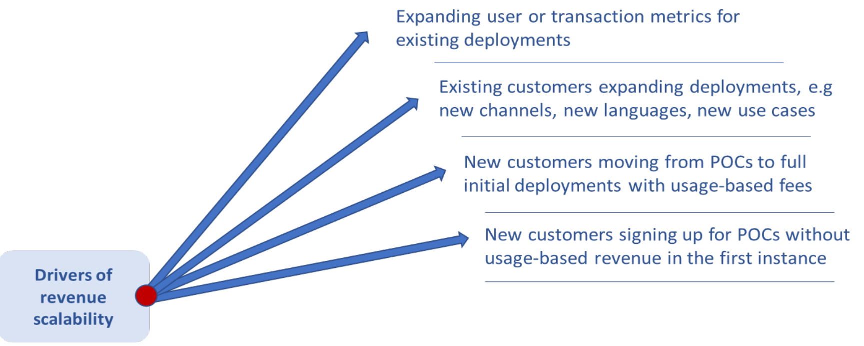
The inevitable shorter-term impact of this transition, pending an uplift in usage revenue, has been a flatter profile in net sales, as services revenue continues to play a diminishing profile in the revenue mix. Going forward, this is expected to be far more than offset by the revenue backlog converting into revenue. The company's recurring revenue model means that revenue will build progressively over time, creating high levels of visibility.

Inherent revenue scalability

Artificial Solutions sells term licences that grant an enterprise the right to use its Teneo platform for a specified period – usually two or three years. Alongside the term licences, and associated support and maintenance contracts, each customer contract incorporates a usage-based revenue element. The nature of customer agreements varies in that some will contract for usage upfront, while other customers will only commit to licence revenue at the outset and pay usage-based fees as incurred. As such, the future revenue to come from existing customers is beyond that included in order backlog.

The enterprise-grade nature of the company's conversational AI capabilities allows the company to focus its attention on the largest enterprises with the highest numbers of users. The other side of the coin is that sales cycles are typically fairly extended and usually require pilot deployments in some form. However, once these enterprises have accepted that Artificial Solutions delivers on their requirements, the opportunity to scale revenue is substantial. The diagram below sets out the ways in which these deployments have, to date, tended to evolve.

Artificial Solutions – drivers of revenue scalability



Source: Hardman & Co Research

Profit and loss

Artificial Solutions – profit and loss					
Year-end Dec (€m)	2017	2018	2019E	2020E	2021E
Income					
Net sales	4.95	4.39	6.78	9.76	16.10
Capitalised costs	0.87	1.19	1.20	1.38	1.59
Other operating income	1.23	0.52	0.41	0.33	0.26
Total income	7.06	6.09	8.39	11.47	17.96
Operating expenses					
Other external costs	-4.28	-5.02	-4.62	-3.21	-3.23
Personnel costs	-9.57	-10.33	-10.64	-10.96	-11.28
Other operating expenses	0.00	0.00	0.00	0.00	-0.01
Total operating expenses	-13.85	-15.35	-15.26	-14.17	-14.52
EBITDA (reported)	**-6.79**	**-9.26**	**-6.86**	**-2.70**	**3.44**
EBITDA (adj., excl. capitalised costs)	-7.67	-10.45	-8.07	-4.08	1.85
Depreciation & amortisation	-2.64	-2.32	-2.55	-2.81	-3.09
EBIT (reported)	-9.44	-11.58	-9.41	-5.51	0.35
EBIT (adj., excl. capitalised costs)	-10.31	-12.77	-10.62	-6.89	-1.24
Interest income	0.45	0.37	0.12	0.15	0.17
Interest expenses	-1.94	-3.02	-2.07	-2.20	-2.16
Net financial income	-1.49	-2.66	-1.95	-2.05	-1.99
PTP	-10.93	-14.24	-8.81	-4.75	1.45
PTP (adj., excl. capitalised costs)	-11.80	-15.42	-10.02	-6.14	-0.14
Taxation	0.00	0.00	0.00	0.00	0.00
Net income	-10.93	-14.24	-8.81	-4.75	1.45

Source: Company data, Hardman & Co Research

Balance sheet

Artificial Solutions – balance sheet					
@ 31 Dec (€m)	2017	2018	2019E	2020E	2021E
Assets					
Fixed intangible assets					
Capitalised exp. for licences & software	3.11	2.87	1.20	1.38	1.59
Goodwill	0.77	0.00	0.00	0.00	0.00
Total intangible assets	**3.87**	**2.87**	**1.20**	**1.38**	**1.59**
Fixed tangible assets					
Equipment, furniture & fittings	0.23	0.17	0.21	0.25	0.31
Total tangible fixed assets	**0.23**	**0.17**	**0.21**	**0.25**	**0.31**
Total fixed assets	**4.10**	**3.04**	**1.41**	**1.63**	**1.90**
Other non-current receivables	0.52	0.54	0.59	0.65	0.72
Total non-current assets	**4.62**	**3.58**	**2.00**	**2.28**	**2.61**
Current assets					
Accounts receivable – trade	0.40	0.56	0.76	1.02	1.38
Tax receivable	0.37	0.88	0.00	0.00	0.00
Other receivables	0.09	0.33	0.36	0.40	0.44
Prepaid expenses & accrued income	0.58	0.47	0.52	0.57	0.63
Total current receivables	**1.44**	**2.24**	**1.63**	**1.99**	**2.44**
Cash & bank balances	0.49	4.56	2.53	1.20	3.52
Total current assets	**1.93**	**6.80**	**4.16**	**3.19**	**5.96**
Total assets	**6.55**	**10.39**	**6.16**	**5.47**	**8.57**
Equity & Liabilities					
Equity					
Share capital	3.09	3.65	4.19	4.82	5.55
Share premium reserve	62.78	75.57	78.87	81.34	82.05
Other equity including result for year	-73.39	-87.64	-96.45	-101.20	-99.76
Total equity	**-7.53**	**-8.43**	**-13.39**	**-15.04**	**-12.16**
Long-term liabilities					
Liabilities to other lenders	2.54	5.10	4.59	4.13	3.72
Total long-term liabilities	**2.54**	**5.10**	**4.59**	**4.13**	**3.72**
Current liabilities					
Liabilities to other lenders	7.78	9.13	9.59	10.07	9.56
Accounts payable – trade	0.40	0.36	0.49	0.66	0.89
Income tax liability	0.01	0.00	0.00	0.00	0.00
Other liabilities	0.24	0.35	0.43	0.54	0.68
Accrued expenses & deferred income	3.12	3.87	4.45	5.11	5.88
Total current liabilities	**11.54**	**13.71**	**14.96**	**16.39**	**17.02**
Total equity & liabilities	**6.55**	**10.39**	**6.16**	**5.47**	**8.57**

Source: Company data, Hardman & Co Research

Cashflow

Artificial Solutions – cashflow statement					
Year-end Dec (€m)	**2017**	**2018**	**2019E**	**2020E**	**2021E**
Operating loss	-9.44	-11.58	-9.41	-5.51	0.35
Depreciation	2.64	2.32	2.55	2.81	3.09
Other items excluded from cashflow	0.32	0.03	0.00	0.00	0.00
	-6.47	-9.23	-6.86	-2.70	3.44
Interest received	0.36	0.30	0.12	0.15	0.17
Interest paid	-0.89	-1.74	-2.07	-2.20	-2.16
Taxation paid & received	0.14	0.00	0.00	0.00	0.00
Operating cashflow before working capital changes	**-6.86**	**-10.67**	**-8.81**	**-4.75**	**1.45**
Changes in working capital					
Increase/(decrease) in receivables	0.36	-1.96	-0.61	0.35	0.45
Increase/(decrease) in liabilities	0.36	0.82	1.25	1.43	0.63
Net change in working capital	**0.72**	**-1.14**	**0.64**	**1.78**	**1.08**
Cashflow from operating activities	**-6.14**	**-11.81**	**-8.17**	**-2.97**	**2.53**
Investing activities					
Purchases of tangible fixed assets	-0.06	-0.03	-0.03	-0.04	-0.06
Purchases of intangible fixed assets	-0.88	-1.24	-0.62	-0.31	-0.16
Change in fixed assets	0.00	0.00	0.00	0.00	0.00
Cashflow from investing activities	**-0.94**	**-1.27**	**-0.65**	**-0.35**	**-0.21**
Financing activities					
Issue of new shares	3.83	12.82	6.10	0.00	0.00
Costs of new share issues	-0.19	-0.35	-0.31	0.00	0.00
Issue of new non-registered shares	0.00	0.00	0.00	0.00	0.00
Change in loans	3.12	4.68	1.00	2.00	0.00
Cashflow from financing activities	**6.76**	**17.15**	**6.80**	**2.00**	**0.00**
Net change in cash & cash equivalents	**-0.32**	**4.07**	**-2.03**	**-1.33**	**2.32**
Cash & cash equivalents at start of year	0.81	0.49	4.56	2.53	1.20
Cash & cash equivalents at end of year	**0.49**	**4.56**	**2.53**	**1.20**	**3.52**

Source: Company data, Hardman & Co Research

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The full detail is on page 26 of the full directive, which can be accessed here: http://ec.europa.eu/finance/docs/level-2-measures/mifid-delegated-regulation-2016-2031.pdf

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