



## ArtSpark Holdings / 3663

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**How to read a Shared Research report:** This report begins with the trends and outlook section, which discusses the company's most recent earnings. First-time readers should start at the business section later in the report.

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## Executive summary

### Dual-company business model sets ArtSpark apart

- ArtSpark is a joint holding company formed by the merger of Celsys, Inc. and HI Corporation in April 2012. Celsys was known for CLIP STUDIO PAINT, software for producing manga, illustration, and animation, as well as an e-book distribution service for feature phones. HI was strong in 3D software for mobile phones. The two companies hold the top market shares in Japan of their respective products.
- ArtSpark has two business segments: Creator Support business (B2C/B2B business) belonging to Celsys and UI/UX business (B2B business) to HI. In FY12/18, the Creator Support business brought in 76.9% of overall sales, and UI/UX business the remaining 23.1% (operating profit, 116.7% and -16.7% respectively). ArtSpark aims to strengthen existing businesses and create new ones by combining the technologies and customer base of Celsys (applications) and HI (UI/UX) which both excel in their individual fields. In January 2019, ArtSpark acquired the shares of Socionext Embedded Software Austria GmbH (SESA: headquartered in Austria; currently Cander a GmbH) and made the company a consolidated subsidiary to strengthen development and sales capabilities in the UI/UX business.
- The company's main business strategies are global expansion and further improvements for CLIP STUDIO PAINT series, and product improvement and enhanced marketing for UI authoring software product exbeans UI Conductor (a foundation for HMI [Human Machine Interface]), as well as for Cander a's HMI (scalable and not reliant on hardware) and GUI design software CGI Studio. (See Business description section for details.)

### Performance

- For FY12/18, the company reported sales of JPY3.8bn (+4.2% YoY), operating profit of JPY375mn (-11.5% YoY), recurring profit of JPY358mn (+12.9% YoY), and net income attributable to parent company shareholders of JPY334mn (-10.8% YoY). Sales reached 104.7% of FY12/18 full-year company forecasts, operating profit reached 102.1%, recurring profit reached 104.3%, and net income attributable to parent company shareholders reached 133.1%. Net income varied from forecast as the company booked JPY57mn in income tax adjustments. It considered the recoverability of deferred tax assets in light of future earnings trends and booked additional deferred tax assets relating to the recoverable portion.
- For FY12/19, the company is forecasting sales of JPY5.2bn (+36.5% YoY), operating profit of JPY256mn (-31.7% YoY), recurring profit of JPY204mn (-43.0% YoY), and net income attributable to parent company shareholders of JPY70mn (-79.1% YoY). The YoY decline in operating profit is due to the booking of roughly JPY270mn in goodwill amortization relating to the Cander a acquisition.
- The company announced a new medium-term plan (FY12/19–FY12/23) along with its FY12/18 full-year results. FY12/23 targets include sales of JPY8.5bn (2.2x FY12/18 levels) and operating profit of JPY2.2bn (5.9x). Assumptions are stable growth for the Creator Support business and accelerated growth for the UI/UX business due to the Cander a acquisition. It plans to continue providing an environment that offers total support of all activities—from digital content creation through use and application.

### Strengths and weaknesses

Shared Research believes ArtSpark's strengths lie in its technological expertise cultivated by creating products for mobile phones, Celsys' large global share in application software for end users, and HI's track record in developing embedded software for manufacturers. Weaknesses: high marketing cost of Creator Support business, major performance fluctuations in the UI/UX businesses, and time-consuming and costly to add or revise functions (see Strengths and weaknesses section).

## Key financial data

Income statement (JPY'000)	FY03/11 Simple sum	FY03/12 Simple sum	FY12/12 Cons. (9-mo.)	FY12/13 Cons. Act.	FY12/14 Cons. Act.	FY12/15 Cons. Act.	FY12/16 Cons. Act.	FY12/17 Cons. Act.	FY12/18 Cons. Act.	FY12/19 Est.
<b>Sales</b>	<b>4,931,552</b>	<b>4,565,225</b>	<b>2,633,289</b>	<b>3,685,419</b>	<b>3,826,206</b>	<b>4,156,911</b>	<b>3,835,853</b>	<b>3,636,018</b>	<b>3,789,652</b>	<b>5,174,000</b>
YoY	-0.5%	-7.4%	-	-	3.8%	8.6%	-7.7%	-5.2%	4.2%	36.5%
<b>Gross profit</b>	<b>2,148,534</b>	<b>1,694,117</b>	<b>411,323</b>	<b>1,142,503</b>	<b>1,333,494</b>	<b>1,278,954</b>	<b>1,564,523</b>	<b>1,602,062</b>	<b>1,787,129</b>	
YoY	0.6%	-21.2%	-	-	16.7%	-4.1%	22.3%	2.4%	11.6%	
GPM	43.6%	37.1%	15.6%	31.0%	34.9%	30.8%	40.8%	44.1%	47.2%	
<b>Operating profit</b>	<b>623,219</b>	<b>226,566</b>	<b>-667,312</b>	<b>-69,093</b>	<b>99,713</b>	<b>88,488</b>	<b>500,504</b>	<b>423,803</b>	<b>374,886</b>	<b>256,000</b>
YoY	14.8%	-63.6%	-	-	-	-	465.6%	-15.3%	-11.5%	-31.7%
OPM	12.6%	5.0%	-	-	2.6%	2.1%	13.0%	11.7%	9.9%	4.9%
<b>Recurring profit</b>	<b>607,749</b>	<b>215,666</b>	<b>-690,045</b>	<b>-68,222</b>	<b>93,621</b>	<b>62,226</b>	<b>477,045</b>	<b>410,425</b>	<b>357,679</b>	<b>204,000</b>
YoY	15.3%	-64.5%	-	-	-	-	666.6%	-14.0%	-12.9%	-43.0%
RPM	12.3%	4.7%	-	-	2.4%	1.5%	12.4%	11.3%	9.4%	3.9%
<b>Net income</b>	<b>371,438</b>	<b>-255,795</b>	<b>-1,350,939</b>	<b>42,811</b>	<b>59,958</b>	<b>34,791</b>	<b>337,150</b>	<b>374,791</b>	<b>334,144</b>	<b>70,000</b>
YoY	69.7%	-	-	-	40.1%	-42.0%	869.1%	11.2%	-10.8%	-79.1%
Net margin	7.5%	-	-	1.2%	1.6%	0.8%	8.8%	10.3%	8.8%	1.4%
<b>Per share data</b>										
Shares outstanding (year-end; '000)	-	-	6,635,570	6,636,770	6,647,375	6,709,945	6,779,120	6,779,120	6,799,220	
EPS	-	-	-203.59	6.45	9.02	5.21	49.80	55.25	49.18	10.39
Dividend per share	-	-	-	-	-	2.00	3.00	4.00	5.00	6.00
Book value per share	-	-	350.03	340.55	348.84	356.88	410.47	464.19	509.60	
<b>Balance sheet (JPY'000)</b>										
Cash and cash equivalents	1,988,715	2,191,488	1,294,740	1,323,533	1,086,746	1,323,640	2,152,234	2,491,012	2,700,195	
<b>Total current assets</b>	<b>3,315,520</b>	<b>3,823,757</b>	<b>2,158,580</b>	<b>2,130,897</b>	<b>2,214,755</b>	<b>2,085,545</b>	<b>2,542,140</b>	<b>2,996,405</b>	<b>3,353,709</b>	
Tangible fixed assets	98,621	83,204	70,065	55,733	71,552	52,856	56,035	76,767	79,334	
Investments and other assets	739,853	667,529	806,700	453,119	351,810	252,399	188,993	208,959	214,436	
Intangible fixed assets	1,078,856	1,406,486	979,243	1,003,040	1,326,376	1,209,075	911,906	741,982	709,851	
<b>Total assets</b>	<b>5,232,853</b>	<b>5,980,979</b>	<b>4,024,939</b>	<b>3,650,704</b>	<b>3,969,974</b>	<b>3,602,921</b>	<b>3,699,684</b>	<b>4,024,115</b>	<b>4,357,332</b>	
Accounts payable	173,764	276,578	170,305	168,904	211,822	149,730	68,135	80,707	100,590	
Short-term debt	133,332	503,136	438,576	596,879	558,012	473,141	357,329	274,964	68,080	
<b>Total current liabilities</b>	<b>749,708</b>	<b>1,117,737</b>	<b>1,022,418</b>	<b>1,021,006</b>	<b>1,241,218</b>	<b>975,882</b>	<b>756,137</b>	<b>676,402</b>	<b>666,971</b>	
Long-term debt	66,668	324,940	474,391	267,512	276,203	87,011	36,372	18,080	-	
<b>Total fixed liabilities</b>	<b>120,709</b>	<b>427,264</b>	<b>653,465</b>	<b>343,485</b>	<b>365,953</b>	<b>187,233</b>	<b>145,328</b>	<b>180,242</b>	<b>213,655</b>	
<b>Total liabilities</b>	<b>870,418</b>	<b>1,545,002</b>	<b>1,675,884</b>	<b>1,364,491</b>	<b>1,607,172</b>	<b>1,163,115</b>	<b>901,466</b>	<b>856,644</b>	<b>880,626</b>	
<b>Net assets</b>	<b>4,362,434</b>	<b>4,435,976</b>	<b>2,349,056</b>	<b>2,286,213</b>	<b>2,362,802</b>	<b>2,439,806</b>	<b>2,798,218</b>	<b>3,167,471</b>	<b>3,476,797</b>	
Total interest-bearing debt	200,000	828,076	912,967	864,391	834,215	560,152	393,701	293,044	68,080	
<b>Cash flow statement (JPYmn)</b>										
Cash flows from operating activities	1,154,289	273,344	137,818	358,484	672,554	837,494	1,435,075	1,021,462	1,007,074	
Cash flows from investing activities	-916,091	-1,052,154	-622,300	-163,135	-508,476	-539,941	-551,610	-577,430	-550,631	
Cash flows from financing activities	401,469	869,543	-355,593	-48,473	-238,659	-64,272	-58,486	-108,862	-250,865	
<b>Financial ratios</b>										
ROA (RP-based)	12.6%	3.8%	-13.8%	-1.8%	2.5%	1.6%	13.1%	10.6%	8.5%	
ROE	9.1%	-5.8%	-41.0%	1.9%	2.6%	1.5%	13.0%	12.6%	10.1%	
Equity ratio	83.7%	73.1%	54.9%	61.7%	58.4%	66.4%	75.2%	78.3%	79.4%	

Source: Shared Research based on company data  
 Figures may differ from company materials due to differences in rounding methods.  
 The company was formed from a merger of Celsys, Inc. and HI Corp. in April 2012, and thus FY12/12 is a nine-month period.  
 Figures for FY03/12 and earlier are a simple aggregate of the results of Celsys, Inc. and HI Corp.

## Recent updates

### Highlights

On **March 19, 2019**, Shared Research updated the report following interviews with ArtSpark Holdings Inc.

On **February 15, 2019**, the company announced earnings results for full-year FY12/18 and a new medium-term plan through FY12/23; see the results section for details.

On **the same day**, the company announced a change to accountants.

- ▷ CPA appointed: Crowe Toyo & Co.
- ▷ Retiring CPA: Ernst & Young ShinNihon LLC

On **December 17, 2018**, the company announced the acquisition of shares in Socionext Embedded Software Austria GmbH (making it a subsidiary) and a loan agreement.

At a meeting of the Board of Directors on December 17, 2018, the company announced the acquisition of shares in Socionext Embedded Software Austria GmbH (SESA: headquartered in Austria) and associated borrowing of funds. SESA will become a subsidiary of ArtSpark.

#### Background to stock acquisition

In its UI/UX business, ArtSpark has development solutions including a UI authoring tool (exbeans UI Conductor) and products for drawing graphics which are used in UI solutions to provide total support in fields from technology through design. Meanwhile, SESA supplies scalable human machine interface (HMI) not reliant on hardware as well as CGI Studio, GUI design software. It supplies major automobile companies primarily in Europe on an OEM basis and is highly compatible with ArtSpark.

Japanese car companies are customers for the ArtSpark group's existing exbeans UI Conductor, and major European car manufacturers are customers for SESA's CGI Studio, so each company can tap into the other's customer base. SESA has knowledge about ISO 26262\*<sup>1</sup> as well as Automotive SPICE\*<sup>2</sup>. It will be able to share this expertise at a time when safety is under increasing scrutiny due to autonomous driving and other factors. ArtSpark thinks that there are many potential synergies, as sharing development expertise will assist in developing more efficiently, and expects enhanced market competitiveness. The company plans to appoint SESA director Reinhard Füricht to the position of managing director, and also intends to change the company name. The stock transfer agreement was reached on December 17, 2018, and the transfer is planned to take place on January 31, 2019.

\*1: ISO 26262 refers to a global functional safety standard for automotive electric and electronic systems.

\*2 Automotive SPICE refers to a process model issued by the VDA QMC (German Automotive Industry Association Quality Management Center) that establishes the process framework for automotive software development. It aims to evaluate automotive software development processes quantitatively.

#### Overview of subsidiary to be transferred

- ▷ Name: Socionext Embedded Software Austria GmbH
- ▷ Location: Austria
- ▷ Business: IT and software services
- ▷ Capital: EUR35,000 (JPY4mn)

#### Acquisition cost and share ownership before and after acquisition

- ▷ Number of shares to be acquired: 1 (Number of voting rights: 1; 100% of voting rights)
- ▷ Acquisition cost: JPY2.2bn (estimate), share acquisition cost: JPY2.0bn, advisory expenses: JPY150mn (estimate)

#### Loan agreement

The share acquisition is planned to be a cash transaction, with the company borrowing the necessary funds as shown following.

- ▷ Lender: MUFG Bank, Ltd.
- ▷ Loan amount: JPY1.5bn
- ▷ Planned borrowing date: January 2019
- ▷ Loan term: Six months
- ▷ Loan interest rate: TIBOR + spread
- ▷ Loan type: Unsecured

Note: ArtSpark is reviewing the impact on full-year FY12/18 earnings and will promptly disclose any material impact on earnings if they become apparent. The company said that it would factor in any impact on earnings for FY12/19 and beyond when it announces earnings forecasts.

**For previous releases and developments, please refer to the News and topics section.**

## Trends and outlook

### Quarterly trends and results

Quarterly performance (JPYmn)	FY12/16				FY12/17				FY12/18				FY12/18	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	% of FY	FY Est.
Sales	1,083	1,174	790	789	841	882	1,035	878	1,012	911	905	962		
YoY	7.4%	2.2%	-18.9%	-23.1%	-22.4%	-24.9%	31.1%	11.3%	20.4%	3.3%	-12.6%	9.5%		
Gross profit	420	550	291	303	420	400	540	242	514	425	419	428		
YoY	12.3%	81.6%	8.9%	-9.4%	-0.1%	-27.3%	85.5%	-20.1%	22.6%	6.3%	-22.4%	76.7%		
GPM	38.8%	46.9%	36.9%	38.4%	49.9%	45.4%	52.2%	27.6%	50.8%	46.7%	46.3%	44.5%		
SG&A expenses	247	266	261	290	279	287	278	334	301	337	293	481		
YoY	-24.4%	-18.7%	-10.3%	18.1%	13.2%	7.9%	6.6%	15.3%	7.7%	17.2%	5.3%	43.9%		
SG&A ratio	22.8%	22.7%	33.1%	36.7%	33.2%	32.6%	26.9%	38.0%	29.7%	37.0%	32.4%	50.0%		
Operating profit	173	284	30	13	140	113	262	-92	214	89	126	-53		
YoY	262.2%	-	-	-85.1%	-18.9%	-60.1%	777.9%	-	52.0%	-21.6%	-52.0%	-		
OPM	16.0%	24.2%	3.8%	1.7%	16.7%	12.9%	25.3%	-	21.1%	9.8%	13.9%	-		
Recurring profit	164	267	26	20	133	111	263	-96	201	89	127	-60		
YoY	359.1%	-	-	-76.9%	-18.7%	-58.6%	902.8%	-	51.1%	-19.6%	-51.6%	-		
RPM	15.1%	22.8%	3.3%	2.5%	15.8%	12.6%	25.4%	-	19.9%	9.8%	14.1%	-		
Net income	132	237	13	-45	127	94	215	-62	179	71	94	-9		
YoY	669.2%	-	-	-	-3.7%	-60.5%	1529.6%	-	40.3%	-24.2%	-56.4%	-		
Net margin	12.2%	20.2%	1.7%	-	15.2%	10.6%	20.8%	-	17.7%	7.8%	10.4%	-		
<b>Cumulative</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>% of FY</b>	<b>FY Est.</b>
Sales	1,083	2,257	3,047	3,836	841	1,722	2,758	3,636	1,012	1,923	2,828	3,790	104.7%	3,621
YoY	7.4%	4.6%	-2.7%	-7.7%	-22.4%	-23.7%	-9.5%	-5.2%	20.4%	11.7%	2.5%	4.2%		-0.4%
Gross profit	420	970	1,261	1,565	420	820	1,360	1,602	514	940	1,359	1,787		
YoY	12.3%	43.3%	33.6%	22.3%	-0.1%	-15.5%	7.8%	2.4%	22.6%	14.6%	-0.1%	11.5%		
GPM	38.8%	43.0%	41.4%	40.8%	49.9%	47.6%	49.3%	44.1%	50.8%	48.9%	48.1%	47.1%		
SG&A expenses	247	513	774	1,064	279	567	845	1,179	301	637	931	1,412		
YoY	-24.4%	-21.5%	-18.1%	-10.6%	13.2%	10.5%	9.1%	10.8%	7.7%	12.5%	10.2%	19.7%		
SG&A ratio	22.8%	22.7%	25.4%	27.7%	33.2%	32.9%	30.6%	32.4%	29.7%	33.2%	32.9%	37.2%		
Operating profit	173	457	487	501	140	254	516	424	214	302	428	375	102.1%	367
YoY	-	-	-	-465.6%	-18.9%	-44.5%	5.9%	-15.3%	52.0%	19.1%	-17.0%	-11.5%		-13.4%
OPM	16.0%	20.3%	16.0%	13.0%	16.7%	14.7%	18.7%	11.7%	21.1%	15.7%	15.1%	9.9%		10.1%
Recurring profit	164	431	457	477	133	244	507	410	201	290	417	358	104.3%	343
YoY	-	-	-	-666.6%	-18.7%	-43.5%	10.8%	-14.0%	51.1%	19.0%	-17.6%	-12.9%		-16.4%
RPM	15.1%	19.1%	15.0%	12.4%	15.8%	14.1%	18.4%	11.3%	19.9%	15.1%	14.8%	9.4%		9.5%
Net income	132	369	382	337	127	221	436	375	179	250	344	334	133.1%	251
YoY	-	-	-	-869.1%	-3.7%	-40.1%	14.2%	11.2%	40.3%	13.0%	-21.3%	-10.8%		-33.0%

Source: Shared Research based on company data

Figures may differ from company materials due to differences in rounding methods.

## Performance by quarter

Quarterly (JPYmn)	FY12/16				FY12/17				FY12/18			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Sales</b>												
Creator Support	548	545	527	542	616	615	589	593	679	748	750	781
UI/UX	540	634	270	261	248	288	456	298	344	174	170	198
Subtotal	1,088	1,179	796	803	864	903	1,046	891	1,023	972	869	979
Adjustments	-5	-5	-7	-14	-23	-22	-11	-12	-11	-11	-15	-16
<b>Total</b>	<b>1,083</b>	<b>1,174</b>	<b>790</b>	<b>789</b>	<b>841</b>	<b>882</b>	<b>1,035</b>	<b>878</b>	<b>1,012</b>	<b>911</b>	<b>905</b>	<b>962</b>
<b>Operating profit</b>												
Creator Support	80	69	24	23	135	104	72	-11	139	157	142	34
UI/UX	84	217	-5	-15	-10	2	167	-103	52	-51	-56	-13
Subtotal	163	324	-19	8	125	106	239	-115	191	106	87	21
Adjustments	10	-40	49	5	15	7	23	22	23	-17	39	-75
<b>Total</b>	<b>173</b>	<b>284</b>	<b>30</b>	<b>13</b>	<b>140</b>	<b>113</b>	<b>262</b>	<b>-92</b>	<b>214</b>	<b>89</b>	<b>126</b>	<b>-53</b>
<b>OPM</b>												
Creator Support	14.5%	12.6%	4.6%	4.3%	22.0%	16.9%	12.2%	-1.9%	20.4%	21.0%	19.0%	4.4%
UI/UX	15.5%	34.3%	-1.9%	-5.9%	-4.1%	0.7%	36.6%	-34.7%	15.2%	-29.2%	-32.9%	-6.7%
<b>Total</b>	<b>16.0%</b>	<b>24.2%</b>	<b>3.8%</b>	<b>1.7%</b>	<b>16.7%</b>	<b>12.9%</b>	<b>25.3%</b>	<b>-10.5%</b>	<b>21.1%</b>	<b>9.8%</b>	<b>13.9%</b>	<b>-5.6%</b>
<b>Cumulative</b> (JPYmn)												
		FY12/16			FY12/17				FY12/18			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Sales</b>												
Creator Support	548	1,093	1,619	2,161	616	1,231	1,820	2,413	679	1,426	2,176	2,957
UI/UX	540	1,175	1,444	1,705	248	536	992	1,291	344	519	688	886
Subtotal	1,088	2,267	3,064	3,867	864	1,767	2,813	3,704	1,023	1,995	2,864	3,843
Adjustments	-5	-10	-17	-31	-23	-45	-55	-68	-11	-22	-37	-53
<b>Total</b>	<b>1,083</b>	<b>2,257</b>	<b>3,047</b>	<b>3,836</b>	<b>841</b>	<b>1,722</b>	<b>2,758</b>	<b>3,636</b>	<b>1,012</b>	<b>1,923</b>	<b>2,828</b>	<b>3,790</b>
<b>Operating profit</b>												
Creator Support	80	148	172	196	135	239	311	300	139	295	438	472
UI/UX	84	301	296	281	-10	-8	159	56	52	2	-54	-67
Subtotal	163	488	468	477	125	231	470	356	191	297	384	405
Adjustments	10	-30	19	24	15	23	46	68	23	5	45	-30
<b>Total</b>	<b>173</b>	<b>457</b>	<b>487</b>	<b>501</b>	<b>140</b>	<b>254</b>	<b>516</b>	<b>424</b>	<b>214</b>	<b>302</b>	<b>428</b>	<b>375</b>
<b>OPM</b>												
Creator Support	14.5%	13.6%	10.7%	9.1%	22.0%	19.4%	17.1%	12.4%	20.4%	20.7%	20.1%	16.0%
UI/UX	15.5%	25.6%	20.5%	16.5%	-4.1%	-1.5%	16.0%	4.3%	15.2%	0.3%	-7.9%	-7.6%
<b>Total</b>	<b>16.0%</b>	<b>20.3%</b>	<b>16.0%</b>	<b>13.0%</b>	<b>16.7%</b>	<b>14.7%</b>	<b>18.7%</b>	<b>11.7%</b>	<b>21.1%</b>	<b>15.7%</b>	<b>15.1%</b>	<b>9.9%</b>

Source: Shared Research based on company data

Figures may differ from company materials due to differences in rounding methods.

Figures are before eliminations.

From Q1 FY12/16, the company revised its business performance management categories, integrating the Applications business with the UI/UX business (figures for the businesses are shown under the UI/UX business). Figures for periods prior to Q1 FY12/16 are also retroactively adjusted in the table above.

From Q1 FY12/17, the company revised its business performance management categories, integrating the Content Solutions business with the Creator Support business (figures for the businesses are shown under the Creator Support business). Figures for periods prior to Q1 FY12/17 are also retroactively adjusted in the table above.



## Full-year FY12/18 consolidated results

### Overview

- ▷ For FY12/18, the company reported sales of JPY3.8bn (+4.2% YoY), operating profit of JPY375mn (-11.5% YoY), recurring profit of JPY358mn (+12.9% YoY), and net income attributable to parent company shareholders of JPY334mn (-10.8% YoY)
- ▷ Sales reached 104.7% of FY12/18 full-year company forecasts, operating profit reached 102.1%, recurring profit reached 104.3%, and net income attributable to parent company shareholders reached 133.1%. Net income varied from forecast as the company booked JPY57mn in income tax adjustments. It considered the recoverability of deferred tax assets in light of future earnings trends and booked additional deferred tax assets relating to the recoverable portion
- ▷ Creator Support business: Sales grew 22.5% YoY and operating profit 57.3% due to strengthened collaborations with CLIP STUDIO SOLUTION
- ▷ UI/UX business: Sales down 31.4% and operating loss of JPY67mn
- ▷ Dividend: FY12/18 dividend per share of JPY5 in line with initial forecast. FY12/19 DPS forecast of JPY6

### Results by segment

#### Creator Support

- ▷ Sales: JPY3.0bn (+22.5% YoY)
- ▷ Operating profit: JPY472mn (+57.3% YoY)

Since its launch in 2012, CLIP STUDIO PAINT (software for producing manga, illustration, and animation) has sold more than 4.53mn units worldwide. The company changed its e-book solutions brand name from BS Reader to CLIP STUDIO READER in an effort to strengthen the link with CLIP STUDIO SOLUTION.

- ▷ CLIP STUDIO PAINT EX: First animation production tool certified by METI under its program to support the introduction of productivity-enhancing IT tools in services (IT introduction subsidy)
- ▷ CLIP STUDIO PAINT: Latest version has functions that enable erasing and separation of tone (dots) using AI technology. This facilitates efficient coloring of electronic manga
- ▷ Company concluded an agreement with Shueisha Inc. to support digital submissions by digital manga artists. Under the agreement, CLIP STUDIO PAINT provides standard Shueisha manuscript settings and enables online application for manga prizes and online submissions to the editorial department. This enhances the benefits of creating in a digital environment
- ▷ CLIP STUDIO PAINT PRO: This is supplied worldwide, bundled with Wacom Intuos, a pen tablet sold by Wacom Co., Ltd. The company also began offering the CLIP STUDIO PAINT EX Volume License Subscription version, ideal for large-scale introduction to businesses and educational institutions, in English, French, Spanish, German, Korean, and Chinese (traditional Chinese)
- ▷ ibisPaint (a popular painting app from ibis mobile inc.): Originally offered only in Japanese. The company increased convenience of the function by enabling it to link up with CLIP STUDIO PAINT in all available languages
- ▷ CLIP STUDIO PAINT for iPad for creating manga, illustrations, and anime on the iPad: A new Pro version and annual payment plan launched simultaneously worldwide
- ▷ European Comic Schools Contest: Held a contest for manga and illustration targeting students at European art schools that teach manga, digital art, and illustration
- ▷ The company sponsored a modern Ashura exhibit held by Nara Newspaper Company Inc. and provided CLIP STUDIO PAINT for an illustration contest based on the theme of a new, modern image of Ashura

- ▷ New CLIP STUDIO TABMATE: An input device to make working with pen tablets more comfortable. Nationwide sales launched at distributors and online stores

CLIP STUDIO, a website providing total support for creators, had 1.46mn registered users as of the end of December 2018 (vs. 1.34mn at the end of September 2018).

## UI/UX

- ▷ Sales: JPY886mn (-31.4% YoY)
- ▷ Operating loss: JPY67mn (JPY56mn operating profit in FY12/17)

ArtSpark is focusing on development and sales of self-developed IP products such as UI authoring software products exbeans UI Conductor, a foundation of HMI, targeting the automotive (cars and motorcycles) market and commercial- and consumer-use printers.

- ▷ exbeans UI Conductor: New version incorporates “view model” and “view state editor” functions. Through the release of a new version, v1.9.0, with enhanced 3D capabilities, there is further separation of embedded apps and UI. Parallel development improves productivity. UI expression and 3D performance enhanced
- ▷ exbeans UI Conductor: ArtSpark is developing joint solutions with hardware and software vendors to improve market value through improved convenience
  - Developing joint solutions with CANTOOL, an ECU development support tool, with iTEC Hankyu Hanshin Co., Ltd. The company exhibited a demonstration model for an human machine interface (HMI) development solution in collaboration with iTEC Hankyu Hanshin at the Automotive Engineering Exposition 2018, an exhibition specializing in automotive technologies for engineers and researchers, in Yokohama and Nagoya
  - For users of Atmark Techno, Inc.’s “Armadillo-640” power-saving embedded platform, the company is offering an evaluation version for three months free of charge of exbeans UI Conductor SDK, an HMI/GUI integrated development tool for embedded devices used in developing graphic user interfaces (GUIs)
- ▷ In the printer field, exbeans UI Conductor has been installed in over 4.10mn total printers produced by Seiko Epson Corp. (TSE1: 6724)
- ▷ The company’s products have been adopted as the default software for in-vehicle equipment by major OEMs since August 2015 and the company has shipped over 2.97mn units (mainly to the North American market)

**For details on previous quarterly and annual results, see the Historical financial statements section.**

## Full-year company forecasts

(JPYmn)	FY12/17			FY12/18			FY12/19		
	1H Act.	2H Act.	FY Act.	1H Act.	2H Act.	FY Act.	1H Est.	2H Est.	FY Est.
<b>Sales</b>	<b>1,722</b>	<b>1,914</b>	<b>3,636</b>	<b>1,923</b>	<b>1,867</b>	<b>3,790</b>	<b>2,365</b>	<b>2,809</b>	<b>5,174</b>
YoY	-23.7%	21.2%	-5.2%	11.7%	-2.5%	4.2%	23.0%	50.5%	36.5%
Cost of sales	902	1,131	2,034	983	1,020	2,003			
<b>Gross profit</b>	<b>820</b>	<b>783</b>	<b>1,603</b>	<b>940</b>	<b>847</b>	<b>1,787</b>			
GPM	47.6%	40.9%	44.1%	48.9%	45.4%	47.1%			
SG&A expenses	567	613	1,179	637	774	1,412			
SG&A ratio	32.9%	32.0%	32.4%	33.2%	41.5%	37.2%			
<b>Operating profit</b>	<b>254</b>	<b>170</b>	<b>424</b>	<b>302</b>	<b>72</b>	<b>375</b>	<b>117</b>	<b>139</b>	<b>256</b>
YoY	-44.5%	294.5%	-15.3%	19.1%	-57.4%	-11.5%	-61.3%	91.8%	-31.7%
OPM	14.7%	8.9%	11.7%	15.7%	3.9%	9.9%	4.9%	4.9%	4.9%
<b>Recurring profit</b>	<b>244</b>	<b>167</b>	<b>410</b>	<b>290</b>	<b>68</b>	<b>358</b>	<b>83</b>	<b>121</b>	<b>204</b>
YoY	-43.5%	261.9%	-14.0%	19.0%	-59.4%	-12.9%	-71.4%	78.6%	-43.0%
RPM	14.1%	8.7%	11.3%	15.1%	3.6%	9.4%	3.5%	4.3%	3.9%
<b>Net income</b>	<b>221</b>	<b>154</b>	<b>375</b>	<b>250</b>	<b>85</b>	<b>334</b>	<b>36</b>	<b>34</b>	<b>70</b>
YoY	-40.1%	-585.3%	11.2%	13.0%	-45.1%	-10.8%	-85.6%	-59.8%	-79.1%
Net margin	12.8%	8.0%	10.3%	13.0%	4.5%	8.8%	1.5%	1.2%	1.4%

Source: Shared Research based on company data  
 Figures may differ from company materials due to differences in rounding methods.  
 Forecast based on most recently released figures.

### Earnings forecasts for FY12/19

- ▷ Sales: JPY5.2bn (+36.5% YoY)
- ▷ Operating profit: JPY256mn (-31.7% YoY)
- ▷ Recurring profit: JPY204mn (-43.0% YoY)
- ▷ Net income\*: JPY70mn (-79.1% YoY)

\* Net income refers to net income attributable to parent company shareholders.

- ▷ The YoY decline in operating profit is due to the booking of roughly JPY270mn in goodwill amortization relating to the Candera acquisition.

### Key initiatives for FY12/19

- ▷ Management focus on software IP
- ▷ Focus on improved management efficiency with strategic allocation of development resources, launch of new group synergy generation projects
- ▷ Accelerating global rollout of CLIP STUDIO by strengthening development and service offerings
- ▷ Develop services related to content creation, distribution, and reproduction leveraging CLIP STUDIO platform
- ▷ Make strong push on business focusing on expertise in embedded devices, especially automobiles
- ▷ Focus on developments that strengthen capabilities of company's proprietary IP products (UI Conductor, CGI Studio)

### Consolidation of Socionext Embedded Software Austria GmbH (currently Candera GmbH) (refer to the Outlook section)

- ▷ In December 2018, the company purchased Candera GmbH (former Socionext Embedded Software Austria GmbH) with the aim of strengthening its development and sales capabilities in the UI/UX business
- ▷ Candera GmbH supplies scalable and hardware independent HMI and GUI design software, including CGI Studio, to offer ideal HMI solutions in the automotive market and home appliances sector. It operates as an OEM supplier for major automobile manufactures, primarily in Europe

## **New medium-term plan (refer to Outlook)**

- ▷ The company announced a new medium-term plan through FY12/23. This comes against a backdrop of expected major business expansion for the group now that Candra GmbH is a subsidiary
- ▷ The company aims to make major strides in strengthening the competitiveness of its software IP to meet the group's new medium-term targets

## Outlook

### New medium-term business plan (FY12/19–FY12/23)

Along with its FY12/18 full-year results, the company announced a new medium-term plan (FY12/19–FY12/23). FY12/23 targets include sales of JPY8.5bn (2.2x FY12/18 levels) and operating profit of JPY2.2bn (5.9x). Assumptions are stable growth for the Creator Support business and accelerated growth for the UI/UX business due to the Candera acquisition (discussed below). It plans to continue providing an environment that offers total support of all activities—from digital content creation through use and application.

#### Background to announcement of new medium-term business plan

Along with its announcement of FY12/17 results on February 9, 2018, ArtSpark noted the need to update the medium-term business plan it released back in July 2015, due to changes in the market environment. It added changes in market environment had increased uncertainty about the future and made it necessary to step up R&D efforts in order to reinforce the competitiveness of its software IP. Regarding performance targets, the company said at the time that it was limiting revisions to its sales and earnings targets for FY12/18, but that it planned to put together a new business plan and, once that was ready, it would be released at the appropriate time.

#### Medium-term plan

(JPYmn)	FY12/19	FY12/20	FY12/21	FY12/22	FY12/23
Sales	5,170	6,050	6,660	7,440	8,520
Creator Support business	32.5	34.4	37.2	41.1	47.0
UI/UX business	19.2	26.1	29.4	33.3	38.2
Operating profit (OPM)	260 (4.9%)	380 (6.2%)	1,000 (15.0%)	1,580 (21.2%)	2,190 (25.8%)
Operating profit before goodwill amortization* (OPM)	530 (10.2%)	800 (13.3%)	1,420 (21.3%)	2,000 (26.9%)	2,620 (30.7%)

Source: Shared Research based on company data

Note: Figures shown are before adjustment for goodwill amortization for Candera GmbH. Goodwill is expected to be amortized using the straight-line method over a period of five years.

#### Initiatives aimed at future growth

- ▷ Creator Support business: Further accelerate global development through strengthening development and service offerings while maintaining stable growth.
  - CLIP STUDIO PAINT growth (see the Business section for details): Work toward further global rollout. Strengthen development, service offerings, and promotion, and look for annual growth of 10–20%. Look for margin improvement driven by recent strength in CLIP STUDIO PAINT for iPad and continued growth in the subscription version.
- ▷ UI/UX business: Following the Candera acquisition, grow business by exploiting synergies through expanded customer base and sharing expertise. The company aims to double sales partly due to impact of acquisition.
  - Synergies from Candera acquisition
    - ✧ Aims to expand business portfolio through acquisition of Candera, a leading company in the embedded HMI and GUI design software field.
    - ✧ ArtSpark mainly supplies products to Japanese and American car companies, and Candera to European manufacturers, so both companies can tap into each other's customer base.
    - ✧ Aims to improve added value and market competitiveness by strengthening development structure through collaboration.
    - ✧ Aims to improve margins by reducing marketing and other costs
  - Generating earnings from existing pipeline

- ◇ ArtSpark has already signed contracts with major Japanese car manufacturers and expects related earnings contributions to emerge from FY12/21.
- ◇ HMI is bound to become an important concept as safety is being increasingly scrutinized due to autonomous driving and other factors. The company expects earnings growth to be driven by further installations of UI Conductor, an HMI development tool enhanced with 3D functions to be more competitive in the market.
- ▷ Group synergy project: Create new IP by synergies among three businesses: Candera, HI, and Celsys. Aims to generate earnings from new project from FY12/22.
  - Phase 1: Deepen mutual understanding between Candera, HI, and Celsys (in terms of corporate cultures, including skills, technologies, challenges, and procedures).
  - Phase 2: Explore and determine specific themes (narrow down to a few themes based on internal discussions in the group).
  - Phase 3: Conduct small-scale development projects in line with themes (select themes from challenges faced by each company).
  - Phase 4: Conduct joint development on the assumption of scrap and build with an eye toward Phase 5 (link to formulation of themes for full-scale joint development).
  - Phase 5: Conduct full-scale joint development (target creation of new IPs without being constrained by existing businesses).

## Acquisition of Candera

In January 2019, ArtSpark acquired the shares of Socionext Embedded Software Austria GmbH (currently Candera GmbH; company name changed on February 1, 2019) for JPY2.0bn\* (excluding roughly JPY150mn in advisory fees), and turned the company into a subsidiary.

\* Conditional acquisition price: In the next three fiscal years, if Candera's pre-tax profit exceeds predetermined targets (net income target for first fiscal year), ArtSpark will pay an additional premium for the acquisition.

### Profile of Candera

- ▷ Software company established in Austria in 2000; leading company in the embedded HMI and GUI design software field.
- ▷ Its key product is CGI Studio, a UI design software that reduces development time and costs for development processes for embedded and in-vehicle devices.
- ▷ The company mainly supplies CGI Studio to German and other European major car manufacturers on an OEM basis.

### Purpose of acquisition

- ▷ Expand business portfolio.
- ▷ Grow customer base and market share.
- ▷ Improve added value and market competitiveness by strengthening product development through collaboration.
- ▷ Increase margins through cost reductions.

### Background

- ▷ In its UI/UX business, ArtSpark has development solutions including a UI authoring tool (exbeans UI Conductor) and products for drawing graphics which are used in UI (user interface) solutions to provide total support in fields from technology through

design. Meanwhile, Candera supplies scalable human machine interface (HMI) not reliant on hardware as well as CGI Studio, GUI (graphical user interface) design software. It supplies major automobile companies primarily in Europe on an OEM basis and is highly compatible with ArtSpark.

- ▷ Japanese car companies are customers for the ArtSpark group's existing exbeans UI Conductor, and major European car manufacturers are customers for SESA's CGI Studio, so each company can tap into the other's customer base. SESA has knowledge about ISO 26262\*<sup>1</sup> as well as Automotive SPICE\*<sup>2</sup>. It will be able to share this expertise at a time when safety is under increasing scrutiny due to autonomous driving and other factors. ArtSpark thinks that there are many potential synergies, as sharing development expertise will assist in developing more efficiently, and expects enhanced market competitiveness.
- ▷ The company plans to appoint Candera director Reinhard Füricht to the position of managing director.

\*1: ISO 26262 refers to a global functional safety standard for automotive electric and electronic systems.

\*2 Automotive SPICE refers to a process model issued by the VDA QMC (German Automotive Industry Association Quality Management Center) that establishes the process framework for automotive software development. It aims to evaluate automotive software development processes quantitatively.

## Business

### Business description

#### Dual-company business model sets ArtSpark apart

##### Merger of Celsys and HI Corp.

ArtSpark is a joint holding company formed by the merger of Celsys, Inc. and HI Corp in April 2012. Celsys was known for CLIP STUDIO PAINT software to produce manga, illustration, and animation, as well as an e-book distribution solution for mobile phones. HI was strong in 3D rendering software for cell phones. The two companies hold the top market shares in Japan for their respective products.

Celsys		HI	
Main businesses	Main products	Main businesses	Main products
Software for use in creating anime and manga	CLIP STUDIO PAINT	3D rendering engine for cell phones	MascotCapsule
	RETAS STUDIO	Font rendering engine	Higlyph
e-book distribution system for cell phones	BS Reader	UI development for embedded devices	exbeans UI Conductor exbeans Affinity
	BS Reader for Browser		
	BS Reader S		

Source: Shared Research based on company data

As the cell phone market rapidly shifted from feature phones to smartphones, the two companies needed to change their business models. Both were strong in their respective markets, and they merged in 2012 to strengthen their competitive edge by combining technologies and customer bases. ArtSpark said that it aims to reinforce the existing businesses and create new businesses through the resources of Celsys (strong in applications) and HI (UI/UX).

##### Making Candera a subsidiary

In January 2019, ArtSpark acquired the shares of Socionext Embedded Software Austria GmbH (currently Candera GmbH), and made Candera a subsidiary. For more information on the purpose and background of the merger, see the New medium-term plan (FY12/19–FY12/23) section. Candera supplies scalable human machine interface (HMI) not reliant on hardware as well as CGI Studio, GUI (graphical user interface) design software.

#### Establishes own base in human-centered design

Technologies to display graphics are advancing spurred by a wider range of portable internet devices, and the profusion of consumer electronics devices like digital cameras, in-vehicle devices, electronic billboards and store information terminals. The popularity of the iPhone and iPad has increased demand for user-friendly devices over functions.

While general electronic devices have been made on the idea of function-centered design, the iPhone and iPad, which offer ease of use, are based on human-centered design. The UI (user interface design) and UX (user experience design) concept is key. The UI/UX business provides comprehensive solutions for development and implementation by combining user interface (connecting users to devices and software), with user experience (pleasure, ease of use and other experience from devices and software). Since function-centered design has been dominant in Japan, human-centered design has not yet taken root. However, the need for user-friendly operations is likely to increase as functions increase.

Celsys and HI had developed software for cell phones and held top positions in their respective industries. ArtSpark is thus the leader in image processing on low-end devices. The company is proceeding with operations in cooperation with designers and engineers in planning, development and implementation.

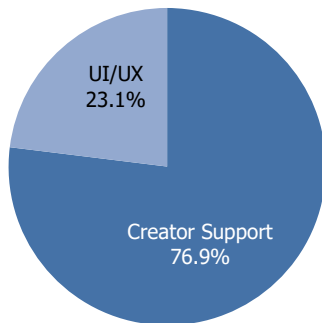


## Segments

The company's business segments are Creator Support, originally a business operated by Celsys, and UI/UX coming from HI\*. In FY12/18, Creator Support accounted for 79.8% of sales and UI/UX for 23.9%. The respective shares of operating profit were 116.7% and -16.7%.

\*Until FY12/16, the three business segments were Creator Support, Content Solution, and UI/UX. Celsys handled Creator Support and Content Solution, while HI handled UI/UX, which included the former Applications segment

### Sales breakdown



Source: Shared Research based on company data

### Sales, profit, and margins by segment

(JPYmn)	Sales					Segment profit					Segment profit margin				
	FY12/14	FY12/15	FY12/16	FY12/17	FY12/18	FY12/14	FY12/15	FY12/16	FY12/17	FY12/18	FY12/14	FY12/15	FY12/16	FY12/17	FY12/18
<b>New segments</b>															
Creator Support	-	-	2,161	2,413	2,957	-	-	196	80	472	-	-	9.1%	3.3%	16.0%
UI/UX	-	-	1,705	1,291	886	-	-	281	84	-67	-	-	16.5%	6.5%	-7.6%
Adjustments	-	-	-31	-68	-53	-	-	24	10	-30	-	-	-	-	-
<b>Old segments</b>															
Content Solution	1,118	1,155	266	-	-	22	6	24	-	-	2.0%	0.5%	8.9%	-	-
Creator Support	751	965	282	-	-	10	135	56	-	-	1.4%	14.0%	19.9%	-	-
UI/UX	2,001	2,070	540	-	-	34	-88	84	-	-	1.7%	-4.3%	15.5%	-	-
Adjustments	-44	984	-5	-	-	33	203	10	-	-	-	-	-	-	-
<b>Total</b>	<b>3,826</b>	<b>5,174</b>	<b>1,083</b>	<b>3,636</b>	<b>3,790</b>	<b>100</b>	<b>256</b>	<b>173</b>	<b>173</b>	<b>375</b>	<b>2.6%</b>	<b>4.9%</b>	<b>16.0%</b>	<b>4.8%</b>	<b>9.9%</b>
<b>% of total (excl. adjustments)</b>															
<b>New segments</b>															
Creator Support	-	-	198.6%	65.2%	76.9%	-	-	119.9%	48.8%	116.7%	-	-	-	-	-
UI/UX	-	-	156.7%	34.8%	23.1%	-	-	171.8%	51.2%	-16.7%	-	-	-	-	-
<b>Old segments</b>															
Content Solution	28.9%	27.6%	24.4%	-	-	33.6%	11.6%	14.4%	-	-	-	-	-	-	-
Creator Support	19.4%	23.0%	25.9%	-	-	15.6%	254.6%	34.3%	-	-	-	-	-	-	-
UI/UX	51.7%	49.4%	49.7%	-	-	50.8%	-166.3%	51.2%	-	-	-	-	-	-	-

Source: Shared Research based on company data

Figures may differ from company materials due to differences in rounding methods.

From Q1 FY12/16, the company revised its business segmentation, integrating the Applications business with the UI/UX business (earnings booked under the UI/UX business). Year-on-year comparisons that follow are retroactively adjusted.

Adjustments to segment profit mainly comprise company-wide revenues not distributed to segments and company-wide expenses (net). Company-wide revenues are management consultancy fees paid by group subsidiaries; company-wide expenses are expenses related to group management.

## Creator Support: 77% of sales (65% in FY12/17)

The Creator Support business provides services and sells software and hardware related to the digital production of illustration, manga, and animation; it promotes research and development and the practical application of graphics technologies, and expands its product lineup in response to new content creation techniques and new devices. It comprises a B2C business that offers total support for creators and a B2B business that provides software and service expertise as solutions.

### B2C business

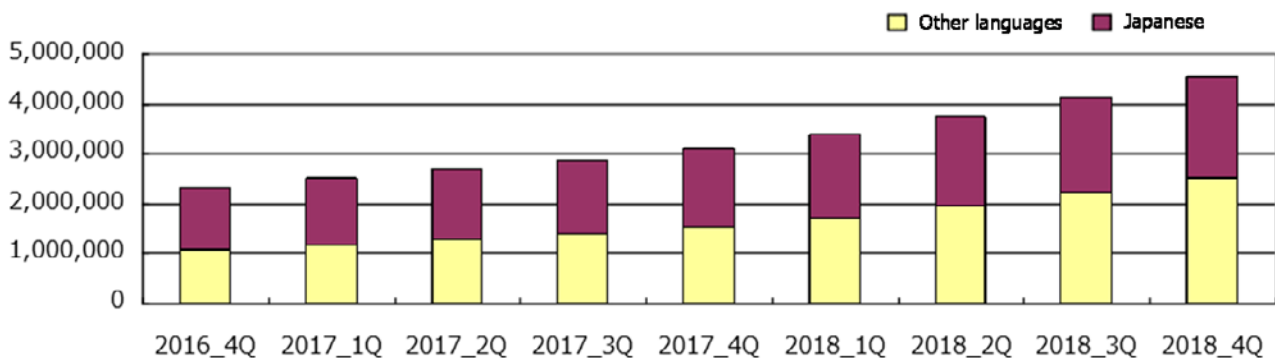
#### CLIP STUDIO PAINT (PRO, EX):

- ▶ Paint software that has achieved 4.5mn unit sales globally since it was launched in 2012 (unit sales topped 4.53mn as of end December 2018).
- ▶ Top sales and market share in graphic software field: Consistently ranked No. 1 in the graphic software category of the BCN AWARD in 2015–2019 based on unit sales data from Amazon and mass retailers. No 1. software used for illustrations posted on pixiv, a social networking platform geared toward illustrators (Celsys estimate for January–December 2018 based on data provided by pixiv).

- ▶ Manga, illustration, and animation production software with various uses, such as monochrome and color drawings for printing on commercial magazines and manga for websites and digital devices. In addition to drawing and painting features for color illustrations, it has features that cover all production processes of manga including rough sketches, frame cuts, inking, background, effect, lettering and management of multiple pages. It is the world's first dedicated manga production software. (Compatible with both Windows and Mac.)
- ▶ Combines the company's expertise in 2D, 3D, and e-books to provide new value for creators.

- ▷ In the B2C business, the company provides graphic content production software such as the CLIP STUDIO PAINT series, software for the production of manga, illustration, and animation. The company also manages its own website CLIP STUDIO, which provides total support to creators producing illustrations, manga, animations or novels, offering comprehensive services to support their creative activities. As well as selling software, the company provides information creators need, such as support, how-to courses, and context introduction. According to the company, over 1.46mn creators are registered with the creative support site CLIP STUDIO (as of end December 2018). Subsidiary Celsys is in charge of planning, development, and support of all software and services.
- ▷ The company sells the software products through the CLIP STUDIO website as well as through PC distributors and retailers, and receives usage fees from end users. In the Japanese market, its manga and animation software are de-facto standards among professionals and more than 90% of TV animations use its products.
- ▷ Accelerating global business is part of the company's growth strategy for CLIP STUDIO. ArtSpark has released multiple-language versions of CLIP STUDIO PAINT: English and Chinese versions in September 2013, French and Spanish versions in July 2014, a Korean version in May 2016, and a German version in September 2017. As a result, now nearly half of CLIP STUDIO sales are for non-Japanese versions. It also improved usability by ensuring functions that are linked up with ibisPaint, a popular painting app from ibis mobile inc. offered only in Japanese, can be used in all available languages. The subscription version, which allows multiple PC installs with a single serial number, and CLIP STUDIO PAINT for iPad released in 2017 have performed well recently.
- ▷ The total shipment volume of CLIP STUDIO PAINT has topped 4.53mn units (as of end-December 2018).

### Total shipment volume of CLIP STUDIO



Source: Shared Research based on company data

### B2B business

- BS Reader for browser:** As the product allows users to browse e-books on web browsers, users do not need to download viewer applications to look around content at e-book store sites. A variety of content can be distributed: comics, novels and photo books.

In the B2B business, the company provides software and knowledge of services based on research and development of graphic technologies as solutions to companies. Sales come from royalties from companies and revenues for providing services under contract.

The core product is the BS Reader series of e-book viewers, developed by Celsys. The company has not unveiled a detailed sales breakdown, though it said that the BS Reader series accounted for 70–80% of sales and almost all the segment's profit. The

segment also develops and sells (or leases out) BS BookStudio, authoring software for processing manga and other publications for mobile devices, and develops and provides ComicDC, a data server for content distribution.

**BS Reader:** As the necessary software for browsing e-books, the company provides the product, or grants a license, to content providers, which distribute content to feature phone and smartphone users, and telecom carriers, and receives certain royalty rates depending on sales of content by using the viewer.

Its BS Reader holds a viewer share of more than 90% for cell phones. Though competitors have joined the viewer market for smartphones, ArtSpark’s BS Reader for smartphones is compatible with feature phones. Despite the rapid spread of smartphones, nearly half of cell phone users do not use smartphones. For content holders, ArtSpark’s BS Reader is seen to be more attractive than competitors’ products as it can provide one-stop solutions both for cellphones and smartphones.

**UI/UX: 23% of sales (35% in FY12/17)**

**exbeans® UI Conductor:** A comprehensive suite of software tools for developing embedded HMI. It allows users to launch data created with authoring tools in runtime (middleware), thereby experiencing the designer’s concept as he or she imagined it. The controls are intuitive, allowing users to drag and drop all elements of UI creation—including design, user interaction, animations, and screen transitions. Users can also easily create UIs across multiple devices and languages, and change designs and mechanisms as they see fit. Thus, this comprehensive line of UI authoring software provides users with a number of features that simplify the development process.



**CGI Studio:** Core product of Candra. Scalable HMI not reliant on hardware as well as GUI design software. Candra mainly supplies the product to European car manufacturers on an OEM basis.



**exbeans® Affinity:** a general-purpose library offering various services such as telematics (services provided for vehicles through mobile phones or the like), and a core library able to handle the flexible development of service applications. Using exbeans Affinity as a web application platform allows for the easy delivery, update, and collection of data.

**exbeans® VI Transfer:** a general-purpose module for the transfer of information from vehicles such as motorcycles and automobiles (CAN information), allowing applications to provide services using the information obtained. Together with exbeans Affinity, described above, exbeans VI Transfer allows the use of Web services built on Affinity.

- ▷ The UI/UX business provides UI solutions to provide total support from the technological side to the design side for digital consumer electronics devices, primarily in fields relating to vehicles (automobiles and motorcycles). It licenses graphics-related products and receives custom development orders.
- ▷ In recent years, ArtSpark has worked to shift its business model away from primarily focusing on winning orders for its development services (as it had done to scale up quickly), toward winning orders for its proprietary IP over the past few years. In this way, it has aimed to reduce production costs and increase profits. In FY12/16, ArtSpark sold HI Corp. Kansai as part of an effort to revise its operations.

- ▷ The company's strength in the UI/UX business is in a product lineup supported by provision of UI design by designers and endorsed by de-facto standard 3D graphics technologies. Core products were developed by HI, an ArtSpark subsidiary, including:
  - **exbeans UI Conductor:** provides a UI development environment for embedded devices.
  - **Higlyph:** a scalable font rendering engine with an emphasis on design; provides high speeds and rendering even on embedded devices.
  - **W10 Browser:** a browser application for embedded devices compatible with HTML5.
- ▷ ArtSpark develops UI solutions-related products for different fields. In the printer field, the company has developed a product that has been installed on total over 4.1mn printers produced by Seiko Epson Corp (as of end-December 2018). Accumulated shipment of its products adopted as the default software for in-vehicle equipment by major OEMs have also topped 2.97mn units (as of end-December 2018), mainly to the North American market. In addition, the company has developed UIs for the SLR cameras of Olympus Imaging Corp, all-in-one printers of Brother Industries (TSE1: 6448) and Clarion Co Ltd (TSE1: 6796) touch panel audio-display screens for Suzuki Motor Corp (TSE1: 7269) K-cars.
- ▷ The company receives revenue from licensing those graphics-related products as UI solutions. It also receives revenue from the development, maintenance and support of custom UI design, software development and implementation. In addition, the core of this business has shifted from middleware products for mobile devices to UI solutions. The company changed the name of the business accordingly in FY12/13, from middleware to UI/UX.

K-car: A Japanese car category—literally “light car”. Engine displacement limited to 660cc. The number plates of private cars have a yellow base (black base for commercial vehicles).

- ▷ In Q1 FY12/16, the company revised its business segmentation, integrating the Applications business with the UI/UX business, and gradually reducing the scale of both since then.
- ▷ In January 2019, ArtSpark acquired the shares of Socionext Embedded Software Austria GmbH (currently Candera GmbH), and made Candera a subsidiary. For more information on the purpose and background of the merger, see the New medium-term plan (FY12/19–FY12/23) section. Candera supplies scalable human machine interface (HMI) not reliant on hardware as well as CGI Studio, GUI (graphical user interface) design software.

## Production and sales

(JPYmn)	Segments	FY12/13	FY12/14	FY12/15	FY12/16	FY12/17	FY12/18	YoY
Production	<b>Creator Support (new seg.)</b>	<b>1,663</b>	<b>1,623</b>	<b>1,672</b>	<b>1,549</b>	<b>1,540</b>		
	Content Solution	829	820	890	744	-		
	Creator Support (old seg.)	833	803	782	805	-		
	<b>UI/UX</b>	<b>1,267</b>	<b>1,280</b>	<b>1,493</b>	<b>884</b>	<b>738</b>		
	Total	2,930	2,904	3,182	2,434	2,279		
Purchase	<b>Creator Support (new seg.)</b>	<b>212</b>	<b>115</b>	<b>116</b>	<b>101</b>	<b>117</b>		
	Content Solution	102	49	49	31	-		
	Creator Support (old seg.)	110	66	67	70	-		
	<b>UI/UX</b>	-	-	-	-	-		
	Total	212	115	116	101	117		
Sales	<b>Creator Support (new seg.)</b>	<b>1,920</b>	<b>1,869</b>	<b>2,119</b>	<b>2,161</b>	<b>2,413</b>	<b>2,957</b>	<b>22.5%</b>
	Content Solution	1,283	1,118	1,155	1,021	-	-	-
	Creator Support (old seg.)	637	751	965	1,140	-	-	-
	<b>UI/UX</b>	<b>1,789</b>	<b>2,001</b>	<b>2,070</b>	<b>1,705</b>	<b>1,291</b>	<b>886</b>	<b>-31.4%</b>
	Adjustments	-23	-44	-33	-31	-68	-53	-
	Total	3,685	3,826	4,157	3,836	3,636	3,790	4.2%

Source: Shared Research based on company materials  
 From Q1 FY12/16, the company revised its business performance management categories, integrating the Applications business with the UI/UX business (figures for the businesses are shown under the UI/UX business). Additionally, in FY12/17 the company consolidated Content Creation and Creator Support into a single Creator Support category. Figures for years prior to FY12/16 are also retroactively adjusted in the table above.  
 Sales figures are adjusted for intragroup transactions.

## Personnel

### Employees per segment

Segment	No. of employees				
	FY12/14	FY12/15	FY12/16	FY12/17	FY12/18
Creator Support	84	87	88	84	100
UI/UX	129	54	46	69	61
Company-wide	19	25	22	14	15
<b>Total</b>	<b>232</b>	<b>166</b>	<b>156</b>	<b>167</b>	<b>176</b>

Source: Shared Research based on company data

Figures for the Creator Support segment from FY12/14–16 are the totals of the Content Solution and Creator Support segments.

## Profitability snapshot, financial ratios

Consolidated (JPYmn)	FY03/08	FY03/09	FY03/10	FY03/11	FY03/12	FY12/12	FY12/13	FY12/14	FY12/15	FY12/16	FY12/17	FY12/18
	Simple sum	Simple sum	Simple sum	Simple sum	Simple sum	Cons.9 mo.	Cons.Act.	Cons.Act.	Cons.Act.	Cons.Act.	Cons.Act.	Cons.Act.
Sales	4,117	4,364	4,954	4,932	4,565	2,633	3,685	3,826	4,157	3,836	3,636	3,790
HI	2,344	1,918	2,259	2,210	1,863	-	-	-	-	-	-	-
Celsys	1,773	2,446	2,696	2,721	2,702	-	-	-	-	-	-	-
Gross profit	2,215	2,090	2,136	2,149	1,694	411	1,143	1,333	1,279	1,565	1,602	1,787
HI	1,398	818	805	843	503	-	-	-	-	-	-	-
Celsys	817	1,272	1,331	1,305	1,191	-	-	-	-	-	-	-
SG&A expenses	1,903	1,757	1,593	1,525	1,468	1,079	1,212	1,234	1,190	1,064	1,178	1,412
HI	1,180	918	738	728	734	-	-	-	-	-	-	-
Celsys	723	839	856	797	733	-	-	-	-	-	-	-
Operating profit	312	333	543	623	227	-667	-69	100	88	501	424	375
YoY	-	6.7%	63.2%	14.8%	-63.6%	-	-	-	-	-	-	-
HI	218	-100	68	115	-231	-	-	-	-	-	-	-
Celsys	94	433	475	508	458	-	-	-	-	-	-	-
GPM	53.8%	47.9%	43.1%	43.6%	37.1%	15.6%	31.0%	34.9%	30.8%	40.8%	44.1%	47.2%
HI	59.6%	42.6%	35.7%	38.2%	27.0%	-	-	-	-	-	-	-
Celsys	46.1%	52.0%	49.4%	48.0%	44.1%	-	-	-	-	-	-	-
SG&A ratio	46.2%	40.3%	32.2%	30.9%	32.1%	41.0%	32.9%	32.2%	28.6%	27.7%	32.4%	37.3%
HI	50.4%	47.9%	32.7%	32.9%	39.4%	-	-	-	-	-	-	-
Celsys	40.7%	34.3%	31.7%	29.3%	27.1%	-	-	-	-	-	-	-
OPM	7.6%	7.6%	11.0%	12.6%	5.0%	-25.3%	-1.9%	2.6%	2.1%	13.0%	11.7%	9.9%
HI	9.3%	-5.2%	3.0%	5.2%	-12.4%	-	-	-	-	-	-	-
Celsys	5.3%	17.7%	17.6%	18.7%	16.9%	-	-	-	-	-	-	-

Source: Shared Research based on company data

Figures may differ from company materials due to differences in rounding methods.

The company was formed from a merger of Celsys, Inc. and HI Corp. in April 2012, and thus FY12/12 is a nine-month period.

Figures from FY03/12 and earlier are the simple sum of the two companies' results.

The table above shows the historical performance of ArtSpark's two predecessor companies, HI Corp and Celsys. The increasing popularity of smartphones in Japan from 2010 onward significantly affected results at both companies. HI's main product was a 3D rendering engine for feature phones. This product generated licensing fees for the engine when phones were shipped, so the business model was affected by rising smartphone sales and the accompanying drop in shipments of feature phones. Celsys obtained revenue mainly from e-book browser distribution solutions for feature phones. Revenue was in the form of license fees paid by content holders when users viewed e-book browser. As such the impact of smartphone diffusion on Celsys was less than for HI. However, the drop in the number of feature phone users decreased the number of e-book browser viewers, affecting Celsys' performance. Both companies focus on software development, a labor-intensive business. The need to develop software for smartphones has driven up CoGS at both companies, resulting in falling gross margins from 2010 onward. HI temporarily shored up earnings by selling assets in unprofitable businesses, but declining sales still meant the company began booking an operating loss in FY12/12.

Amid such conditions, the two companies established a joint holding company on April 2, 2012, in a bid to gain a competitive edge by combining their technologies and customers. Since the merger, the new company—ArtSpark Holdings—has focused on tapping into new markets, mainly in the Creator Support and UI/UX segments, and improving margins with tight project management. The company initially booked an operating loss, partly owing to upfront investment. But its expansion into new businesses is paying off, with the company moving back into the black in FY12/14.

## Strengths and weaknesses

### Strengths

- ▶ **Technological expertise from creating products for feature phones:** ArtSpark enjoys a 90%-plus market share in 3D-rendering software and image distribution solutions for feature phones. Feature phones have limited memory and processing power, so they require light software. The experience that the company has built up in creating these programs will lend it a competitive advantage in developing programs for other devices with low processing power.
- ▶ **Celsys' large global share in application software for end users:** Celsys, one of the two companies merged to create ArtSpark, held a large market share in applications designed for end users. According to the company, ArtSpark tops global shares in the field of manga, illustration, and animation production software.
- ▶ **HI's track record developing embedded software for manufacturers:** The strengths of HI Corp. (the other of the two original companies) were in making embedded software for manufacturers. In addition to being adopted by North American automakers for mass production, ArtSpark's products have a strong track record with printer manufacturers, and the company anticipates further growth. The company has leveraged its UI/UX technology and track record for developing embedded software to establish long-term relationships with manufacturers.

### Weaknesses

- ▶ **High marketing cost of Creator Support business:** In the Creator Support segment, the company operates a B2C business providing creators a total support service through product offerings such as manga, illustration, and animation production software CLIP STUDIO PAINT and animation production software RETAS STUDIO. Since it is difficult to gauge the market size for these products or clearly identify the target customer base, associated marketing cost tends to get higher as a result.
- ▶ **Major performance fluctuations in the UI/UX business:** Over the past few years, the company has managed to shift its UI/UX business model toward handling proprietary IP products. That said, the process leading up to licensing (clients' adoption of the product) is significantly time consuming, and it takes another few years for the company to receive royalties from mass production. Even in the mass production stage, since production volume relies heavily on the manufacturers' production plan, earnings tend to fluctuate significantly. To narrow the range of fluctuation, ArtSpark must develop highly competitive products that match client needs and can be adopted repeatedly by clients for use in mass production.
- ▶ **Time-consuming and costly to add or revise functions:** In both the Creator Support and UI/UX businesses, the company responds to client requests for complex revisions and upgrades. Adding or upgrading functions to products can be time-consuming and costly. In the software development business, fixed cost is inherently high, and operating leverage also tends to be high.

## Historical performance and financial statements

### Q3 FY12/18 consolidated results

#### Overview

For cumulative Q3 FY12/18, the company reported sales of JPY2.8bn (+2.5% YoY) and operating profit of JPY428mn (-17.0% YoY). The company reported recurring profit of JPY417mn (-17.6% YoY) due to booking JPY1mn in paid interest and JPY7mn in forex losses and net income attributable to parent company shareholders of JPY344mn (-21.3% YoY) due to deducting JPY82mn in tax expenses. The company focused on software IP-centered businesses, strategic realignment of development resources, and improvement of operational efficiency.

Sales reached 78.1% of FY12/18 full-year company forecasts (FY12/17 cumulative Q3 sales reached 75.8% of full-year FY12/17 results), operating profit reached 116.7% (121.8%), recurring profit reached 121.7% (123.4%) and net income attributable to parent company shareholders reached 136.9% (116.4%).

#### Creator Support

- ▷ Sales: JPY2.2bn (+19.5% YoY)
- ▷ Operating profit: JPY438mn (+40.6% YoY)

Since its launch in 2012, CLIP STUDIO PAINT (software for producing manga, illustration, and animation) has sold more than four million units worldwide. The company changed its e-book solutions brand name from BS Reader to CLIP STUDIO READER in an effort to strengthen the link with CLIP STUDIO SOLUTION. The company also sponsored a modern Ashura exhibit held by Nara Newspaper Company Inc. and provided CLIP STUDIO PAINT for an illustration contest based on the theme of a new, modern image of Ashura.

CLIP STUDIO, a website providing total support for creators, had approximately 1.3mn registered users as of the end of September 2018 (vs. approximately 1.2mn at the end of June 2018).

#### UI/UX

- ▷ Sales: JPY688mn (-30.6% YoY)
- ▷ Operating loss: JPY54mn (JPY159mn operating profit in cumulative Q3 FY12/17)

ArtSpark is focusing on development and sales of self-developed IP products such as UI authoring software products exbeans UI Conductor, a foundation of HMI, targeting the automotive (cars and motorcycles) market and commercial- and consumer-use printers.

In the printer field, exbeans UI Conductor has been installed in over three million total printers produced by Seiko Epson Corp. (TSE1 6724). The company will continue to strengthen the features of this product so that it is adopted by Tier-1 companies (primary suppliers), and promote business creation through exhibits at events and fairs.

The company's products have been adopted as the default software for in-vehicle equipment by major OEMs since August 2015 and the company has shipped over 2.7mn units (mainly to the North American market).

### 1H FY12/18 consolidated results

#### Overview

For 1H FY12/18, the company reported sales of JPY1.9bn (+11.7% YoY), operating profit of JPY302mn (+19.1% YoY), recurring profit of JPY290mn (+19.0%), and net income attributable to parent company shareholders of JPY250mn (+13.0%). The company



focused on software IP-centered businesses, strategic realignment of development resources, and improvement of operational efficiency.

Results exceeded the company's forecasts for 1H FY12/18 (sales of JPY1.7bn, operating profit of JPY13mn, recurring profit of JPY3mn, and net loss of JPY9mn) by wide margins.

1H sales exceeded the company's initial forecasts due to robust sales overseas in the Creator Support business. Profits also exceeded initial forecasts by a large margin due to the recording of highly profitable sales. Because 1H results surpassed initial forecasts by a wide margin, the company revised its full-year forecasts as set out below:

- ▷ Sales forecast: JPY3.6bn (initial forecast JPY3.3bn)
- ▷ Operating profit forecast: JPY367mn (JPY63mn)
- ▷ Recurring profit forecast: JPY343mn (JPY42mn)
- ▷ Net income forecast: JPY251mn (JPY7mn)

### Creator Support

- ▷ Sales: JPY1.4bnmn (+15.9% YoY)
- ▷ Operating profit: JPY295mn (+23.4% YoY)

The company released a Pro version and an annual membership plan for CLIP STUDIO PAINT for iPad (software for producing manga, illustration, and animation on an iPad) simultaneously worldwide. The company also released the new CLIP STUDIO TABMATE, an input device enabling more comfortable use of pen tablets, at dealers and online stores nationwide. In addition, the company increased convenience of the function allowing compatibility between ibisPaint (a painting app initially from ibis mobile inc.) and CLIP STUDIO PAINT, by making it available in all languages (having originally been offered only in the Japanese version).

CLIP STUDIO, a website providing total support for creators, had approximately 1.2mn registered users as of the end of June 2018 (vs. approximately 1.1mn at the end of March 2018).

### UI/UX

- ▷ Sales: JPY519mn (-3.2% YoY)
- ▷ Operating profit: JPY1.6mn (JPY8.1mn operating loss in 1H FY12/17)

ArtSpark is focusing on development and sales of self-developed IP products such as UI authoring software products exbeans UI Conductor, a foundation of HMI, targeting the automotive (cars and motorcycles) market and commercial- and consumer-use printers.

Regarding exbeans UI Conductor, the company has been collaborating with various hardware and software vendors to develop joint solutions to increase convenience and raise market value. In 1H the company showed a demo machine for the HMI (Human Machine Interface) development solution developed in collaboration with iTEC Hankyu Hanshin Co., Ltd. at the Automotive Engineering Exposition, an exhibition specializing in automotive technologies for engineers and researchers.

The company's products have been adopted as the default software for in-vehicle equipment by major OEMs since August 2015 and the company has shipped over 2.4mn units (mainly to the North American market).

## Q1 FY12/18 consolidated results

### Overview

For Q1 FY12/18, the company reported sales of JPY1.0bn (+20.4% YoY), operating profit of JPY214mn (+52.0% YoY), recurring profit of JPY201mn (+51.1%), and net income attributable to parent company shareholders of JPY179mn (+40.3%). The company focused on software IP-centered businesses, strategic realignment of development resources, and improvement of operational efficiency.

The progress rates against the company's plan for 1H FY12/18 were high, with sales at 60.6%, operating profit at 1,642.4%, recurring profit at 6,699.3%, and net income at JPY179mn (the company had forecast a JPY9mn loss in the quarter). However, the company has not revised initial forecasts.

### Creator Support

- ▷ Sales: JPY679mn (+10.1% YoY)
- ▷ Operating profit: JPY139mn (+2.4% YoY)

Manga, illustration, and animation production software CLIP STUDIO PAINT PRO was released worldwide, bundled together with Wacom Intuos, a pen tablet sold by Wacom Co., Ltd. (TSE1: 6727). Additionally, the company began offering the CLIP STUDIO PAINT EX Volume License Subscription version, ideal for large-scale introduction to businesses and educational institutions, in English, French, Spanish, German, Korean, and Chinese (traditional Chinese). The company also held the European Comic Schools Contest, a contest for manga and illustration targeting students at art schools in European countries which teach manga, digital art, and illustration.

CLIP STUDIO, a website providing total support for creators, had just over 1.1mn registered users as of the end of March 2018 (vs. just over 1.0mn at the end of December 2017).

### UI/UX

- ▷ Sales: JPY344mn (+39.1% YoY)
- ▷ Operating profit: JPY52mn (JPY10mn operating loss in Q1 FY12/17)

ArtSpark is focusing on development and sales of self-developed IP products such as UI authoring software products exbeans UI Conductor, a foundation of HMI, targeting the automotive (cars and motorcycles) market and commercial- and consumer-use printers.

Regarding exbeans UI Conductor, the company has been collaborating with various hardware and software vendors to develop joint solutions to increase convenience and raise market value. In Q1 the company announced ECU development support tool CANTOOL, a collaborative solution with iTEC Hankyu Hanshin Co., Ltd. Additionally, at Automotive World 2018, an industry-facing exhibition of next generation automotive technology held at Tokyo Big Sight, the company exhibited at the 1<sup>st</sup> Autonomous Driving Technology Expo to introduce its IP software and promote business creation.

The company's products have been adopted as the default software for in-vehicle equipment by major OEMs since August 2015 and the company has shipped over 2.0mn units (mainly to the North American market).

## Full-year FY12/17 consolidated results

### Overview

For FY12/17, the company reported sales of JPY3.6bn (-5.2% YoY). FY12/16 sales included JPY276mn, attributable to the sale of shares in HI Corporation Kansai, a subsidiary of a company subsidiary, during the term. When comparing sales of existing group companies, sales were up 2.1% YoY. Operating profit was JPY424mn (-15.3% YoY). Recurring profit was JPY410mn (-14.0%), with interest paid coming to JPY4mn (down JPY2.2mn) and foreign exchange losses of JPY5mn (down JPY9.6mn). Net

income attributable to parent company shareholders was JPY375mn (+11.2%) after booking extraordinary losses of JPY13mn for software impairment losses and only JPY19mn in taxes. The company focused on software IP-centered businesses, strategic realignment of development resources, and improvement of operational efficiency.

Sales and earnings all finished above plan, with sales finishing 4.4% above plan, operating profit 13.0% above plan, recurring profit 16.3% above plan, and net income 26.2% above plan.

From Q1 FY12/17, the company revised its business segments, integrating the Content Solutions business with the Creator Support business (figures for the businesses are shown under the Creator Support business). Year-on-year comparisons that follow are retroactively adjusted.

## Creator Support

- ▷ Sales: JPY2.4bn (+11.7% YoY)
- ▷ Operating profit: JPY300mn (+53.2% YoY)

Manga, illustration, and animation production software CLIP STUDIO PAINT was upgraded simultaneously world-wide, and the company began providing a German language version of the software, which had been in demand. The company now offers seven languages for the software, Japanese, English, Korean, Chinese (traditional), French, Spanish, and German.

In November 2017, the company made a simultaneous, worldwide release of an iPad compatible version of its manga and illustration production software<sup>\*1</sup>, CLIP STUDIO PAINT EX. CLIP STUDIO PAINT EX for iPad comes in seven different languages and offers the same level of functionality as its Windows and Mac OS versions. As the most advanced version of the company's CLIP STUDIO PAINT software series, CLIP STUDIO PAINT EX in its iPad version allows users to create full-scale Manga and illustrations and commercial-level animation using only an iPad.

<sup>\*1</sup> The product is free for the first six months, and the company can only book sales once it starts receiving user fees after the six months has elapsed. There was thus no impact on FY12/17 sales.

The company also launched the CLIP STUDIO PAINT EX Volume License Subscription version, which is ideal for companies or schools because it can be installed on multiple PCs using the same serial number.

CLIP STUDIO PAINT DEBUT was also bundled with an 8-inch Windows Tablet raytrektab DG-D08IWP (from Thirdwave Diginnos; equipped with pressure-sensitive digital stylus) for nationwide sale through large-volume retailers and e-commerce websites. As of November 2017, the company had shipped a cumulative total of more than 3.0mn units of its CLIP STUDIO PAINT software, with roughly half of these going overseas.

The company's electronic book viewer, BS Reader for Browser, which allows vertical scroll<sup>\*2</sup> of comic strip panel sequences, started being offered through Mecha Comic, an e-book distribution service hosted by Amutus Corporation that is among the largest in Japan in terms of the number of users. In addition, the electronic book viewer BS Reader for Browser was adopted by Kodansha's electronic book service that will be provided to educational facilities in Matsuda, Ashigarakami District, Kanagawa Prefecture. A browser viewer solution combining the BS Reader for Browser viewer with Media Do's md-dc content distribution system was released jointly, and adopted by Kodansha's "My Bookstore." Working together with Media Do, the company also created a browser viewer solution that was adopted by online Manga sellers Pixiv Comic Store and Comico PLUS.

<sup>\*2</sup> Previously, the format allowed the reading of one panel at a time by tapping on the screen. The addition of the vertical reading scrolling capability enables a viewer to choose between the traditional panel display and vertical scrolling. According to Infocom (JASDAQ: 4348), the parent company of Amutus, the readability and speed of reading with vertical scrolling offers convenience that is unique to a smartphone.

CLIP STUDIO, a website providing total support for creators, had just over 1.0mn registered users as of the end of December 2017 (vs. 940,000 at the end of September 2017).

## UI/UX

- ▷ Sales: JPY1.3bn (-24.3% YoY)
- ▷ Operating profit: JPY56mn (-80.2% YoY)

ArtSpark is focusing on development and sales of self-developed IP products starting from UI authoring software products exbeans UI Conductor, a foundation of HMI, targeting the automotive (cars and motorbikes) market and commercial- and consumer-use printers.

During the year the company released an updated version of exbeans UI CONDUCTOR software with new features making its screen transition support tools more user friendly as well as enhanced animation features. exbeans UI CONDUCTOR is being installed in more and more products, especially in-vehicle equipment and printers. In the printer market, for example, Seiko Epson extended its contract with ArtSpark from FY12/16 into FY12/17 to use exbeans UI CONDUCTOR in its main printer models as well as printers for the business market. Going forward, ArtSpark is looking to get more overseas companies to adopt exbeans UI CONDUCTOR software. In the area of in-vehicle equipment, the big Tier-1 companies (primary suppliers) are adopting exbeans UI CONDUCTOR and ArtSpark expects these manufacturers to be releasing products embedding the software.

Looking to the IoT era of next-generation vehicles, ArtSpark has released exbeans VI Transfer, a vehicle information communication software. As a general-purpose software to transfer information for vehicles (such as motorcycles and automobiles) for mobile devices, the prototype model of exbeans VI Transfer has been used as the default software for in-vehicle equipment sold to major OEM automotive equipment suppliers since August 2015, and to date has shipped some 1.7mn units (mainly to the North American market).

With regard to Higlyph, a scalable font drawing engine for embedded equipment, the company released an updated version for the global market that is capable of handling 57 different languages. Having been adopted for use in digital cameras, printers, electronic dictionaries, in-vehicle equipment, and a variety of other products, to date Higlyph has sold a combined total of more than 70mn units in Japan and overseas.

With respect to marketing at special events and trade shows, we note that the company had a booth at the 5th Connected Car Technology Show that was a part of the larger Automotive World 2017 exposition in January 2017 and that, as a Tier-1 manufacturer within the automotive industry, was able to use that venue to promote new business for its core self-development IP products. The company also continued working closely together with various platform vendors; in recognition of these efforts, it even received a "Gold Partner" award from Renesas Electronics Corporation, which holds a sizeable share of the global market for SoC platforms for in-vehicle equipment.

Further, the company aims to help develop new services and devices that utilize a variety of vehicle information by offering a combination of exbeans VI Transfer, a vehicle information communication software, and exbeans Affinity, a generic web application platform for embedded equipment. To this end, the company has been conducting marketing and proposal activities with auto manufacturers of both passenger and commercial vehicles.

The UI/UX business sales of JPY1.3bn in FY12/17 included the JPY276mn in sales from subsidiary HI Corporation Kansai. The company sold all of its stake in this company in Q3 FY12/16.

## Income statement

Income statement (JPY'000)	FY03/08	FY03/09	FY03/10	FY03/11	FY03/12	FY12/12	FY12/13	FY12/14	FY12/15	FY12/16	FY12/17	FY12/18
	Simple sum	Simple sum	Simple sum	Simple sum	Simple sum	Cons. (9-mo.)	Cons. Act.	Cons. Act.	Cons. Act.	Cons. Act.	Cons. Act.	Cons. Act.
<b>Total sales</b>	<b>4,116,737</b>	<b>4,363,531</b>	<b>4,954,267</b>	<b>4,931,552</b>	<b>4,565,225</b>	<b>2,633,289</b>	<b>3,685,419</b>	<b>3,826,206</b>	<b>4,156,911</b>	<b>3,835,853</b>	<b>3,636,018</b>	<b>3,789,652</b>
YoY	23.0%	6.0%	13.5%	-0.5%	-7.4%	-	-	3.8%	8.6%	-7.7%	-5.2%	4.2%
CoGS	1,901,988	2,273,601	2,818,224	2,783,018	2,871,108	2,221,966	2,542,916	2,492,712	2,878,801	2,272,354	2,033,955	2,002,522
<b>Gross profit</b>	<b>2,214,749</b>	<b>2,089,930</b>	<b>2,136,043</b>	<b>2,148,534</b>	<b>1,694,117</b>	<b>411,323</b>	<b>1,142,503</b>	<b>1,333,494</b>	<b>1,278,954</b>	<b>1,564,523</b>	<b>1,602,062</b>	<b>1,787,129</b>
GPM	53.8%	47.9%	43.1%	43.6%	37.1%	15.6%	31.0%	34.9%	30.8%	40.8%	44.1%	47.2%
SG&A expenses	1,902,949	1,757,161	1,593,111	1,525,315	1,467,550	1,078,636	1,211,597	1,233,780	1,190,466	1,064,018	1,178,999	1,411,630
SG&A ratio	46.2%	40.3%	32.2%	30.9%	32.1%	41.0%	32.9%	32.2%	28.6%	27.7%	32.4%	37.2%
<b>Operating profit</b>	<b>311,800</b>	<b>332,768</b>	<b>542,931</b>	<b>623,219</b>	<b>226,566</b>	<b>-667,312</b>	<b>-69,093</b>	<b>99,713</b>	<b>88,488</b>	<b>500,504</b>	<b>423,803</b>	<b>374,886</b>
YoY	-32.1%	6.7%	63.2%	14.8%	-63.6%	-	-	-11.3%	465.6%	-15.3%	-11.5%	-
OPM	7.6%	7.6%	11.0%	12.6%	5.0%	-	-	2.6%	2.1%	13.0%	11.7%	9.9%
Non-operating income	9,033	27,901	6,059	1,558	9,346	6,399	34,455	13,778	3,746	4,611	646	763
Non-operating expenses	93,643	31,613	21,847	17,029	20,247	29,132	33,585	19,869	30,008	28,070	14,024	17,970
<b>Recurring profit</b>	<b>227,192</b>	<b>329,056</b>	<b>527,143</b>	<b>607,749</b>	<b>215,666</b>	<b>-690,045</b>	<b>-68,222</b>	<b>93,621</b>	<b>62,226</b>	<b>477,045</b>	<b>410,425</b>	<b>357,679</b>
YoY	-47.6%	44.8%	60.2%	15.3%	-64.5%	-	-	-33.5%	666.6%	-14.0%	-12.9%	-
RPM	5.5%	7.5%	10.6%	12.3%	4.7%	-	-	2.4%	1.5%	12.4%	11.3%	9.4%
Extraordinary gains	4,366	-	27,989	3,849	35,121	413,052	134,257	15,887	37,275	5,341	216	652
Extraordinary losses	95,842	74,951	120,297	20,916	318,135	1,004,349	48,891	31,934	44,588	83,298	17,086	0
Tax charges	53,497	288,748	216,009	219,244	188,447	72,300	-25,667	17,284	18,929	58,576	18,763	31,701
Implied tax rate	39.4%	113.6%	49.7%	37.1%	-279.8%	-5.6%	-149.7%	22.3%	34.5%	14.7%	4.8%	8.8%
Minority interests	-	-	-	-	-	-2,703	0	332	1,192	3,362	0	0
<b>Net income</b>	<b>82,219</b>	<b>-34,643</b>	<b>218,826</b>	<b>371,438</b>	<b>-255,795</b>	<b>-1,350,939</b>	<b>42,811</b>	<b>59,958</b>	<b>34,791</b>	<b>337,150</b>	<b>374,791</b>	<b>334,144</b>
YoY	-65.9%	-142.1%	-731.7%	69.7%	-	-	-	40.1%	-42.0%	869.1%	11.2%	-10.8%
Net margin	2.0%	-0.8%	4.4%	7.5%	-	-	1.2%	1.6%	0.8%	8.8%	10.3%	8.8%

Source: Shared Research based on company data  
 Figures may differ from company materials due to differences in rounding methods.  
 The company was formed from a merger of Celsys, Inc. and HI Corp. in April 2012, and thus FY12/12 is a nine-month period.  
 Figures from FY03/12 and before are simple sums of the two pre-merger results.  
 FY12/12 is an irregular period of nine months, owing to a change in accounting methods.

ArtSpark was established as a joint holding company in April 2012 as a result of the integration between Celsys, Inc. and HI Corp, so FY12/12 was an irregular nine-month financial year and FY12/13 was the first 12-month financial year. In the table above, SR shows the simple sums of the two companies' results for FY12/09 through FY12/11. The two companies' performances had expanded on main products for feature phones. However, the core of the mobile phone market began shifting to smartphones from around 2010 and the companies' performances lost pace, a factor that led to the integration.

In FY12/12 and FY12/13, ArtSpark incurred operating losses as it restructured unprofitable businesses and recombined its segments. It has pared its dependence on feature phones. In Q4 FY12/13, it reported operating profits and sales in the core content support business, and sales from smartphones surpassed those from other cell phones. Though the UI/UX segment posted lower profitability (launch of a new project), the expansion of products for auto-related industries made progress. The company moved back into the black in FY12/14. The medium-term plan ArtSpark announced in July 2015 demonstrated a strategic shift: leveraging the group's intellectual property by focusing on proprietary products and services. Sales consequently fell in FY12/16, but profit rose. In FY12/17, sales and profit fell. In FY12/18, sales expanded but profit declined as lower sales and profit in the UI/UX business weighed down strong performance in the Creator Support business.

## Balance sheet

Balance sheet (JPY'000)	FY03/08 Simple sum	FY03/09 Simple sum	FY03/10 Simple sum	FY03/11 Simple sum	FY03/12 Simple sum	FY12/12 Cons. (9-mo.)	FY12/13 Cons. Act.	FY12/14 Cons. Act.	FY12/15 Cons. Act.	FY12/16 Cons. Act.	FY12/17 Cons. Act.	FY12/18 Cons. Act.
<b>Assets</b>												
Cash and deposits	2,522,632	1,770,238	1,344,987	1,988,715	2,191,488	1,294,740	1,323,533	1,086,746	1,323,640	2,152,234	2,491,012	2,700,195
Accounts receivable	589,366	960,410	1,292,257	1,109,019	1,410,763	561,478	552,076	880,145	490,332	259,294	320,305	275,934
Inventories	118,515	156,324	101,746	101,518	119,342	192,378	148,755	137,536	108,577	24,887	26,207	163,696
Deferred tax assets	-	-	-	-	-	-	-	-	-	-	28,903	74,393
Other	214,980	211,370	156,776	149,870	133,924	120,373	119,141	126,709	169,220	107,157	133,019	141,512
Allowance for doubtful accounts	-5,077	-16,194	-17,100	-33,602	-31,760	-10,389	-12,608	-16,381	-6,224	-1,432	-2,864	-2,021
<b>Total current assets</b>	<b>3,440,416</b>	<b>3,082,148</b>	<b>2,878,666</b>	<b>3,315,520</b>	<b>3,823,757</b>	<b>2,158,580</b>	<b>2,130,897</b>	<b>2,214,755</b>	<b>2,085,545</b>	<b>2,542,140</b>	<b>2,996,405</b>	<b>3,353,709</b>
Buildings	37,814	27,453	58,448	51,278	47,142	41,794	35,755	40,325	26,214	24,124	29,194	26,639
Tools, furniture, and fixtures	66,350	62,310	45,700	47,343	36,062	28,271	19,977	31,227	26,642	25,881	41,012	47,853
Construction in progress	-	20,000	-	-	-	-	-	-	-	6,029	-	-
Other	-	-	-	-	-	-	-	-	-	-	6,561	4,842
<b>Total tangible fixed assets</b>	<b>104,165</b>	<b>109,763</b>	<b>104,148</b>	<b>98,621</b>	<b>83,204</b>	<b>70,065</b>	<b>55,733</b>	<b>71,552</b>	<b>52,856</b>	<b>56,035</b>	<b>76,767</b>	<b>79,334</b>
Software, software in progress	372,056	659,988	863,294	1,051,745	1,378,467	911,681	944,035	1,159,427	1,176,660	879,742	711,493	664,525
Goodwill	2,924	4,772	14,013	15,722	17,964	34,955	27,964	134,174	-	-	-	-
Other	14,955	11,769	8,874	11,389	10,055	32,607	31,041	32,775	32,415	32,163	30,489	45,325
<b>Total intangible assets</b>	<b>389,935</b>	<b>676,529</b>	<b>886,181</b>	<b>1,078,856</b>	<b>1,406,486</b>	<b>979,243</b>	<b>1,003,040</b>	<b>1,326,376</b>	<b>1,209,075</b>	<b>911,906</b>	<b>741,982</b>	<b>709,851</b>
Investment securities	84,496	150,600	213,863	429,187	338,856	599,132	203,623	111,991	103,449	58,517	81,681	80,102
Deferred tax assets	82,917	20,663	19,557	24,804	34,232	-	-	-	-	-	-	-
Other	114,376	384,128	331,730	285,862	294,441	207,568	249,996	239,819	148,950	130,476	127,278	134,334
<b>Total other fixed assets</b>	<b>281,789</b>	<b>555,391</b>	<b>565,150</b>	<b>739,853</b>	<b>667,529</b>	<b>806,700</b>	<b>453,119</b>	<b>351,810</b>	<b>252,399</b>	<b>188,993</b>	<b>208,959</b>	<b>214,436</b>
<b>Total fixed assets</b>	<b>775,889</b>	<b>1,341,685</b>	<b>1,555,482</b>	<b>1,917,331</b>	<b>2,157,220</b>	<b>1,856,010</b>	<b>1,511,893</b>	<b>1,749,740</b>	<b>1,514,332</b>	<b>1,156,935</b>	<b>1,027,710</b>	<b>1,003,623</b>
Deferred assets	-	-	-	-	-	10,349	7,914	5,478	3,043	608	-	-
<b>Total assets</b>	<b>4,216,307</b>	<b>4,423,833</b>	<b>4,434,149</b>	<b>5,232,853</b>	<b>5,980,979</b>	<b>4,024,939</b>	<b>3,650,704</b>	<b>3,969,974</b>	<b>3,602,921</b>	<b>3,699,684</b>	<b>4,024,115</b>	<b>4,357,332</b>
<b>Liabilities</b>												
Accounts payable	155,279	226,229	178,477	173,764	276,578	170,305	168,904	211,822	149,730	68,135	80,707	100,590
Short-term debt	42,550	28,160	10,000	133,332	503,136	438,576	596,879	558,012	473,141	357,329	274,964	68,080
Other	339,410	561,269	409,156	442,612	338,023	413,537	255,223	471,384	353,011	330,673	320,731	498,301
<b>Total current liabilities</b>	<b>537,239</b>	<b>815,658</b>	<b>597,633</b>	<b>749,708</b>	<b>1,117,737</b>	<b>1,022,418</b>	<b>1,021,006</b>	<b>1,241,218</b>	<b>975,882</b>	<b>756,137</b>	<b>676,402</b>	<b>666,971</b>
Long-term debt	38,160	10,000	-	66,668	324,940	474,391	267,512	276,203	87,011	36,372	18,080	-
Other	37,403	40,350	46,804	54,041	102,324	179,074	75,973	89,750	100,222	108,956	162,162	213,655
<b>Total long term liabilities</b>	<b>75,563</b>	<b>50,350</b>	<b>46,804</b>	<b>120,709</b>	<b>427,264</b>	<b>653,465</b>	<b>343,485</b>	<b>365,953</b>	<b>187,233</b>	<b>145,328</b>	<b>180,242</b>	<b>213,655</b>
<b>Total liabilities</b>	<b>612,803</b>	<b>866,009</b>	<b>644,439</b>	<b>870,418</b>	<b>1,545,002</b>	<b>1,675,884</b>	<b>1,364,491</b>	<b>1,607,172</b>	<b>1,163,115</b>	<b>901,466</b>	<b>856,644</b>	<b>880,626</b>
<b>Net assets</b>												
Capital stock	1,830,390	1,841,000	1,853,409	1,974,133	2,113,508	1,000,000	1,000,320	1,003,158	1,024,122	1,056,688	1,063,930	1,065,325
Capital surplus	1,534,233	1,544,843	1,352,927	1,473,253	1,612,626	1,867,600	479,447	482,285	503,249	535,815	543,057	544,452
Retained earnings	226,779	192,137	590,776	934,999	648,594	-658,100	773,184	832,467	867,258	-1,190,994	1,545,457	1,852,434
Treasury stock	-	-	-	-	-	-71	-609	-958	-1,786	-2,946	-3,085	-3,198
Other	12,101	-20,156	-7,402	-19,951	61,248	139,627	33,871	35,440	35,500	17,667	18,112	17,784
<b>Total net assets</b>	<b>3,603,503</b>	<b>3,557,824</b>	<b>3,789,710</b>	<b>4,362,434</b>	<b>4,435,976</b>	<b>2,349,056</b>	<b>2,286,213</b>	<b>2,362,802</b>	<b>2,439,806</b>	<b>2,798,218</b>	<b>3,167,471</b>	<b>3,476,797</b>
Working capital	552,602	890,505	1,215,526	1,036,773	1,253,527	583,551	531,927	805,859	449,179	216,046	265,625	339,040
Total interest-bearing debt	80,710	38,160	10,000	200,000	828,076	912,967	864,391	834,215	560,152	393,701	293,044	68,080
<b>Net debt</b>	<b>-2,441,922</b>	<b>-1,732,078</b>	<b>-1,334,987</b>	<b>-1,788,715</b>	<b>-1,363,412</b>	<b>-381,773</b>	<b>-459,142</b>	<b>-252,531</b>	<b>-763,488</b>	<b>-1,758,533</b>	<b>-2,197,968</b>	<b>-2,632,115</b>

Source: Shared Research based on company data

Figures may differ from company materials due to differences in rounding methods.

The company was formed from a merger of Celsys, Inc. and HI Corp. in April 2012, and thus FY12/12 is a nine-month period.

Figures from FY03/12 and before are simple sums of the two pre-merger companies.

FY12/12 is an irregular period of nine months, owing to a change in accounting methods.

## Assets

The largest item in assets is cash and deposits, followed by intangible fixed assets like software. Changes in assets during FY12/16 reflect an upturn in operating performance and the sale of Hi Corp. Kansai during FY12/16. At end FY12/18, current assets were up JPY357mn YoY at JPY3.4bn; fixed assets were down JPY24mn YoY at JPY1.0bn. During the year, cash and equivalents increased by JPY209mn. Meanwhile, accounts receivable declined by JPY44mn and intangible fixed assets declined by JPY32mn due to software depreciation.

At end FY12/18, the company held JPY80mn in investment securities. This centered on software-related companies in Japan and overseas that ArtSpark may have synergy with. As the group is oriented toward research and development, it believes that mergers and acquisitions, as well as partnership strategies, are important. It will consider M&A and tie-ups.

## Liabilities

At end FY12/18, on its consolidated balance sheet total liabilities were JPY881mn, of which current liabilities were JPY667mn and long-term liabilities were JPY214mn. Total liabilities trended down from FY12/14 to FY12/17 owing to a business turnaround and the sale of HI Corp. Kansai, but they increased modestly YoY in FY12/18.

## Net assets

At end FY12/18, net assets on the consolidated balance sheet were JPY3.5bn, up JPY309mn YoY. Accordingly, the equity ratio rose from 78.3% to 79.5%.

## Cash flow statement

Cash flow statement (JPY'000)	FY03/08 Simple sum	FY03/09 Simple sum	FY03/10 Simple sum	FY03/11 Simple sum	FY03/12 Simple sum	FY12/12 Cons. 9 mo.	FY12/13 Cons. Act.	FY12/14 Cons. Act.	FY12/15 Cons. Act.	FY12/16 Cons. Act.	FY12/17 Cons. Act.	FY12/18 Cons. Act.
Cash flows from operating activities (1)	100,877	228,683	297,551	1,154,289	273,344	137,818	358,484	672,554	837,494	1,435,075	1,021,462	1,007,074
Cash flows from investing activities (2)	-486,572	-933,578	-712,016	-916,091	-1,052,154	-622,300	-163,135	-508,476	-539,941	-551,610	-577,430	-550,631
<b>Free cash flow (1+2)</b>	<b>-385,695</b>	<b>-704,895</b>	<b>-414,465</b>	<b>238,198</b>	<b>-778,810</b>	<b>-484,482</b>	<b>195,349</b>	<b>164,078</b>	<b>297,553</b>	<b>883,465</b>	<b>444,032</b>	<b>456,443</b>
<b>Cash flows from financing activities</b>	<b>1,370,332</b>	<b>-22,001</b>	<b>-28,281</b>	<b>401,469</b>	<b>869,543</b>	<b>-355,593</b>	<b>-48,473</b>	<b>-238,659</b>	<b>-64,272</b>	<b>-58,486</b>	<b>-108,862</b>	<b>-250,865</b>
Depreciation and amortization (A)	191,641	235,534	355,424	520,037	655,477	469,339	519,223	574,714	595,441	651,849	687,552	534,377
Capital expenditures (B)	-394,729	-561,315	-588,708	-709,427	-980,638	-552,470	-563,377	-815,302	-631,804	-427,410	-550,392	-523,854
Working capital changes (C)	46,459	337,903	325,021	-178,753	216,754	-669,976	-51,624	273,932	-356,680	-233,133	49,579	73,415
<b>Simple FCF (NI + A + B - C)</b>	<b>-167,328</b>	<b>-698,327</b>	<b>-339,479</b>	<b>360,801</b>	<b>-797,710</b>	<b>-764,094</b>	<b>50,281</b>	<b>-454,562</b>	<b>355,108</b>	<b>794,722</b>	<b>462,372</b>	<b>271,252</b>

Source: Shared Research based on company data

Figures may differ from company materials due to differences in rounding methods.

The company was formed from a merger of Celsys, Inc. and HI Corp. in April 2012, and thus FY12/12 is a nine-month period.

Figures from FY03/12 and before are simple sums of the two pre-merger results.

FY12/12 is an irregular period of nine months, owing to a change in accounting methods.

In FY12/16, cash flows were affected by an upturn in operating performance and reflected the concentration and allocation of financial resources, including the selling of shares in HI Corp. Kansai. Cash flow conditions were favorable in FY12/18 as well, due to solid operating cash inflows. As a result, cash and equivalents rose by JPY206mn YoY to JPY2.6bn at end FY12/18.

### Cash flows from operating activities

Since being established in April 2012, the company has restructured, and cash flows from operating activities are trending upward, with annual inflows of over JPY1.0bn since FY12/16. In FY12/18, cash inflow from operating activities was JPY1.0bn, down JPY14mn YoY. The decrease was mainly due to an increase in inventories (work in process) (there was a JPY1mn increase in inventories in FY12/17, and an increase of JPY138mn in FY12/18).

### Cash flows from investing activities

For the company, whose main operation is development of software, cash flows from investing activities change mainly on acquisition of intangible assets. In FY12/18, ArtSpark spent a net JPY551mn on investing activities. Principal outflows included JPY477mn in acquisitions of software and other intangible assets, and JPY47mn for the purchase of tangible fixed assets.

### Cash flows from financing activities

There was an outflow of JPY251mn in cash flows from financing activities in FY12/18. The company paid down short-term debt worth JPY140mn, long-term debt worth JPY85mn, and paid out JPY27mn in dividends.

## News and topics

## Other information

### History

**ArtSpark Holdings Inc.** is a holding company, established in April 2012 as a result of the integration of Celsys, Inc. and HI Corporation. The companies are now wholly owned subsidiaries of ArtSpark. Celsys and HI were mainly operating in services for feature phones. ArtSpark was established to harness the popularity of smartphones, and build a competitive company by combining Celsys' application technologies in 2D graphics and HI's middleware technologies and design capabilities in 3D graphics.

**Celsys** was founded in May 1991. The company grew quickly by selling software enabling users to create animations and comics on personal computers. The company's software is used by more than 90% of TV animation studios in Japan. It also has a high market share in distributing electronic comics to mobile phones.

**HI** was established in April 1989. The company initially engaged in custom development of computer systems for corporate clients, but the success of MascotCapsule, a 3D rendering engine for mobile devices launched in 2001, helped fuel its performance in the following years. HI has delivered MascotCapsule to major telecom carriers and device manufacturers in the world. Its share is over 90% in the market of 3D rendering engines for feature phones in Japan.

History of ArtSpark and the two subsidiaries:

#### History of ArtSpark Holdings

Apr. 2012	Established as a joint holding company when Celsys, Inc. and HI Corp. were integrated. Listed on the TSE second section.
Feb. 2014	With the intent of expanding the UI/UX segment, subsidiary HI Corp acquires 91.7% of outstanding shares in HI Corporation Kansai, making HI Corporation Kansai a second-tier subsidiary.
Apr. 2014	With the intent of expanding the UI/UX segment, subsidiary HI Corp acquires 60.6% of outstanding shares in U'eyes Design, Inc., making U'eyes Design, Inc. a second-tier subsidiary.
Jun. 2015	Sells all shares in U'eyes Design, Inc. as part of restructuring.
Jul. 2016	Transfers all shares in HI Corp. Kansai held by consolidated subsidiary HI Corp.
Jan. 2019	Acquires shares of Socionext Embedded Software Austria GmbH (currently Candera GmbH) and made Candera a subsidiary.

#### History of Celsys, Inc.

May 1991	Establishment of Celsys. Starts custom production of media content.
Sep. 1993	Release of Retas!Pro Ver1, software for production of animations.
Aug. 2001	Release of ComicStudio Ver1.0, software to produce manga.
Nov. 2001	Starts mobile solutions for au (KDDI Corp, TSE1: 9433).
Nov. 2003	Release of Claytown, clay animation software for consumers.
Jan. 2004	Starts providing mobile solutions for NTT Docomo Inc. (TSE1: 9437).
Dec. 2004	Starts mobile solutions for Vodafone (now SoftBank Mobile Corp).
Feb. 2006	Overseas release of MangaStudio, the English-language version of ComicStudio.
Oct. 2006	Upgrade of manga viewer ComicSurfing to the total e-book viewer BookSurfing (BS Reader).



Dec. 2006	Listing of company's stocks on the Nagoya Stock Exchange's Centrex market (delisted in January 2011).
Dec. 2008	Release of Retas Studio all-in-one animation production package.
Apr. 2009	Release of the color painting and illustration tool ILLUSTRATION download edition.
Nov. 2010	Listing on the Second Section of the Tokyo Stock Exchange.
Nov. 2010	Celsys and Prime Works Co Ltd start providing the total e-book viewer BS Reader for Android for SoftBank Mobile's smartphones as preinstalled software.
Mar. 2011	Starts exclusive sale in Japan of Panelfly, North America's largest e-book solution. Comprehensive tie-up, development and sale of e-book solutions for iPhone and iPad.
Apr. 2011	E-book solutions of Celsys and Voyager Japan Inc. are adopted by LISMO Book Store, a KDDI e-book store.

## History of HI

Apr. 1989	HI Co Ltd established for custom development of systems for corporate clients and providing programming seminars for advanced learners.
Oct. 1992	HI is officially incorporated.
Dec. 1996	Starts development and sale of packaged software.
Mar. 2001	MascotCapsule V1, the world's first real-time 3D rendering engine for mobile phones, is introduced.
Mar. 2001	Begins integrating MascotCapsule with mobile phones for J-Phone Group (now SoftBank Mobile).
Apr. 2001	Shifts the core target of development from PC software to mobile content.
May 2002	NTT Docomo adopts MascotCapsule for its mobile phones.
Mar. 2003	KDDI begins integrating MascotCapsule with its mobile phones.
Apr. 2003	Enters an alliance with Macromedia Inc. (now Adobe Systems Inc.) of the US and Bandai Networks Co Ltd of Japan on integrating Adobe Flash Lite with NTT Docomo's mobile phones.
May 2003	Signs a license agreement on MascotCapsule with Motorola Inc. (USA).
Jan. 2004	Signs a license agreement on MascotCapsule with Sweden's Sony Ericsson Mobile Communications AB.
Sep. 2004	Victor Co of Japan (now JVC Kenwood Corp, TSE1: 6632) adopts MascotCapsule for its hard disk camcorder, the first-ever mounting on a home electronics device.
Sep. 2004	Signs a license agreement on MascotCapsule with Qualcomm Incorporated (USA).
Jun. 2005	Signs a license agreement on MascotCapsule with Samsung Electronics Co Ltd (South Korea).
Aug. 2005	Signs license agreement for MascotCapsule with LG Electronics Inc. (South Korea).
Oct. 2005	Starts integrating MascotCapsule with Willcom Inc.'s mobile phones.
Apr. 2006	Signs a license agreement for MascotCapsule with Sagem Communication (France).
Apr. 2007	HI stock listed on the JASDAQ Securities Exchange.
Jun. 2008	Signs a license agreement with Sun Microsystems Inc. (USA).
Oct. 2009	Signs a license agreement with Pantech Co Ltd (South Korea).

## Shareholder return

The company recognizes that returning profits to shareholders is important and, going forward, will seek to improve return to shareholders in the form of dividends by setting its dividend payout based on the level of earnings, while at the same time balancing the need for internal reserves to assure the company has the financial wherewithal to cope with changes in the operating environment. As part of this policy, the company intends to make a single dividend payment at the end of each fiscal year. The internal reserves the company is looking to fortify will be used as a source of internal capital to fund systems development work, the hiring of additional personnel, and other investment spending needed to sustain growth in the future.

## Major shareholders

Top shareholders	As of December 31, 2018	
	Shares held	Shareholding ratio
SMBC Nikko Securities Inc.	145,900	2.15%
Rakuten Securities, Inc.	133,900	1.97%
Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.	93,700	1.38%
CREDIT SUISSE SECURITIES (USA) LLC SPCL. FOR EXCL. BEN (Standing proxy: Credit Suisse Securities Co., Ltd.)	76,100	1.12%
MSIP CLIENT SECURITIES (Standing proxy: Morgan Stanley MUFG Securities Co., Ltd.)	68,632	1.01%
Japan Trustee Services Bank, Ltd. (Trust account)	65,100	0.96%
Matsui Securities Co., Ltd.	57,900	0.85%
Mieko Kobayashi	56,200	0.83%
Yuya Takada	54,000	0.79%
Tatsuro Miyata	50,200	0.74%
<b>SUM</b>	<b>801,632</b>	<b>11.80%</b>

Source: Shared Research based on company data

## Top management

ArtSpark President **Shinya Nozaki** (born 1965) graduated from Nihon Kogakuin College in 1987 and joined Suda International Gear Works, Ltd. After moving to Cadix, Co., Ltd., he established Celsys, Inc. in 1991, serving as its representative director and president. He was appointed as Representative Director and President in March 2016 after the former Representative Director, Chairman, and President Yosuke Kawakami, who was also one of the founders of Celsys, Inc., resigned from his post.

## Employees

As of end December 2018, ArtSpark Holdings had 176 employees on a consolidated group basis, of which 15 are holding company employees.

## Other

The company's name is ArtSpark Holdings. The Art component encompasses a variety of meanings, such as technology, design, and creative works. The Spark component reflects the idea of companies involved in these fields forming a group, and sparking with light as they fire each other up.

## Glossary

Glossary sources include company materials and BINARY, an IT term dictionary.

**Engine:** In the field of IT, an engine is a program that processes input data according to preset aims and rules and returns outputs. It also refers to general-purpose software that performs a core or essential function for other programs in a system.

**Rendering engine:** In graphic design, a rendering engine is software, equipment or a system that processes sets of data denoting images and content of screens (figures, parameters of equations and descriptions of drawing rules) with computer programs and constitutes concrete sets of image pixels. The process is called rendering, which adds shading, color and lamination to a 2-D or 3-D wireframe. The word rendering engine is not used for a single application or system, but for a factor or part of some software or a system that shoulders a drawing function. Depending on objects of drawings, there are such types as a 3D rendering engine (for 3D graphics) and an HTML rendering engine (for displaying web pages).

**BS Reader:** BS Reader is an application for viewing e-books developed by Celsys and distributed jointly with Voyager Japan Inc. and Neos Corp. Users can browse e-books based on the BookSurfing (ComicSurfing) format of Celsys and those on the book format of Neos. There are applications for Japanese mobile phones, iOS devices and Android terminals, and BS Reader for Browser can be used for Windows and Mac PCs. In viewing comics, additional effects can be added, such as expansion of a small frame of manga into a full display of a mobile phone and inserting background music or sound effects.

**BS BookStudio:** BS BookStudio is an integrated tool to produce analog or digital manuscripts into content for distribution. It contains a professional tool for each working process, covering all production stages from scanning, author's review to generation of distribution data. As there are abundant functions to produce content for feature phones, smartphones and tablets, users can efficiently produce content usable for multiple devices.

**CLIP STUDIO PAINT:** CLIP STUDIO PAINT can represent all processes of manga production in a digital environment, from making storyboards, frame cutting, inking, toning, to the inputting of speech into balloons. There are abundant plugins of fonts, screen tones and others. Pen tablets are usually used for works. There are such functions as 2DLT rendering function, which automatically converts data into drawing lines and tones, and 3DLT rendering function, which imports 3D modeling data and automatically converts the data into drawing lines and tones.

**MascotCapsule:** HI's 3D rendering engine for embedded devices. As the engine needs neither an FPU (floating point unit) for calculation nor a large amount of memory, it is appropriate for embedded devices and mobile phones with limited resources. It has been adopted for mobile phones of all carriers in Japan, NTT DoCoMo, au (KDDI/Okinawa Cellular), SoftBank Mobile, Willcom and Emobile, and overseas makers like Motorola, Sony Ericsson Mobile Communications and Samsung Electronics, with accumulated global shipments of cell phones mounting the engine surpassing 600mn units (end March 2010).

**Retas Studio:** Celsys' software suite for production of animations. Its former name was Retas! (Revolutionary Engineering Total Animation System), which is the company's registered trade mark. Celsys is engaged in the development of software for production of animations and manga and content services for comics for mobile phones and e-books. Retas Studio has widely penetrated production studios of animations in Japan.

**UI/UX:** UI is short for User Interface and UX is short for User Experience. UI is designed to link products and services to users. In the case of a software product, UI is a display viewed by the user, i.e., a point between equipment and man that has a large influence on the sense of use of the equipment. UX is how users feel about products and services and how they respond to them. UX refers to aesthetics, usability and reliability.

## Profile

<b>Company name</b>	<b>Head office</b>
ArtSpark Holdings Inc.	Nishi-Shinjuku, Shinjuku-ku, Tokyo, Japan 4-15-7
<b>IR Phone</b>	<b>Listed on</b>
+81-3-6820-9590	Tokyo Stock Exchange, second section
<b>Established</b>	<b>Exchange listing</b>
2012/04/02	2012/04/02
<b>Website</b>	<b>Fiscal year-end</b>
<a href="http://www.artspark.co.jp/">http://www.artspark.co.jp/</a> (Japanese only)	December
<b>IR web</b>	
<a href="http://www.artspark.co.jp/irinfo/">http://www.artspark.co.jp/irinfo/</a> (Japanese only)	-
<b>IR mail</b>	<b>IR phone</b>
ir@artspark.co.jp	03-6820-9590

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Aeon Fantasy Co., Ltd.	Grandy House Corporation	ONWARD HOLDINGS CO.,LTD.
Ai Holdings Corporation	Hakuto Co., Ltd.	Pan Pacific International Holdings Corporation
ANEST IWATA Corporation	Happinet Corporation	PARIS MIKI HOLDINGS Inc.
AnGes Inc.	Harmonic Drive Systems Inc.	PIGEON CORPORATION
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Arealink Co.,Ltd.	i-mobile Co.,Ltd.	RVH Inc.
Artspark Holdings Inc.	Inabata & Co., Ltd.	RYOHIN KEIKAKU CO., LTD.
AS ONE CORPORATION	Infocom Corporation	SanBio Company Limited
Ateam Inc.	Infomart Corporation	SANIX INCORPORATED
Aucfan Co., Ltd.	Intelligent Wave, Inc.	Sanrio Company, Ltd.
AVANT CORPORATION	ipet Insurance CO., Ltd.	SATO HOLDINGS CORPORATION
Axell Corporation	istyle Inc.	SBS Holdings, Inc.
Azbil Corporation	Itochu Enex Co., Ltd.	Seikagaku Corporation
AZIA CO., LTD.	JSB Co., Ltd.	Seria Co.,Ltd.
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Benefit One Inc.	Japan Best Rescue System Co., Ltd.	SMS Co., Ltd.
B-lot Co.,Ltd.	JINS Inc.	Snow Peak, Inc.
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Career Design Center Co., Ltd.	KAMEDA SEIKA CO., LTD.	SOURCENEXT Corporation
Carna Biosciences, Inc.	Kenedix, Inc.	Star Mica Co., Ltd.
CARTA HOLDINGS, INC	KFC Holdings Japan, Ltd.	Strike Co., Ltd.
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Chiyoda Co., Ltd.	Kondotec Inc.	Synchro Food Co., Ltd.
Chugoku Marine Paints, Ltd.	Kumiai Chemical Industry Co., Ltd.	TAIYO HOLDINGS CO., LTD.
cocokara fine Inc.	Lasertec Corporation	Takashimaya Company, Limited
COMSYS Holdings Corporation	LUCKLAND CO., LTD.	Take and Give Needs Co., Ltd.
CRE, Inc.	MATSUI SECURITIES CO., LTD.	Takihyo Co., Ltd.
CREEK & RIVER Co., Ltd.	Medical System Network Co., Ltd.	TEAR Corporation
Daiseki Co., Ltd.	MEDINET Co., Ltd.	Tenpo Innovation Inc.
DIC Corporation	MedPeer,Inc.	3-D Matrix, Ltd.
Digital Arts Inc.	Mercuria Investment Co., Ltd.	TKC Corporation
Digital Garage Inc.	Milbon Co., Ltd.	TOKAI Holdings Corporation
Dream Incubator Inc.	MIRAIT Holdings Corporation	Tri-Stage Inc.
Earth Corporation	Monex Goup Inc.	VISION INC.
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FIELDS CORPORATION	Nihon Denkei Co., Ltd.	Yushiro Chemical Industry Co., Ltd.
Financial Products Group Co., Ltd.	Nippon Koei Co., Ltd.	ZAPPALLAS, INC.
FreeBit Co., Ltd.	NIPPON PARKING DEVELOPMENT Co., Ltd.	
FRONTEO, Inc.	Nisshinbo Holdings Inc.	

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