Manufacturing Market INSIDER™

inside the contract manufacturing industry

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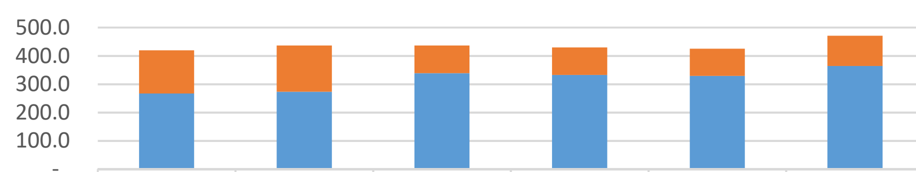
Positive Growth for the Contract Manufacturing Services Industries

The last time there was any significant growth in the EMS industry was in 2014, when the market expanded by 24 percent; then it stayed flat through 2016. But in 2017 the contract manufacturing market experienced good growth again, expanding by 10.8%. This growth was achieved in both the EMS and ODM industries, which expanded by 10.7% and 10.9%, respectively, in 2017. By far the largest growth occurred in the total assembly telecom sector among commodity smart phones, accounting for 35.5% growth in 2017. The industrial and medical markets experienced 5.8% and 5.5% growth, followed closely by the automotive market at 4.7%. The consumer and computer electronics sectors experienced a downturn of 10.2% and 5.6% percent as a result of slumping demand for digital televisions and computer products. The defense/aerospace and commercial avionics market had a combined growth of 4.0%, with the strongest expansion coming from the commercial sector.

Table 1 (p. 2) summarizes the assembly of electronics products by manufacturing type and industry segment for 2017. Most noteworthy is the percentage of EMS and ODM revenue from the computer and communications (IT) sectors. These two sectors ostensibly accounted for approximately 69 percent of total CM revenue and an incredible 83 percent of ODM revenue, as the latter suppliers are concentrated in the computer, communications, and consumer electronics sectors. EMS companies tend to be more general-purpose manufacturers compared with ODMs, and usually specialize in high-complexity and high-mix assemblies. It is interesting to note that a substantial proportion of available manufacturing remains in-house, particularly among the Japanese, Korean, and Chinese OEMs. Additionally, there is a large proportion of the market that cannot be readily outsourced, as the assemblies are too low in volume and high in complexity, or contain proprietary information or designs that should remain in-house.

Because of price pressures, as well as economies of scale in purchasing, OEM outsourcing is likely to grow again over time. There are periods of market contraction, as evidenced in 2009 and in the last three years. In previous years, *MMI* has tracked a number of mergers and acquisitions that redistributed the market share of leaders, as is normal for any market. Lower-tier EMS companies tend to make attractive acquisition targets, as they can provide a strategic solution such as the provision of a regional footprint, access to specific customers, technical capabilities, or positive cash flow. Most EMS companies cannot succeed via organic growth alone, but must supplement growth by acquiring weaker EMS players or suppliers that have good customer bases or regional control.

Figure 1: The Worldwide CM Market ($M), 2012–2017



	2012	2013	2014	2015	2016	2017
ODMs	152.1	163.3	98.0	97.5	95.9	106.4
EMS	267.4	273.4	338.7	332.6	329.2	364.5

Some articles in this issue

Communications

The CM communications market stayed relatively flat in 2015 and 2016 but expanded to nearly $545 billion in 2017 (+ $66 billion), achieving its highest growth ever in a single year. Tier 1 suppliers continue to dominate this segment, with Foxconn achieving $79 billion in assembly revenue in 2017 (up $21 billion from 2016), followed somewhat distantly by Pegatron ($22 billion) and Flex ($11 billion). This industry is expected to continue to grow as smart phones replace computers and tablets due to their comparable computing power. EMS firms still overwhelm this segment as a result of Foxconn's dominance, although ODMs are developing low-cost feature phones as a specialty in emerging economies.

Computers/Peripherals

The CM computer market decreased by over $20 billion in 2017 as desktop computers and tablets experienced a weakening in demand. Leading EMS companies in 2017 were Foxconn, Jabil, and Pegatron, whereas leading ODMs in 2017 were Quanta Computer, Compal Electronics, Inventec, and TPV. EMS firms still dominate this segment in 2017, although ODMs are driving LCD panel technology as a specialty. The computer market segment also includes peripherals such as monitors, storage systems, and printers. Monitors and printers are manufactured mostly in China today, as HP, Canon, and Epson either outsource or utilize their captive suppliers for assembly.

Consumer Electronics

The consumer electronics market segment declined by more than $18 billion in 2017 as a result of a slump in demand for digital TVs and other commodities that are experiencing shake-out. Once again, Foxconn was the largest player, with almost $26 billion in revenue, mostly involving LCD/LED display products (TVs, monitors, etc.) since its purchase of Sharp in 2016. EMS firms continue to dominate this segment (thanks to Foxconn). The most popular products were LED televisions, set-top boxes, and video game consoles.

Table 1: Worldwide Electronics Market by Source and Industry, 2017

Total Assembly ($M)	EMS	ODM	OEM	Total	Percent
Computer	151,700	20,910	167,544	340,155	22.6%
Communications	85,005	66,961	393,016	544,983	36.2%
Consumer	55,293	15,798	177,640	248,731	16.5%
Industrial	29,814	1,225	95,445	126,483	8.4%
Medical	18,359	194	49,082	67,636	4.5%
Automotive	12,644	1,334	90,988	104,966	7.0%
Aviation/Defense/Other	11,726	-	59,468	71,195	4.7%
Total	**364,542**	**106,423**	**1,033,184**	**1,504,149**	**100.0%**

Industrial

The CM market for industrial products increased by $7 billion in 2017. Flex emerged as the largest supplier to this segment, followed by Foxconn, Pegatron, and Jabil. Other industrial sectors, like clean energy, robotics, and HVAC, benefited. The ODM supplier market increased significantly in size due to growth opportunities in the APAC region.

Medical

The CM medical equipment market increased $3.5 billion in 2017, mainly resulting from new EMS opportunities. Jabil, Flex, and Sanmina are the leading suppliers in this category, followed somewhat distantly by Plexus, Venture, and Benchmark. The majority of outsourced medical product assemblies are performed by small to medium-sized EMS companies worldwide. ODM suppliers experienced a flat year in revenue for medical products in 2017, as assembly and outsourcing tend to be local and among the Tier 2–4 supplier base.

Automotive

The automotive market segment continues to be one of the bright spots in the CM market as the latest electronic guidance (self-driving) and navigation systems become more essential to the automobile. Growth in the automotive sector was approximately $5.0 billion in 2017. OEMs prefer to outsource noncritical assemblies, such as instrument panel subsystems containing a microcontroller and sensors (federally mandated assemblies such as emission control and ABS are typically not outsourced).

Commercial Aviation, Defense, and Other Transportation

The combined market segment for all aerospace and military/defense spending for electronic assemblies increased by only $2.6 billion in 2017, despite the dramatic increase in spending for in-flight devices, including on-board entertainment and Internet services. North American top-tier EMS firms are the primary suppliers to this sector and include Celestica, Ducommun, Plexus, and Sanmina.

Table 2: Top 10 CMs in Growth	2016 ($M)	2017 ($M)	Percent
Pan-International Industrial	571	863	51.1%
PC Partner	752	1,098	46.0%
Fabrinet	977	1,420	45.4%
V.S. Industry	526	763	45.1%
Venture	2,083	2,901	39.3%
Wistron	20,478	27,501	34.3%
SMT Technologies	258	343	32.9%
Accton	908	1,199	32.0%
IMI	843	1,091	29.4%
Compal Electronics	23,795	29,197	22.7%

While the market for EMS may have been flat for the last few years, there were some surprising winners in terms of revenue growth in 2017. Table 2 (p. 2) summarizes the top ten companies with the highest revenue growth in 2017.

Pan-International's growth was entirely organic, but the company will not share with us the secret of its success. PC Partner is an Asian ODM that achieved growth in the computer industry where others could not. Fabrinet achieved exceptional growth as a result of its focus on the optical devices market for the communications sector. V.S. Industry is one of the top performers in the EMS industry, *MMI* has found. Venture has been secretive about its growth strategy, which resolves around its customer base of HP and Cisco. Wistron has benefited from its assembly of Apple products. IMI has leveraged its growth through acquisitions and concentration on the automotive sector, in which it was ranked fifth worldwide in 2017.

The above discussion is excerpted from The Worldwide Electronics Manufacturing Services Market – 2018 Edition*, by* ***NVR.***

Healthy Start for North American Group

For a group of eight mid-tier and smaller EMS providers based in North America, combined Q1 sales grew from the year-earlier period. The group's revenue rose 9.6% year over year, as the group started on a positive note with strong growth on which to build in subsequent quarters. The US economy started on a stronger footing, too, which increased at an annual rate of 2.3 percent in the first quarter of 2018, according to the estimate released by the Bureau of Economic Analysis. Thus, this North American group as a whole outgrew the US economy by 730 basis points versus a year earlier, which could be a good sign. If the group can continue to maintain this growth rate for the rest of the year, then it should see annual growth above what is projected for the economy; the International Monetary Fund is estimating 2.7% GDP growth for the US economy in 2018.

This North American group of eight mid-tier and smaller providers posted weaker annual growth in a comparison with a cohort of large competitors. On a year-over-year basis, collective sales growth of the mid-tier and smaller providers in Q1 was 110 percentage points lower than that of the six largest US-traded EMS providers (Chart 1, p. 4). Overall, bigger was better in this analysis.

In a quarter-over-quarter comparison, however, the six US-traded EMS providers posted an inferior result, with a sales decline of –4.7% versus an increase of 4.4% for the eight North American EMS providers.

Q1 revenue for the mid-tier and smaller group totaled $729.7 million, compared with $665.7 million in the same period a year ago. Year-on-year sales declines at three providers were essentially offset by increases at five providers. **IEC Electronics** recorded by far the highest sales growth at 48.7%. **Kimball Electronics** came in at second with 15.3% growth year over year. **Nortech Systems** posted the biggest decline, at –6.6%; **KeyTronic** had a –4.6% decline and **Sparton** a –1.5% decline (Table 3, below).

Versus the prior quarter, Q1 sales for the group of eight increased 4.4%.

Table 3: 1Q2018 and Year-over-Year GAAP Results for Eight Mid-Tier and Smaller EMS Providers Based in North America (M$ or %)

Company	1Q18 Sales	4Q17 Sales	Qtr.–Qtr. Chg.	1Q17 Sales	Yr.–Yr. Chg.	1Q18 Gross Marg.	4Q17 Gross Marg.	1Q17 Gross Marg.	1Q18 Oper. Marg.	4Q17 Oper. Marg.	1Q17 Oper. Marg.	1Q18 Net Inc.	4Q17 Net Inc.	1Q17 Net Inc.
Stand-Alone EMS Providers														
KeyTronic	108.4	111.7	–3.0	113.6	–4.6	7.5%	7.9%	8.0%	0.7%	1.5%	1.6%	0.6	–2.3	1.0
Sparton	93.9	97.8	–4.0	95.4	–1.5	16.9%	18.9%	15.5%	2.5%	3.9%	1.6%	0.6	–9.0	0.4
SMTC	37.1	34.4	7.8	33.2	11.7	10.4%	7.5%	10.7%	0.9%	–0.8%	–0.6%	<0.1	–0.9	–0.4
SigmaTron	65.7	73.0	–9.9	62.2	5.7	9.0%	9.7%	9.2%	0.4%	2.0%	0.5%	0.0	0.7	0.0
IEC Electronics	31.8	21.2	50.2	21.4	48.7	15.1%	7.2%	10.7%	5.9%	–6.0%	–1.8%	1.6	–1.5	–0.6
Nortech Systems	26.4	25.6	3.4	28.3	–6.6	11.4%	8.4%	10.9%	–0.5%	–3.4%	–0.8%	–0.4	–2.2	0.0
Kimball Electronics	283.9	258.2	3.4	232.9	15.3	8.1%	8.1%	8.0%	3.9%	3.9%	4.1%	10.7	8.3	8.1
Subtotal/Avg.	**647.3**	**621.8**	**4.1**	**587.0**	**10.3**							**13.3**	**–6.9**	**8.4**
EMS Unit of Larger Public Company														
Ducommun**	82.4	77.2	6.7	78.7	4.7									
Total/Avg.	**729.7**	**699.0**	**4.4**	**665.7**	**9.6**									

**Financial Data for Ducommun LaBarge Technologies (DLT) segment of Ducommun, Inc. has been included.

Chart 1: Q1 Sales Growth Year Over Year

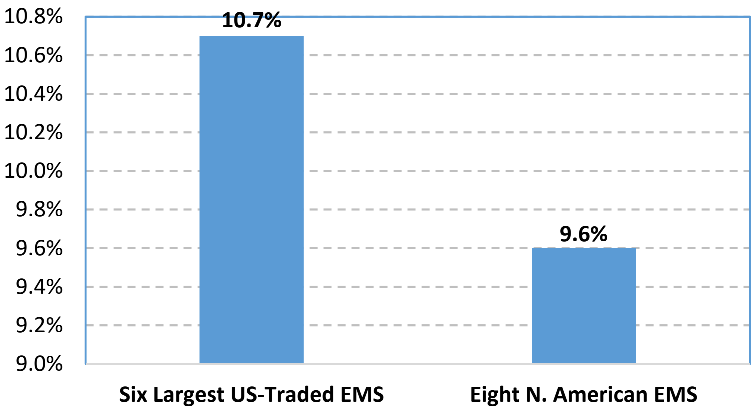
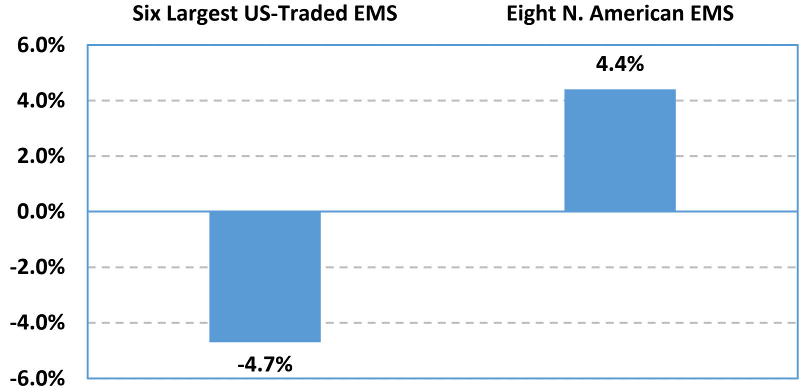


Chart 2: Q1 Sales Growth Quarter to Quarter



As stated above, the six largest US-traded EMS firms were considerably outperformed by the mid-tier and smaller providers (Chart 2). It appears that the mid-tier and smaller providers, despite being collectively more subject to seasonality due to their significant amounts of consumer and computing sales, are holding their own in Q1.

Five out of the eight North American providers saw their Q1 sales increase from the prior quarter, with IEC Electronics registering two-digit growth. The sequential increases at those five providers outweighed the declines at the other three players—**SigmaTron**, Sparton, and KeyTronic (Table 3).

The group of eight mid-tier and smaller providers consists of seven companies in the EMS space, all publicly traded, and one EMS unit, which is **Ducommun LaBarge Technologies** (DLT, a.k.a. the Electronic Systems division), a unit within the larger publicly held corporation that is Ducommun.

For the seven stand-alone providers, net income in Q1 amounted to $13.3 million, up from a combined net loss of $6.9 million in the prior quarter and up from net income of $8.4 million a year earlier. The year-over-year increase in net income occurred in tandem with a 10.3% increase in sales versus a year ago. Q1 net margin came in at 2%, up 62 basis points year over year. Four of seven providers reported an increase in net income compared to a year ago.

A Brief Look at Each Provider

KeyTronic Corporation (NASDAQ: KTCC). For the third quarter of its fiscal year 2018, KeyTronic reported total revenue of $108.4 million, compared to $113.6 million in the same period of fiscal year 2017. For the first nine months of fiscal year 2018, total revenue was $329.3 million, compared to $349.3 million in the same period of fiscal year 2017.

For the third quarter of fiscal year 2018, the company had net income of approximately $0.6 million or $0.06 per share, compared to net income of $1.0 million or $0.09 per share for the third quarter of fiscal year 2017. As expected, the results for the third quarter of fiscal year 2018 include expenses in connection with a binding arbitration hearing and severance expenses related to streamlining the company's facilities in Mexico, totaling $0.10 per diluted share. For the first nine months of fiscal year 2018, net income was $0.9 million or $0.08 per share, compared to net income of $4.3 million or $0.39 per share for the same period of fiscal year 2017.

For the third quarter of fiscal year 2018, gross margin was 7.5% and operating margin was 0.7%, compared to 8.0% and 1.6%, respectively, in the same period of fiscal 2017.

For the fourth quarter of fiscal year 2018, the company expects to report revenue in the range of $112 million to $117 million, and earnings in the range of $0.11 to $0.16 per diluted share. These expected results assume an effective tax rate of 20% in the quarter.

Most of company's new programs continued to ramp steadily during the third quarter of fiscal 2018, though its productivity was adversely impacted by industry-wide shortages in key components and an unexpected delay from one large new customer.

At the same time, the company has continued to win significant new business from both EMS competitors and existing customers, including five new programs involving gaming equipment, medical devices, and a consumer security product.

Sparton Corporation (NYSE: SPA). For 3Q2018, the company reported net sales of $93.9 million. Gross profit margin was 18.8%. SG&A expenses were $13.3 million, or 14.1% of sales; adjusted SG&A was $12.8 million, or 13.7% of sales. Adjusted EBITDA was $6.0 million, a 6.4% adjusted EBITDA margin.

On March 5, 2018, Sparton Corporation ("Sparton") announced the termination by Sparton and Ultra Electronics Holdings plc ("Ultra") of their July 7, 2017 merger agreement as a result of the staff of the United States Department of Justice (the "DOJ") informing the parties that it intended to recommend that the DOJ block the merger.

The year-to-date free cash flow was affected by an increase in accounts receivable, principally derived from domestic sonobuoy production. This increase was as a result of the timing of production, and payments on such receivables are anticipated in Q4. Additionally, the company continues to work with its banks, and recently amended its credit facility.

Also on March 5, 2018, Sparton announced that, during the DOJ's review of Sparton's proposed merger with Ultra, the United States Navy (the "Navy") expressed the view that instead of the parties proceeding with the merger, each party should enhance its ability to independently develop, produce, and sell sonobuoys and over time work toward eliminating their use of the Sparton and Ultra joint venture for such activities.

SMTC Corporation (NASDAQ: SMTX). Revenue for the first quarter 2018 was $37.1 million, up 11.7% from $33.2 million in the first quarter of 2017. Gross profit was $3.9 million or 10.4%. Net income was $8,000, or $0.00 per share, an improvement of $385,000, compared to a net loss of ($377,000) or $(0.02) reported in the first quarter of 2017. Adjusted EBITDA was $0.9 million in the first quarter of 2018 compared to –$0.3 million in the first quarter of 2017 and $1.2 million in the fourth quarter of 2017. The decrease in the first quarter of 2018 compared to the prior quarter was due to expected lower seasonal revenue in the first quarter.

SigmaTron International, Inc. (NASDAQ: SGMA). Revenues increased to $65.7 million for the third quarter of fiscal 2018 from $62.2 million for the same quarter in the prior year. Net income for the quarter was $31,338 compared to a net loss of $47,852 for the same period in the prior year. Basic and diluted earnings per share were each $0.01 for the quarter ended January 31, 2018, compared to basic and diluted loss per share each $0.01 for the same quarter in fiscal 2017.

Sales volume increased for the three- and nine-month periods ended January 31, 2018 as compared to the prior year in the industrial electronics, fitness, gaming, auto, and medical/life science marketplaces. During the three- and nine-month periods ended January 31, 2018, sales in the consumer electronics and appliance marketplaces decreased compared to the same period in the prior year. Sales in the first nine months increased due to increasing demand from existing and new customers.

The company reported a small profit for the third fiscal quarter ended January 31, 2018. This was the result of a slowing trend in revenue due to the holidays and customers evaluating inventory levels. This, coupled with the continued component shortages, had the dual effect of lowering revenue and increasing inventory levels. The component shortages will continue into the fourth fiscal quarter. The component shortages have been driven by the overall stronger economy and increased emphasis on electric vehicles and server farms as well as cell phones.

IEC Electronics Corp. (NYSE: IEC). IEC reported revenues of $31.8 million for the second quarter of fiscal 2018, an increase of nearly 49% as compared to revenues of $21.4 million for the second quarter of fiscal 2017. Gross profit margin for the second quarter of fiscal 2018 was 15.1% as compared to 10.7% in the same quarter of 2017. Selling and administrative expenses increased on a dollar basis to $2.9 million, but decreased as a percentage of sales to 9.2%, as compared to $2.7 million or 12.5% of sales in the second quarter of fiscal 2017. The company reported net income of $1.6 million for the second quarter of fiscal 2018, or $0.15 per share, compared to a net loss of $0.6 million, or a loss of $0.06 per share, in the second quarter of fiscal 2017.

Revenues for the first six months of fiscal 2018 increased 25% to $52.9 million as compared to $42.3 million in the same period of fiscal 2017. Gross profit margin for the first six months of fiscal 2018 was 11.9% as compared to 9.6% in the first six months of fiscal 2017. Selling and administrative expenses increased on a dollar basis to $5.7 million, but decreased as a percentage of sales to 10.8%, as compared to $5.1 million or 12.0% of sales in the first six months of fiscal 2017. Net income for the first six months of 2018 was $1.1 million, or $0.11 per share, compared to a net loss of $1.5 million, or a loss of $0.14 per share, in the same prior-year period.

The company has delivered strong second-quarter results, characterized by significant revenue growth, gross margin improvement, and a return to profitability. As expected, its conversion of backlog to sales improved during the quarter, including the shift of several program deliveries from the first quarter to the second quarter. Importantly, its sales pipeline and backlog continue to grow as a result of its ability to generate new program activity from existing customers and to attract new customers.

Robust Q1 Growth for European Group

First-quarter sales in euros for a group of five European EMS providers rose 14% year over year, considerably above the European Union's GDP growth rate. Revenue for the five mid-sized providers totaled €475.4 million, up from €416.9 million in the year-ago quarter. As a group, the five providers made a good start in 2018 with a healthy year-over-year increase in Q1.

Sales grew from a year earlier at all of the five providers and all five were able to achieve double-digit gains (Table 4, p. 6). At **Neways Electronics International**, Q1 net turnover increased fully organically by 13.7% on a year-over-year basis. The semiconductor and industrial sectors made particularly strong contributions to the higher turnover. Turnover in the medical and automotive sectors remained at the same level as in 1Q2017, while turnover from the defense sector declined slightly.

Neways recorded a 15.6% year-on-year increase in order intake in the first quarter. The order book stood at €281.8 million at the end of the quarter, a significant increase from the €205.9 million at the end of March 2017. The increase in the order book was largely the result of higher demand in the automotive sector. The increases in order intake and order book reflect continued growth, especially in the semiconductor, industrial, and automotive sectors. The order book was also higher than at year-end 2017 (€263.6 million).

As for **Scanfil**, its Q1 sales increased by 14.2% year over year. Its turnover was €139.6 million and operating profit €10.3 million. The first-quarter turnover increase was supported by growth in almost all customer segments, especially the "Other Industries" customer segment. Turnover was very good and grew with new customers by €13.8 million (107.6%). The "Medtech, Life Science & Environmental Measurements" customer segment grew €4.9 million (24.4%) from the previous year. In the "Networks & Communications" segment, however, there was a decline. The largest customer accounted for 11% of turnover and the top ten customers accounted for 58% of turnover.

At **LACROIX Electronics**, Q1 sales increased 12.3% year over year. LACROIX Electronics confirms its dynamic growth, which continues to be driven by business in Poland and supported by positive contributions from all its industrial sites.

Kitron saw its Q1 revenue grow 11.3% from a year earlier in its NOK reporting currency. Revenue growth compared to the same quarter last year was particularly strong in the Industry market sector. Energy/Telecoms and Medical Devices also recorded solid growth, while Defense/Aerospace declined. Offshore/Marine grew from a very low level. Orders received in the quarter were NOK514 million (NOK 620 million), a decrease of 17%, illustrating that there will be variations from quarter to quarter, particularly within Defense/Aerospace, although the underlying trend is intact. Revenue from customers in the Swedish market represented a 41.1% share of the total revenue during the first quarter (43.1%). The Norwegian market represented 17.5% of Kitron's total revenue in the first quarter (24.0%). The Defence/Aerospace sector revenue decreased by 21.0% compared to last year. The Energy/Telecoms sector revenue increased by 12.0% compared to last year. Revenue in the Medical Devices sector increased by 8.6% compared to the same period last year. For 2018, Kitron expects revenue to grow to between NOK2,500 and NOK2,700 million.

Finally, **Connect Group** reported that Q1 sales increased by 19.5% from the same period last year. Taking account of the gap caused by the loss of the ASML business in mid-2016 (€9.7 million), this can be equated with a 16.7% increase in turnover through increased sales of its product range to existing and new customers. The increase was mainly achieved in its plants in the Czech Republic and Romania, meaning that these plants were under great pressure over the last few months to boost their production capacity. On the positive side, orders are up to almost €117 million, the highest level ever known at Connect Group. In mid-2018, company expects to gain further production space in its Romanian subsidiary.

Table 4: 1Q2018 Results for Five European EMS Providers (M€ or %)

Company (in order of 1Q18 sales)	Headquarters	Reports in Euros	1Q18 Sales	1Q17 Sales	Yr.–Yr. Chg.
Neways Electronics International	Netherlands	Yes	122.3	107.6	13.7%
Scanfil	Finland	Yes	139.6	122.2	14.2%
LACROIX Electronics	France	Yes	79.3	70.6	12.3%
Kitron	Norway	No	68.7	61.7	11.3%
Connect Group	Belgium	Yes	65.5	54.8	19.5%
Total/Avg.			**475.4**	**416.9**	**14.0%**

Results in non-euro currencies were converted to euros by applying a three-month average exchange rate for the corresponding quarter. Average exchange rates were obtained from OANDA. Note: For Connect Group we have considered its second-half 2017 figures.

Company News

VTech to Acquire Manufacturing Facility from Pioneer Corporation

VTech Holdings, Limited announced that it has signed an agreement with Pioneer Corporation under which VTech will acquire a manufacturing facility in Malaysia owned by **Pioneer Technology** (Malaysia) Sdn. Bhd., a subsidiary of Pioneer Corporation.

The acquisition of the manufacturing facility includes its fixed assets and business in manufacturing high-performance audio equipment tailored for DJs, producers, and artists to inspire their work and performance. This will strengthen VTech Contract Manufacturing Services' (CMS's) leading position as a manufacturer of professional audio equipment. It also adds 25% to its manufacturing capacity, with further potential for expansion.

This acquisition will further enhance VTech CMS's expertise in professional audio equipment. As part of its strategic initiatives, the addition of a manufacturing site outside of China expands its global footprint in serving the needs of its customers.

VTech will fund the transaction through internal resources. The acquisition is expected to close in the third quarter of

2018 and is subject to certain closing conditions in the agreement.

Jabil Expands in Israel with Opening of Optics Technology Innovation Center

Green Point, a division of **Jabil, Inc**. (NYSE: JBL), announced the opening of its new 2,000-square-meter Optics Technology Innovation Center in Haifa, Israel. This development and manufacturing center will provide the Israeli tech community—already recognized for driving worldwide innovations—with additional opportunities in computational cameras, projection systems, and combined solutions.

The new Jabil Optics facility, located in the Matam Park in Haifa, meets the growing demands of Jabil customers who are looking for specialized expertise and resources for complex assembly and integration of optoelectronic systems. This includes optical design; development and manufacturing capabilities for camera modules; and projection systems being produced in this facility. These solutions are important assets for smart phones, tablets, e-readers, and laptops, as they prepare to serve mobile, virtual, augmented, and extended reality products seeing rapid growth and adoption. The center will also create leading-edge automotive products and solutions, including advanced driver-assistance components, DMS systems, heads-up display units, and LiDAR systems.

Logic PD Acquired by Compass Group Equity Partners

Electronics manufacturing services (EMS) and design and engineering company **Logic PD** announced that the company has recently been acquired by **Compass Group Equity Partners**, a private equity firm based in St. Louis, Missouri. Compass Group acquired 100 percent of the shares of Logic PD, which had previously been held by Denver, Colorado–based CHB Capital Partners.

The acquisition will have no impact on the company's operations and more than 300 employees. Logic PD President and Chief Executive Officer Bruce DeWitt will continue in his current leadership role under Compass Group ownership, as will the other members of Logic PD's management team.

Compass Group will expand Logic PD's capabilities and manufacturing footprint to include Dayton, Ohio, an aerospace manufacturing hub, and Atlanta, Georgia, one of the fastest growing high-tech regions in the nation.

In conjunction with the ownership change, Logic PD expects to continue upgrading its facilities and equipment over the next year. This includes new surface-mount technology (SMT) equipment, which the company plans to install during 3Q2018. New investments in Logic PD's embedded products portfolio will also be accelerated in 2018.

TT Electronics Acquires Precision

The UK's **TT Electronics** keeps expanding its presence and capabilities, this time via the acquisition of US-based **Precision**, a designer and manufacturer of precision electromagnetic product solutions for critical applications.

Based in Minneapolis, Minnesota, Precision has around 160 employees supporting customers in the medical, industrial, and aerospace and defense markets.

The US company brings new design, simulation, and manufacturing capabilities to TT in electromagnetics, one of its focus areas for growth. Precision's products are primarily sold for medical applications, including pacemakers, neurological implants, and other in-body equipment, as well as external diagnostic equipment such as dialysis machines and MRI scanners, a press release reads.

Through this acquisition TT will provide Precision with customer and market access in Europe and Asia, supported by a global Field Application Engineering team and distribution network. TT's operating footprint will provide significant manufacturing and supply chain capabilities in Asia to support customers in the region.

Foxconn/Sharp Scoop Up Toshiba's PC Business

Following the bankruptcy of its nuclear energy subsidiary **Westinghouse**, **Toshiba** is looking at various measures to get back on its feet. The PC business seems to be next on the review list.

Toshiba and **Sharp** signed a share purchase agreement that anticipates completion of all necessary procedures, including government approvals and the transfer of the stock, by October 1, 2018. After the share transfer is closed, **Toshiba Client Solutions** (TCS) will be deconsolidated from **Toshiba Group**.

Toshiba transferred its PC business to TCS on April 1, 2016 as part of a wide-ranging structural reform. TCS subsequently implemented a series of measures to stabilize the business, including shifting its focus to B2B operations, reviewing personnel and operating sites, and ending ODM procurement, while also investigating various strategic options with third parties.

As a result of these considerations, Toshiba has determined that the best way to strengthen TCS, increase its corporate value, and also secure global competitiveness and continued development of the business is to select Sharp as its partner.

Accordingly, Toshiba has decided to transfer 80.1% of its TCS shares to Sharp (which is controlled by Foxconn Technology) for JPY4 billion (€30.7 million). Following the share transfer, Toshiba will continue to provide brand licensing for PC products and equipment designed, manufactured, and sold by TCS, a press release states.

South African EMS Opens Major New Plant

Yekani Manufacturing opened a new "smart manufacturing" facility in the East London Industrial Development Zone.

The contract assembler invested $78 million in the new plant, which will ultimately employ up to 1,000 workers.

The 28,000-square-meter (301,000-square-foot) facility is equipped with

11 surface-mount technology (SMT) machines capable of of placing 1.3 million components per hour (CPH). "Our technologically advanced facility is geared to manufacturing innovative technology products for clients in the automotive, defence, [and] aerospace industries, as well as consumers," said Siphiwe Cele, CEO, Yekani Group, in a statement.

Yekani was founded in 1998 and is one of South Africa's largest EMS companies.

Foxconn Discusses Plans for Egypt Plant

Foxconn may invest an as-yet-undisclosed sum to open a plant in Egypt to build electronics assemblies intended for export, according to reports.

Egypt's trade and industry minister Tarek Kabil reportedly met with Foxconn to discuss the investment.

"Foxconn's projects in the Egyptian market coincide with the ministry's strategy to upgrade the engineering industry sector," said a statement, citing the minister.

Zytek Closing EMS Plant in Silicon Valley

Zytek EMS, a contract electronics assembler located in Silicon Valley, is closing its factory and selling its assets at auction.

Zytek was founded in 2011 by Rabia Khan. It had four SMT lines, and, according to company data, employed 51 to 200 workers.

An auction was to be held in mid-June.

Foxconn to Launch R&D Center in Nanjing

Foxconn plans to launch an R&D center in Nanjing for about $720 million, according to reports.

The project covers an area of 3.8 hectares (38,000 square meters) and will focus on the development of intelligent terminal devices and smart wearable products.

Currently, about 450 employees work at the site's temporary office.

Foxconn Among Founding Members of 5G Alliance

Some 16 companies, including **Foxconn** and **China Telecom**, announced their backing of the 5G industry alliance.

Members of the alliance will focus on development and adoption of ultra-high-definition video transferred on 5G networks. Alliance members will develop high-speed 5G and super-high-definition video up to 8K technology.

5G networks are said to be 20 to 50 times faster than 4G networks. China is in trials for 5G and a widespread rollout is planned in 2020.

Latest Acquisition Pushes Kimball Electronics Beyond EMS

Kimball Electronics announced that it has signed an agreement to purchase substantially all of the assets and assume certain liabilities of **GES Holdings**, Global Equipment Services and Manufacturing, and its subsidiaries for approximately $50 million plus assumed liabilities, subject to certain post-closing working capital adjustments.

San Jose–based GES specializes in production processing and test equipment design, volume manufacturing, and global services for the semiconductor and electronics product manufacturing industry.

Publisher: Randall Sherman

Editor: Anna Reynolds

Research Analyst: Vivek Sharma

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E-mail: rsherman@mfgmkt.com

Website: www.newventureresearch.com