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EMS Innovation Centers Replace Manufacturing R&D for OEMs

On Wednesday, May 13, 2015, Jabil Circuit unveiled its 100,000-square-foot **Blue Sky Innovation Center** to a massive crowd of press writers, analysts, top executives, customers, and luminaries. The company had meticulously planned its presentation, which was to reveal the new paradigm for electronics manufacturing. This new paradigm is being created in the development centers of Jabil, Flextronics, Celestica, Sanmina-SCI, Plexus, and even small second-tier EMS companies such as éolane. The goal of the centers is to take a company from ideation to UX/UI design, industrial design, rapid prototype, full-scale production, and final delivery. Jabil's center is filled with PhDs, scientists, and engineers of every type. Blue Sky provides everything from design to rapid prototype manufacturing all under one roof. If a company approached Jabil with an idea on a napkin, it could leave with a working prototype in hand, as well as an understanding of how much it would cost to manufacture its product by millions of units.

From the beginning of the modern electronics industry, manufacturing was developed within OEM companies like GE, Siemens, and NEC. Circuit board assembly was driven by the technical needs and requirements of the OEM and its application. Outsourcing, when it occurred, was given to outside third parties with SMT equipment. Since the emergence of the EMS industry, R&D spending for OEM manufacturing has almost completely disappeared, with EMS companies having to pick up the development tasks and cost. OEM customers now expect their EMS partners to advance the technology and keep it at the cutting edge, with the lowest cost and highest throughput possible. Not all EMS companies can afford to do this (although many have design centers), but the visionary ones that invest R&D money to advance SMT technology, printed electronics, materials, and the integration of miniaturized thin and thick film IC components that provide seamless integration into the final product will definitely stand out.

The **Blue Sky Innovation Center** is based in San Jose, CA. Jabil's new facility is entirely devoted to working with customers large and small (surprisingly, several new startups) to provide solutions to technical problems that currently have no manufacturing solution. For example, Jabil demonstrated a number of innovative products, including Walt Disney's MagicBand™, which does such magical things as allow the user to access hotel rooms, board rides, and pay for meals by tapping the wristband to a mouse-logo reader.

Jabil also presented a feeding tube that helps technicians see what is happening inside a patient's throat. The product includes a precision video camera and chemical analyzer that can snake down your closed throat into the cauldron of your stomach acid (and survive).

Pressing the limits of miniaturization, outside a clean room a senior director of engineering and technology services, Dan Gamota, showed a display of memory chips getting as small as a speck of dust. The last box looked blank, as if nothing was there. Yet, he reassured the audience, there was a multigigabyte transceiver that can indeed be mounted on the board. "Today's chips are so tiny they are invisible to the eye, and can only be handled by robotic fingers for assembly," he remarked.

Additionally, the company demonstrated a wide range of 3-D manufacturing technologies and products that clearly puts it on the

Some articles in this issue

leading edge of advanced technology.

Robotics is an area of keen development interest to OEMs and EMS companies. The presentation moved to a voluminous space called the Factory of the Future to view Baxter, a robot with a red torso and digital face and the ability to interact with people. It is designed to work collaboratively with humans in manufacturing situations.

Of course, the IoT (Internet of Things) had its own room, and an employee wearing sensor-equipped gym shorts from a Jabil customer (Athos) was demonstrating squats and basketball drills. An adjacent video screen featured a real-time scan depicting muscle exertion (heat) in the user's thighs and calves. According to David Wahl, general manager of Blue Sky, customers will be able to use the IoT room to test wearables and other objects that will be part of the connected-device industry, estimated to grow to $4 trillion by 2020 (not our projections).

EMS companies spend much time and effort managing their supply chain, and Jabil seems to have perfected the integration and management of 7 million parts and 17,000 vendors on a 24x7x365 basis through its Supply Chain Command Center, where it can react in real time to product or component shortages. The system allows Jabil to quickly reconfigure its supply chain if weather or geopolitical problems disrupt any part of the logistics network. For example, Nepal's recent earthquake was provided as an illustration: Jabil staff re-created the scene, clicked on regions of the Web graphic, and identified 106 suppliers that existed within 500 miles of the epicenter. Jabil was able to tell if its supply network was injured. None were affected, but the company's spectacular success in real-time monitoring has apparently allowed it to win over $100 million of new business. Jabil's inControl software is able to visualize the entire chain and can drill down to the component level within minutes as necessary.

Other impressive Jabil product demonstrations included the Philips Sonicare toothbrush, Advair Diskus inhaler (GlaxoSmithKline), VeinViewer Flex vein finder, Tile lost and found device, Whistle dog activity monitor, 94Fifty Smart Sensor basketball, and the Tesla Motors TSLA (Model S).

The Blue Sky Center was designed to help customers engineer growth and stay technologically relevant during a time of unprecedented market change. Jabil claims that no other organization can execute this much under one roof. But there are other EMS companies that have competitive offerings, seen below.

Flextronics is organized slightly differently, along vertical industry lines. For example, the company offers "High-Reliability Solutions," "Industrial & Emerging Industries," "Integrated Network Solutions," and "Consumer Technologies." With these, Flextronics is linking the high-technology advances of Silicon Valley with the automotive industry in Detroit. At its newly established location, the company is specializing as an automotive team to enable swift implementation of smart, connected technologies through collaboration with OEM customers and partners on emerging projects and embedded solutions.

To this end, Flextronics is making investments in product innovation centers, Lab IX, and in improving its mechanical and automation capability, by acquiring RIWISA.

The **Flextronics Customer Innovation Center** is located in Milpitas, California. It will provide customers with design and manufacturing solutions that provide, among other things, the ability to integrate next-generation liquid and corrosion protection for electronic products by introducing submersible thin film protective technology for any kind of electronics assembly, device, or component through an expanding partnership with HZO, Inc. In Europe, a product innovation center is located in Althofen, Austria, and a design center in Milan. Both innovation and design functions exist at other sites in Zhuhai, China, and Guadalajara, Mexico.

Celestica has developed a proprietary CoreSim™ Design Analysis service that helps its customers identify and resolve errors at critical schematic entry and layout stages in the design cycle. The company is five years into its implementation of the RapidResponse forecasting and planning tool from Kinaxis, which is said to be crucial to its architecture. The system allows Celestica to be proactive in simulation environments by employing "what-if" scenarios, and to see how emergency orders perform and what impact they have on risk, revenue, and inventory levels.

For many years, **Sanmina-SCI** promoted its "ODM" design services platform, which was intended to leverage its experience in computer architecture and manufacturing. Recently, the company has focused on low-volume, high-mix product assembly (like Celestica), so now its design center is focused on DFX component engineering and system-level products across eight industries. At the DesignCon conference in Santa Clara recently, it announced significant advances in high-performance backplane technology and the capability to perform high-speed production vector network analysis (VNA) backplane testing. Its India Design Center (IDC) has been certified for medical product design and development.

Plexus has long been recognized as a leader in design engineering and promoting cutting edge reference designs for the telecom and medical market sectors. The company was awarded Supplier of the Year by GE Healthcare in 2014 and 2013, and one of Chicago's 101 Best and Brightest companies to work for in 2014 and 2013.

Second tier EMS supplier **éolane** builds 8 core modules platforms from which all its products are derived. It's Product Lifecycle system is centered on a unique embedded system that can be applied to industrial PLCs, optical fibre and Ethernet input/output, and interface converters. The company is focused on medical products and the defense sector providing very high bandwidth network interface cards, railways and telecommunications routers and other ruggedized applications.

Poor Start for US-Traded Group

Combined first-quarter revenue for the six largest US-traded EMS providers rose 0.5% year over year, a poor start on which to build a growth year. But this marks the fourth consecutive quarter in which the group's sales grew year over year. Four straight quarters of year-on-year increases are a good sign for this sector of the EMS industry and may indicate that the sector will grow, though slowly, in the first half of 2015.

In Q1, the six providers generated sales totaling $14.35 billion, up from $14.28 billion in the year-earlier period. The prime mover behind this increase was **Jabil**, which boosted its sales by 20.5% year over year. **Plexus** also posted a double-digit gain. Despite the group's growth of 0.5% from a year earlier, sales performance varied widely, ranging from Jabil's double-digit high to **Flextronics's** double-digit low (Table 1A, below).

MMI had estimated that aggregate growth for the six providers would be 8.1% (Feb., p. 5). So the group failed *MMI's* projection by 7.6 percentage points, and the group's Q1 revenue was $861.4 million lower than projected. *MMI* based its estimates on the midpoint of each company's sales guidance for Q1. The decline was mostly driven by Flextronics, which fell behind its projected midpoint guidance.

On a sequential basis, the group's revenue fell by 7.7% in Q1, a quarter in which segments such as consumer electronics and computing are prone to seasonality. Still, the decrease was 5 percentage points better than forecasted. Sales declines at all six providers prevailed, with **Benchmark Electronics** registering double-digit drops. No company out of the six was able to grow its sales from the prior quarter.

Five out of six providers follow GAAP accounting rules, while the sixth, **Celestica**, adheres to IFRS reporting standards. For the five GAAP companies, GAAP gross margin in Q1 was a combined 1.6%, down 760 basis points sequentially and down 580 basis points year over year. Flextronics, Jabil, and Benchmark succeeded in raising their gross margins from 4Q2014, while all but **Sanmina** and Benchmark Electronics improved their margins from the year-earlier period.

Together, the five companies in Q1 produced a GAAP operating margin of 5.6%, up 30 basis points sequentially and up 270 basis points year over year. Two providers—Flextronics and Jabil—turned in increased GAAP operating margins, led by Jabil with a 6.3% result. Jabil was the only providers to increase their GAAP margin from the prior quarter, and also boosted their margins from a year earlier. As for the lone IFRS reporting company, Celestica's IFRS operating margin declined from the previous quarter and the year-ago period (Table 1A).

On a sequential basis, combined GAAP net income for the five companies in Q1 fell far faster than sales did. Aggregate net income of $258 million dropped 9.7% in contrast with a sales decline of 7.5%. Net income was down from the prior quarter at four out of five companies, with Flextronics being the lone exception. In the year-over-year comparison, total GAAP net income for the five companies sank 10% despite sales growth of 0.7%. Jabil bore nearly all responsibility for this decline. Q1 net margin for the GAAP reporting companies was 1.9%, down 4 basis points sequentially and 23 basis points year over year.

Table 1A: Q1 2015 Results for the Six Largest US-Traded EMS Providers (M US$ or %)

Company	Q1 '15 sales	Q4 '14 sales	Quarter–quarter chg.	Q1 '14 sales	Yr.–yr. chg.	Q1 '15 gross marg.	Q4 '14 gross marg.	Q1 '14 gross marg.	Q1 '15 oper. marg.	Q4 '14 oper. marg.	Q1 '14 oper. marg.	Q1 '15 net inc.	Q4 '14 net inc.	Q1 '14 net inc.
Flextronics	5,952.0	6,528.5	–8.8	6,723.9	–11.5	5.7%	5.6%	5.4%	4.6%	4.6%	3.3%	152.9	138.9	43.0
Jabil	4,309.3	4,550.4	–5.3	3,577.3	20.5	8.4%	8.3%	5.6%	6.3%	6.1%	3.5%	52.9	73.8	185.6
Sanmina	1,527.5	1,671.2	–8.6	1,476.7	3.4	7.5%	7.5%	7.9%	4.9%	5.0%	5.0%	14.8	22.7	20.7
Benchmark	621.0	710.0	–12.5	639.3	–2.9	8.3%	7.8%	8.0%	3.0%	5.5%	5.3%	14.3	24.0	19.1
Plexus	651.2	664.6	–2.0	557.6	16.8	9.2%	9.4%	9.5%	6.5%	6.6%	6.6%	23.1	26.5	18.4
Subtotal/avg.	**13,061.0**	**14,124.7**	**–7.5**	**12,974.8**	**0.7**	**1.6%**	**9.2%**	**7.4%**	**5.6%**	**5.3%**	**2.9%**	**258.0**	**285.8**	**286.8**
Celestica	1,298.5	1,424.3	–8.8	1,312.4	–1.1	6.9%	7.2%	6.7%	2.1%	3.1%	2.2%	19.7	(4.4)	37.3
Total/avg.	**14,359.5**	**15,549.0**	**–7.7**	**14,287.2**	**0.5**									

All results are based on GAAP except those of Celestica, which adopted IFRS reporting. With the exception of sales, GAAP and IFRS results are not necessarily comparable.

Table 1B: Q2 2015 Guidance and Estimates for the Six Largest US-Traded Providers (sales in $B except as noted)														
Company	Q2 '15 guidance	Q2 midpoint	Q1 '15 sales	Quarter–quarter estim. chg. (%)	Q2 '14 sales	Yr.–yr. estim. chg. (%)	Q1–2 '15 estimated sales	Q1–2 '14 sales	Estimated change (%)	Q2 guidance adjusted EPS* $	Q2 EPS midpoint $	Q1 '15 adjusted EPS* $	EPS Q–Q chg. at midpoint (%)	Q2 '14 adjusted EPS* $	EPS Y–Y chg. at midpoint (%)
Flextronics	5.6–6.2	5.90	5.95	–0.9	6.64	–11.1	11.85	13.36	–11.3	0.20–0.26	0.23	0.26	–11.5	0.30	–23
Jabil	4.3–4.5	4.40	4.31	2.1	4.05	8.6	8.71	7.92	10.0	0.43–0.55	0.49	0.29	69.0	–0.12	–508
Sanmina	1.50–1.55	1.53	1.53	–0.1	1.60	–4.7	3.05	3.08	–0.9	0.48–0.52	0.50	0.17	194.1	0.24	108
Celestica	1.35–1.45	1.40	1.30	7.9	1.47	–4.8	2.70	2.78	–2.9	0.20–0.26	0.23	0.11	109.1	0.23	0
Benchmark	635–665 M	0.65	0.62	4.7	0.71	–8.5	1.27	1.35	–5.9	0.37–0.41	0.39	0.27	44.4	0.41	–4.9
Plexus	670–700 M	0.69	0.65	5.2	0.62	10.5	1.34	1.17	14.2	0.71–0.79	0.75	0.67	11.9	0.71	5.6
Total/avg.		**14.56**	**14.36**	**1.4**	**15.09**	**–3.5**	**28.92**	**29.66**	**–2.5**						

Q2 estimates equal midpoint of Q2 guidance. First-half 2014 estimates equal Q1 sales plus midpoint of Q2 guidance.
*Adjusted EPS may not be comparable from company to company.

Drop in First-Half Growth Projected

Combined revenue growth of the six largest US-traded EMS providers in the first half will be underwhelming, if *MMI's* estimates hold true. *MMI* is projecting that the group's first-half sales will total $28.92 billion, down 2.5% year over year. Given this projected decrease, hopes for a growth year now rest on the group's second-half performance.

According to *MMI's* estimates, first-half sales will grow from a year earlier at two out of six providers, with double-digit gains projected for **Jabil** and **Plexus,** whereas **Flextronics** is expected to report a double-digit decline. Sales increases at those two providers cannot outweigh revenue declines at the other four companies (Table 1B, above).

First-half projections are based on second-quarter estimates set equal to the midpoint of sales guidance for each company.

Estimated Q2 sales for the six providers add up to $14.56 billion, up 1.4% from Q1 and declined (down 3.5%) versus the year-ago period. In the sequential comparison, Q2 sales are projected to rise at four providers and the gains are sufficient to offset an estimated drop at other two providers. **Celestica** is the only provider with a projected sequential increase of more than 6%. On a year-over-year basis, forecasted sales declines at four providers will be canceled out by increases at **Jabil** and **Plexus**, with a double-digit increase predicted for the latter. (In the case of Jabil, its fiscal quarter ending in May is used as a quasi-Q2 in this analysis.) Plexus and Jabil is expected to boost its Q2 revenue by double digits from a year earlier (Table 1B).

Guidance suggests that adjusted EPS for the June quarter will increase sequentially for five providers, i.e., Sanmina, Jabil, Celestica, Benchmark Electronics, and Plexus. Based on guidance from Flextronics, the company expects that adjusted EPS in its June quarter will decline from the prior quarter. No such inferences can be made for EPS guidance issued by the other companies. Still, at the midpoint of guidance, adjusted EPS would be up sequentially at five providers and down for one provider.

In a year-over-year comparison, guidance implies that adjusted EPS will improve at Sanmina and Plexus, while the EPS metric is expected to fall at Jabil, Flextronics, and Benchmark Electronics. At the midpoint of guidance, adjusted EPS growth from a year earlier would be in triple digits for Sanmina and the growth rates at Jabil will decline in triple digits. Celestica's guidance does not lead to any conclusion about how Celestica's adjusted EPS for Q2 will compare with the year-ago result.

Some Quarterly Results

Benchmark Electronics (BHE). The company reported Q1 revenue of $621M and non-GAAP EPS of $0.34. Gross and operating margins came in at 8.3% (+50 basis points q-o-q) and 3.8% (–20 basis points q-o-q). Overall, the company is doing an impressive job managing through a choppy demand environment and the challenge for the company remains finding sustainable growth levers.

BHE announced 33 new program wins in the quarter, with potential annual revenue of $105–125 million. Industrial Controls continues to drive the majority of new bookings, representing 52% of new wins in 1Q15, while Medical and Telecom also saw new wins. The wins point to strong potential future growth; however, for FY15, management sees the traditional Computing and Telecom segments declining, while non-traditional segments are expected to see some growth.

From an end-market perspective, the March quarter saw the following y-o-y trends: a) Computing (19% of sales, –9% y-o-y): This segment's year-over-year decline was likely due to a larger customer (IBM), historically a 10%+

customer, reducing its percent (there were no 10% customers in the March quarter). Management noted that the segment should be up mid-singles q-o-q. b) Industrial Controls (32% of sales): The segment was up +7% on a y-o-y basis and is continuing to benefit from program ramps. Notably, management anticipates that this segment should be up low singles q-o-q in June. c) Telecom (27% of sales, –2% y-o-y). Notably, the company expects to see the segment grow mid-single digits in the June quarter. d) Medical Devices (13% of sales, +11% y-o-y): The segment continues to grow on a y-o-y basis and should see sequential growth in the future and as program ramps continue. Management guided this segment up mid-teens on a sequential basis in the June quarter. e) Test and Instrumentation (9% of sales, –32% y-o-y): Though down 32% on a y-o-y basis, the company believes this segment should be up low to mid-single digits q-o-q in June.

Benchmark guided the June quarter to $635–665 million; EPS at $0.37–0.41. On a segment basis, the company offered sequential guidance as follows: 1) Industrial Controls to be up low singles, 2) Medical Devices to be up mid-teens, 3) Test and Instrumentation to be up low single digits, 4) Telecom to be flat, and 5) Computing to be up mid-singles. From a margin perspective, the company noted that Q2 should see operating margins of 3.9% at the midpoint (3.7–4.1%).

Flextronics (FLEX). The provider recorded 1Q15 sales of $6.0 billion and EPS of $0.27. Sales declined 11% y-o-y and were modestly below the low end of management's guidance, driven by weakness in the Integrated Network Solutions (INS) and Consumer Technology Group (CTG) segments. Operating margins were 3.0%, up 10 basis points q-o-q, as the company continues to shift sales to the higher margin Industrial & Emerging Industries (IEI) and High-Reliability Solutions (HRS) segments.

FLEX achieved operating margins of 3.0%, driven by a mix shift toward the higher margin segments of IEI and HRS. IEI was up 11% y-o-y, while HRS was up 7% y-o-y due to good demand in automotive and medical. Negatives: INS performed below expectations, down 13% y-o-y, with management citing softness in wireless due to reduced capex spending from carriers. CTG underperformed, due to lower-than-expected smart phone demand, while wearables and computing devices experienced normal seasonal declines.

While management expects INS to grow in 2Q2015, FLEX sees continued weakness in the segment for the June quarter, and also guided F1Q 16% lower than expectations.

Separately, FLEX announced its intent to acquire Mirror Controls International (MCi) for ~$500 million with TTM sales of $216 million. The company, a manufacturer of actuators, will boost FLEX's automotive sales, and potentially drive sales in the industrial markets.

Management provided guidance for the first quarter ending June 26, 2015: Revenue is expected to be in the range of $5,600 to $6,200 million and adjusted EPS is expected to be in the range of $0.20 to $0.26 per diluted share.

Sanmina (SANM). Sanmina reported a soft 2Q2015 of $1.53 billion and EPS of $0.50. Revenue was up 3% y-o-y, supported by growth in Industrial/Medical/Defense (IMD) (+20% y-o-y), partially offset by revenue declines in Communications (–7% y-o-y) and Compute/Storage (–1% y-o-y). Notably, operating margins came in at 3.7%, which was slightly below expectations due to higher SG&A costs and lower revenues. Sanmina noted that the softness in communications networks was partially offset by growth in the industrial, medical, and defense sectors. The company anticipates continued headwinds from its Oil and Gas segment, coupled with inventory de-stocking within the Communications segment.

End-market overview: 1) Communications: The segment was down 13.2% q-o-q (–7.4% y-o-y), reflecting demand softness within infrastructure sales and inventory de-stocking that will continue in the June quarter. 2) Industrial/Medical/Defense: Down 5.9% q-o-q (+20.0% y-o-y); stable growth was partially offset by softness in ONG and Energy. 3) Computing and Storage: The segment was down 4.4% q-o-q (–0.8% y-o-y). From a customer perspective, SANM had no 10% customer for the March quarter.

June quarter guidance: The company guided the June quarter to $1.50–1.55 billion/EPS of $0.48–0.52. From an end-market perspective, the company expects the following on a sequential basis: 1) Communications Networks to be down, 2) Defense/Industrial/Medical to be up, 3) Computing & Storage to be flattish.

Jabil Circuit, Inc. (JBL). The company reported 2Q2015 net revenue of $4.3 billion, a 20% increase from a year ago and down –5% q-o-q. Gross margin of 8.5% was the best in the past 10 years and its operating margin of 3.9% was ahead of consensus at 3.6%. The business has recovered solidly from the iPhone 5c issues a few quarters ago. Partially overshadowing these good results are its higher capex investments (FY15 capex is now ~$750 million vs. $700 million previously).

On a segment basis: Diversified Manufacturing (DM) was up +52% y-o-y (versus previous guidance calling for +53% y-o-y performance). This was likely driven by continued strength at **Apple**. Notably, DMS margins were at 6.6%, up +40 basis points q-o-q. While the uptick was a positive in the quarter, it was believed to be due to higher AAPL concentration (likely ~25%). Electronic Manufacturing (EM) revenues were up +6% year over year, slightly above previous expectations calling for +3% y-o-y growth. The ~$75M in upside was driven by improved broad-based demand. In addition, operating margins came in at 2.1%, which was down 30 basis points q-o-q.

Management maintained its fiscal year 2015 revenue outlook of $17.5–$18.5 billion and core earnings per share of $1.85–2.15. The company expects capex to come in at the high end of its stated range of $650–750 million for the full year.

Company News

Contracts awarded… **Exception EMS,** a UK-based EMS provider, has secured just under £500,000 funding from the government's "Innovate UK" initiative to develop a low-cost, high-capacity, smart residential distribution network enabled by 3C SiC (silicon carbide) power electronics.

Facing potential localized energy system supply problems, Innovate UK requested advanced technological solutions from leading UK businesses to help resolve the issue of distribution networks potentially failing to meet the ever-increasing demand for electricity. In January 2015, Exception EMS and its partners were given confirmation of their funding to proceed with the project, which will be completed by December 2017.

The project is based on the creation by the working group of a low-cost power converter that will sit within homes and resolve the issue of lack of bandwidth within today's existing distribution networks (which are increasingly being stretched by the likes of electric vehicles and the move to electro-heat). Using the existing infrastructure, the working group will devise equipment to increase network capacity, and provide optimized connections for emerging electric vehicle charging, distribution, generation, and energy storage… **Kitron** (Norway) has, through its subsidiary **Kitron AS** in Arendal, received an order from **Kongsberg Defence & Aerospace AS** for military communications equipment.

The equipment to be supplied is linked to contracts for deliveries to Hungary. Kitron will supply various communications products, and production will be done by Kitron in Arendal.

The contract has a value for Kitron of NOK 32 million (roughly €3.82 million), and deliveries will take place in 2015 and 2016, as reported by *Evertiq*… **OSI Systems, Inc.** (Hawthorne, CA) announced that its healthcare division, Spacelabs Healthcare, has been awarded an approximately $3.4 million order from a prominent children's hospital to provide patient monitoring and connectivity solutions, including the portable monitor, qube™, and the new patient monitoring central station Xhibit, which boasts an intuitive user interface and monitors up to 48 patients across four high-resolution displays with highly customizable screen layouts.

The Name of a New Giant: NEO Tech

With the merger between **Natel Engineering** and **OnCore Manufacturing** now complete, it is time for a new name. The name NEO Tech combines the company's legacy members, Natel Engineering, EPIC Technologies, and OnCore Manufacturing.

Connect Group with New CEO

The **Connect Group** (Belgium) board of directors announced that Luc Switten terminated his term as CEO of the group by the end of March. Supported by the board of directors, the current management will ensure continuity, with COO Flor Peersman being appointed as interim CEO. Luc Switten will remain available as a consultant until the end of 2015.

PartnerTech Joins Forces with Kongsberg Devotek

PartnerTech (Sweden) and Norway-based product development specialist **Kongsberg Devotek** have signed a cooperation agreement. Both companies have already worked together on a new underwater technology project for applications in the oil and gas segment. Within the framework of the agreement now entered, the companies will deepen their cooperation and jointly address a broader customer base in shared focus areas, such as oil and gas and medical technology, as reported by *Evertiq*.

Acquisitions… **Flextronics** (Singapore) will acquire **Mirror Controls International** (Netherlands) (MCi) for $494 million from a private equity firm in an all-cash deal. The acquisition is an effort by Flextronics to boost its manufacturing offerings to the automotive industry. MCi manufactures glass and power fold actuators used by the auto industry. The company generated sales totaling $216 million over the past 12 months and its revenue historically has grown 20% per year. The company is based in Woerden, the Netherlands, and has manufacturing facilities in Ireland, China, and Mexico.

Flextronics noted that the acquisition is in line with its strategy to identify and acquire companies that have technologies that deliver innovative solutions to customers in industries that have long and stable product life cycles.

Scanfil to Buy PartnerTech

Finish EMS provider **Scanfil** has announced a public offer to the shareholders of **PartnerTech** to tender all of their shares in PartnerTech to Scanfil for a consideration of SEK 35 (roughly €3.79) in cash for each share in PartnerTech. The total value of the offer amounts to approximately SEK 443 million (roughly €48 million).

In its evaluation of the offer, PartnerTech's board has also taken into account that the company's two largest shareholders—together representing approximately 65.9% of the shares in the company—have expressed their support for the offer by signing undertakings to accept the offer.

PartnerTech is recommending that its shareholders—based on its own evaluation—accept Scanfil's offer.

NCAB Group Acquires Ulf Andersson Elektronik

NCAB Group (Sweden), supplier of printed circuit boards, has acquired 100% of **Ulf Andersson Elektronik's** PCB Division.

Like NCAB, Ulf Andersson Elektronik is privately owned and focused on customers and always delivering the best possible service and PCBs of the highest quality. Being selected by NCAB to be a part of its Swedish team is a great compliment and proof of the relationship and high service level noted by the management of Ulf Andersson Elektronik.

Relocation… EMS provider **OSI Systems** (Hawthorne, CA) will be closing its facility in Camarillo, California and relocating its electronics manufacturing operations to its site in Hawthorne, California. As part of this process, it will be liquidating some excess and unused assets utilizing the online auction services of **Baja Bid,** as reported by *I-Connect007*.

Facilities expansion… **Valence Surface Technologies** (Gardena, CA) has acquired the assets and operations of **Flextronics** San Carlos in San Carlos, California.

Under Valence ownership, the business now operates under the name Valence San Carlos. In combination with **CSL** in Santa Clara, Valence operates two of the leading special processors in northern California servicing the semiconductor, aerospace and satellite, laser, microwave, and medical device markets, as reported by *Evertiq*…EMS provider **Jabil Circuit, Inc.** (St. Petersburg, FL) has secured approval from the Penang state government in Malaysia to purchase 20 acres of land at the Batu Kawan Industrial Park to support expansion plans. Jabil cited a wide range of reasons for selecting Penang in which to expand its Malaysian operations, including the local availability of highly skilled talent; the mature local supply chain; and the region's excellent utility services. The agreement, which entitles Jabil to purchase a further 20 acres of land in the future, will provide the company with a total buildup area of one million square feet. Construction on the new facilities is expected to start in the second half of 2016.

Samsung Ends TV Production in Thailand

South Korean tech giant **Samsung** has stopped its production of TVs in Thailand in a move to streamline its global manufacturing footprint.

The company announced last year that it would invest some $560 million to construct a consumer appliances complex in Vietnam, which would mainly manufacture TVs. The Vietnamese venture is part of the company's effort to boost its output across different segments—including smart phones and displays—in the lower-cost country, according to a *Reuters* report.

Foxconn Invests in Cyanogen

Cyanogen (Palo Alto, CA), maker of CyanogenMod and Cyanogen OS, announced that it received funding from Chinese manufacturer **Foxconn** (Taiwan) recently. The company didn't disclose how much Foxconn invested, but did say it has raised a total of $110 million to date; that includes an $80 investment round in March.

Cyanogen said it plans to use the investment to build out its Cyanogen operating system and to hire new team members.

Taiwan Expanding Trade Ties with Philippines

Taiwan and the Philippines are expected to continue experiencing increasing amounts of bilateral trade, according to Taiwan's Ministry of Economic Affairs, with trade volume between the two countries doubling from US$6.05 billion in 2009 to nearly US$12 billion in 2014.

Current figures make the Philippines Taiwan's 11th largest trading partner. Conversely, Taiwan is the sixth largest destination of exports for the Philippines.

In 2014, the Philippines exported US$2.07 billion in goods to Taiwan, while imports from Taiwan stood at US$9.53 billion, according to data provided by Taiwan's Ministry of Economic Affairs.

In the Philippines, Taiwanese investments can be found mainly in Subic and the South Luzon area. Also there are a number of power-generation industry investments in Visayas, and fishing industry investments in Mindanao. Over the years, Taiwan has expanded its presence in the Philippines by establishing several companies in the country.

Recent developments have increased investments of Taiwanese companies in the Philippines. These include **Kinpo Electronics**, a global original design manufacturer and electronics manufacturing services partner, investing P1.4 billion to further expand its Batangas facility; and **Bioteque Corporation**, Taiwan's leading medical device manufacturer, starting construction of its factory in the Philippines, which will be operational by the end of this year.

Taiwan and the Philippines have both invested resources in smart-grid planning and construction. Both sides agreed to coordinate their efforts to spur greater investment in the Philippines and the development of the smart-grid industry. Aside from that, both countries have also expressed interest in geothermal power operation, as reported by *The Manila Times*.

German Semiconductor Market—Double-Digit Growth

The German semiconductor market will grow by 11.5% to €12.3 billion in 2015. The market for printed circuit boards will increase by 8.3% to around €1.5 billion, writes industry association ***ZVEI***.

The market for integrated thin film circuits is forecast to show a decrease of just over two percent to €546 million. For the total segment of electronic components (semiconductors, printed circuit boards, integrated thin film circuits, and electromechanical and passive components), ZVEI expects an increase of 8.5% to €19.6 billion for 2015.

For the electronic assemblies market (in-house manufacturers and electronics manufacturing services providers), an increase of 8.6% to €27.8 billion is forecast for 2015, as published by ZVEI.

Flextronics Buys Alcatel-Lucent Plant in Trieste, Italy

Alcatel-Lucent (France) will sell its optical transport manufacturing plant and related assets in Trieste (Italy) to EMS provider **Flextronics** (Singapore). Financial details of the proposed transfer are not being disclosed, and the agreement is subject to statutory regulatory approvals and a final binding agreement.

The Trieste site will continue to supply Alcatel-Lucent with optical transport products, supporting its focus as a specialist vendor of IP, optical transport, cloud, and ultra-broadband access technologies.

Flextronics aims to develop the site into a global center of excellence for optical transport, and one that will play an even bigger part in the manufacture of optics products that will meet its customers' needs as their networks evolve to all-IP technologies.

Foxconn Invests $5.5M in France's PIQ

Paris-based **PIQ** announced that it had raised $5.5 million in a round of funding led by Foxconn. PIQ has designed a platform of sensors and data analytics that focuses on sports equipment and performance.

PIQ was founded 18 months ago by Cédric Mangaud. PIQ has designed a kit of wearable sensors that it then partners with sports equipment manufacturers to sell. Rather than embedding the devices directly in something like a tennis racquet, the sensors are worn on a player's wrist.

Foxconn Rumored To Be Reentering India with New Manufacturing Facilities

EMS giant **Foxconn** (Taiwan), is rumored to be planning a return to India. A published report asserts that Devendra Fadnavis, India's Chief Minister of the state, confirmed that Foxconn will invest a large sum of cash in either Pune or Aurangabad. Fadnavis recently visited China.

Other areas in the country rumored to be possible sites for a Foxconn facility include Gujarat, Noida, and Andhra Pradesh.

April ODM Data Below Seasonal

April monthly sales and shipment data from Taiwanese ODMs underscore April sales data from other Taiwanese companies in the supply chain and point to a seasonally soft April for notebook PCs (ODM shipments –20% m-o-m vs. –7% 10-year seasonal).

Total shipments were 9.2 million in April, –20% m-o-m and –9% y-o-y. Overall shipment results were dragged down by the larger players, **Quanta** and **Compal,** which reported April results of –20% m-o-m and –28% m-o-m, respectively. **Wistron** fell 18% m-o-m, Inventec fell 14% m-o-m, and AAPL iPhone-levered **Pegatron** bucked the trend with sales up 11% m-o-m.

Guidance for 2H2015 was revised lower at **Inventec** (now guiding +20% vs. prior +40% q-o-q) and Wistron (now flat vs. prior +5%), while Compal noted near-term pressure, Quanta remains hopeful for growth in 2H15, and Pegatron guided second-half 2015 up 15–20% q-o-q at its analyst day.

PCs were largely in line with seasonal expectations (down 30 basis points vs. seasonal to –7% m-o-m) after a very strong March (+27% m-o-m vs. seasonal +16%). EMS/ODM player **Hon Hai** performed well (+4% m-o-m vs. seasonal –1%), but remaining ODM/ OEM PC players, such as Acer, showed rather anemic results (–36% m-o-m, vs. seasonal –30%).

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