n° 3 - 2017

NEWS

FEDERATION IDEA



## August/Sept 2017



### Associations

**AREI - South Africa**
Association of Representatives for Electronics Industry

**ASPEC - Russia**
Association of Suppliers of Electronic Components

**ASSODEL - Italy**
Associazione Nazionale Fornitori Elettronica

**CEDA - China**
China Electronics Distributor Alliance

**ECAANZ - Australia**
Electronic Components Association Australia and New Zealand

**ECIA - United States**
Electronic Components Industry Association

**ECSN - United Kingdom**
Electronic Components Supply Network

**ELCINA - India**
Electronic Industries Association of India

**ELKOMIT - Finland**
Suppliers of Electronic Instruments and Components Association

**FBDI - Germany**
Fachverband der Bauelemente Distribution

**FEDELEC - Tunisia**
Tunisian Federation of Electric and Electronic Industries

**SE - Sweden**
Svensk Elektronik Trade Associations

**SPDEI - France**
Syndicat Professionnel de la Distribution en Electronique Industrielle

# Do distributors now have to create BOM-BOM-BOM lists?

by Jens Dorwarth
Manager E&C Hy-Line, Chairman of the WG Environment & Compliance at the FBDi

*Recent news of the Environment &Compliance Work Group at the FBDi*
*The proportionality and feasibility of EU regulations*

The state of the environment and of human health should be important issues for us all. To ensure that industry also adheres to regulations, the **REACh Regulation** (EC) 1907/2006) of the European Union came into force in 2007. It is one of the strictest pieces of legislation governing chemicals and a highly detailed set of rules. Generally speaking, it would give little cause for complaint – but for the fact that every amendment introduces ever greater hurdles to be overcome before it can be implemented …

The latest version 4.0 of the REACh Guide is now pending and is already a hot topic of discussion before it was even been published (as of mid of May).

This is particularly the case, for example, among component distributors, whose status as importers of articles means that they must automatically accept the obligations and therefore the responsibilities of a manufacturer.

> ***"The latest version 4.0 of the REACh Guide is now pending and is already a hot topic of discussion before it was even been published"***

The unique identification of substances is a precondition for the majority of procedures in accordance with REACh. This requires that the participants in the supply chain have sufficient information about the identity of their substances – so the theory goes.
Ultimately, the right to information enables consumers to inform themselves about these types of substances when they make purchasing decisions.

As a general rule, Article 7 requires producers and importers to notify the ECHA of the presence of a SVHC in articles if this SVHC is present in those articles in quantities totalling over one tonne per producer or importer per year

(as a total quantity in all imported individual articles). The question now arises as to what constitutes an article and when?

## THE 4.0 VERSION

However, the new REACh Guide 4.0 is supposed to be able to answer this for us. In reality, as the draft already shows, it is not clearly understandable.
And - to make matters worse - it contains regulations that are effectively impossible to implement!

> *"The new REACh Guide 4.0 is supposed to be able to answer this for us. In reality,as the draft already shows, it is not clearly understandable"*

This was confirmed by **ORGALIME** (umbrella organisation of the European mechanical, electrical, electronic and metal articles industries) in Remark 578 (Appendix 5, Example 2) based on the example of PC boards, which states 'not for discussion'.
Close examination of the proposed methodology shows – if every component of a complex object (e.g. PCB) must be broken down to its original article level – that a separate BOM is required for each level. For three levels, this therefore equates to three BOMs or a **BOM-BOM-BOM list**.
However, it should be noted that the new interpretation in the Guide renders the previous interpretation of the article (the component itself) no longer relevant.

> *"For three levels, this therefore equates to three BOMs or a BOM-BOM-BOM list"*

The article (e.g. a capacitor) is now a complex object that itself requires a BOM. As a result, articles valued at mere cents may under certain circumstances require several hundred hours of work in order to determine the basic information – the more there is, the more complex it becomes!
It is simply impossible to manage these volumes of data – although we would be delighted to see any representative of the ECHA attempt it. We would also be happy to lend him or her the FBDi Compass for assistance – provided that we receive a response to issue of proportionality.

# Continued market growth in both Bookings and Billings for most European regions in Q2!

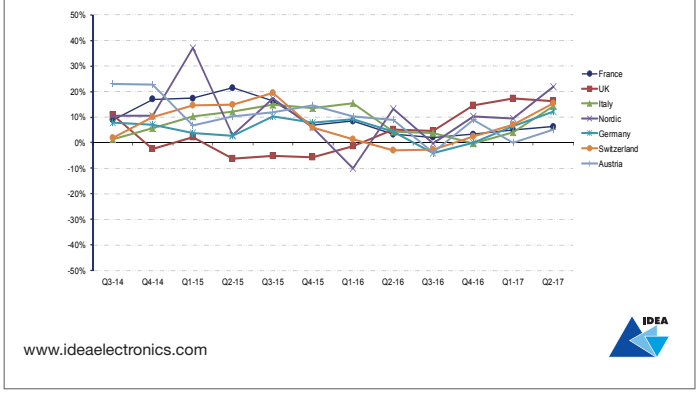
by Gary Kibblewhite

*www.ideaelectronics.com*

Just to remind readers. If you would like to have the original graphics used in this article just email to the IDEA secretary at *segreteria@ideaelectronics.com*

The IDEA statistics are taken from actual bookings and billings returns made by a substantial percentage of the electronic component distributors in Europe, including all the major distribution groups. Their sales represent over 66% of the total European electronic component distribution market so the trends shown are truly representative.
These published statistics now include, from Q3 2015 onwards including historical adjustments, Switzerland and Austria.

**2ND QTR. 2017 TOTAL COMPONENTS TENDENTIAL INDEX BY COUNTRY(Q.QY-1)** *GraphicT6*
Trend showing growth/decline % in quarterly sales of all components through distribution split by country compared with same quarter prior year

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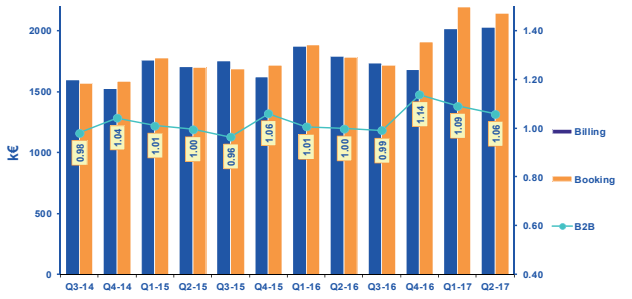
**1ST QTR. 2017 TOTAL COMPONENTS BOOKING, BILLING & BOOK: BILL RATIO** *Graphic T1*
Total distribution electronic components booking, billing and book: bill ratio for Germany, France, Italy, UK, Sweden, Norway, Danmark, Finland, Switzerland and Austria

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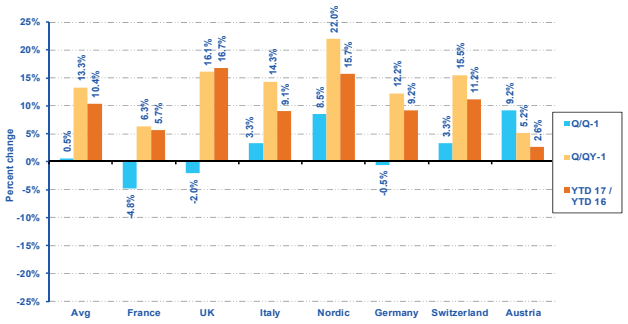
Even though the Book:bill for Q1 was down a little on Q4 last year, the trend growth in all regions stays positive in Q2. **Nordic** and the **UK** top the growth league with a **15%** plus growth and **France** and **Austria** at the bottom but still with a **5%** plus growth! In Q2 last year total billings for all regions was 4.5% lower than the previous year but this year, total billings was 0.3% higher than last year! Stability at last? (well for a short time)

*"Stability at last? (well for a short time)"*

Yet another record bookings growth! Last quarter total component bookings were up **16.8%** on the prior year but in Q2 they were up 20.3%! The gradual drop in Book:bill ratio is a concern so let us hope that it doesn't drop below the critical 1:1 and recovers in Q3 or we will be heading for a market decline.

**2ND QTR. 2017 TOTAL COMPONENTS BILLING TREND** *Graphic T3*

Distribution sales for Electronic components by country comparing current qtr with prior quarter (Q/QY-1)and same quarter prior year (Q/QY-1) and YTD 17/16

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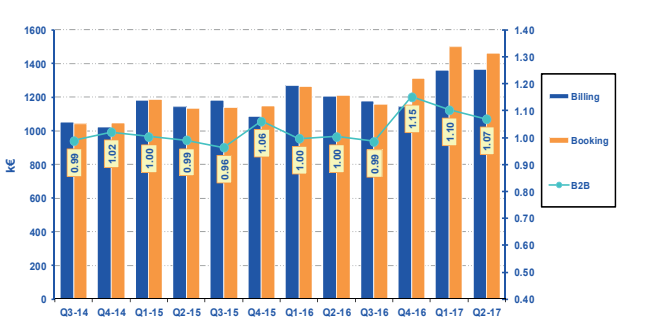
The billings trend will, of course, eventually follow that of bookings but it is good to see that all regions are still showing a billings growth over the same quarter last year.
The UK has recovered well from the poor billings performances in Q2 and Q4 last year.

**2ND QTR. 2017 SEMICONDUCTOR BOOKINGS, BILLINGS & BOOK:BILL RATIO** *Graphic S1*

Semiconductor components bookings, billings & book:bill ratio for Germany, France, Italy, UK, Sweden, Norway, Denmark, Finland, Switzerland and Austria

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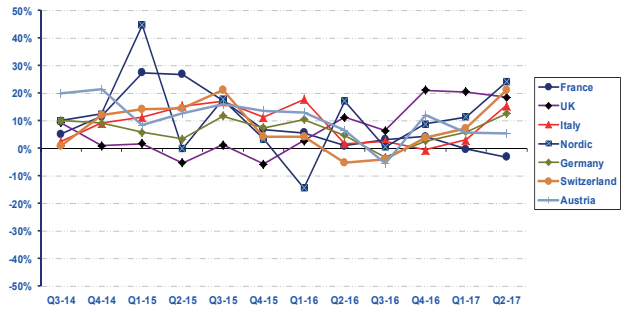
Semiconductor billings in Euros was still 13.5% up on the same quarter last year but up by just 0.5% on Q1.
This follows the same trend as most years with Q1 being the strongest and either Q3 or Q4 the weakest. However, semis continue to bill at their highest level for many years!

**2ND QTR. 2017 SEMICONDUCTOR TENDENTIAL INDEX ( Q/QY-1)** *Graphic S6*

Trend showing growth/decline % in quarterly sales of semiconductors through distribution by country compared with the same quarter prior year.

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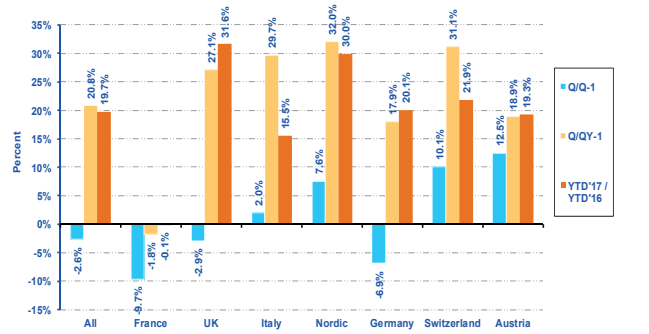
A great performance with only France dipping into a decline after a zero growth in the prior quarter.
With Germany, the UK, Italy and Nordic all showing **10%** plus growth over last year the market is still buoyant.

***"Yet another total components record bookings growth!"***

**2ND QTR 2017 SEMICONDUCTOR BOOKING TREND** *Graphic S2*

Distribution orders for semiconductors by country compared with the prior quarter (Q/Q1) and the same quarter prior year ( Q/QY-1) and YTD 17 / 16

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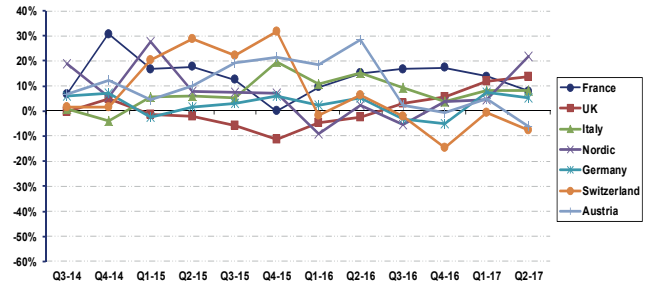
Bearing in mind that Semis are still, by far, the largest sector, the continued extremely strong growth in all regions other than France is important for the sector as a whole.
Also, the continued booking growth in Germany over the same quarter prior year (22.2% in Q1 and 17.9% in Q2) is vital for Europe as a whole.

***"The gradual drop in Book: bill ratio is a concern"***

**2ND QTR. 2017 PASSIVES TENDENTIAL INDEX BY COUNTRY( Q/QY-1)** *Graphic P6*

Trend showing growth/decline % in quarterly sales of passives through distribution by country compared with the same quarter prior year.

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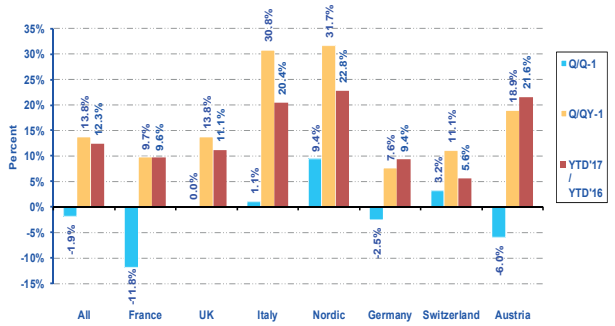
Passive component performance has been a little patchy this quarter! Whereas last quarter, all regions were showing growth, this quarter both Switzerland an Austria dropped into decline. However, all the major regions contimued with a strong growth with Nordic and the UK leading the growth % league.

**2ND QTR. 2017 PASSIVE COMPONENTS BOOKING TREND** *Graphic P2*

Distribution orders for passive components by country comparing Q1 2017 with the prior quarter (Q/Q-1) and the same quarter prior year (Q/QY-1)

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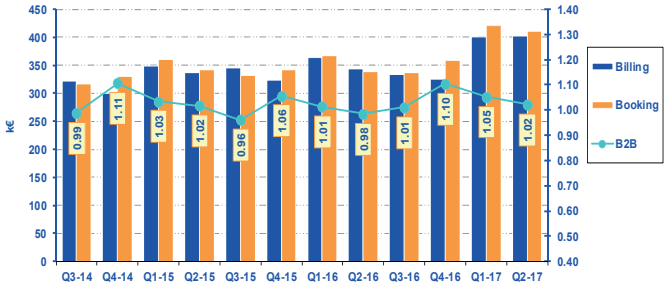
The strong performance of passive bookings in the last quarter's report continues this quarter with all the major European regions still growing at around 10% or more!

**2ND QTR. 2017 EMECH COMPONENTS BOOKING, BILLING & BOOK:BILL RATIO** *Graphic E1*

EMECH components Bookings, billings & book:bill ratio for Germany, France, Italy, UK, Sweden, Norway, Denmark, Finland, Switzerland and Austria

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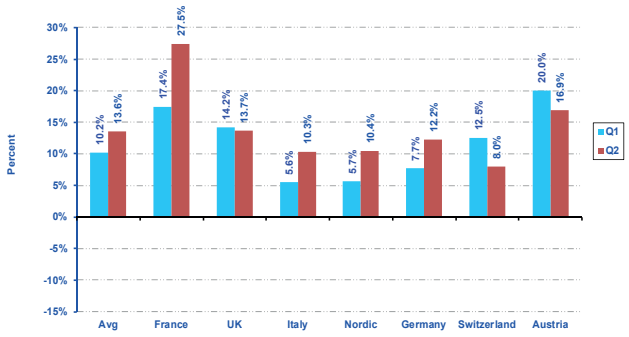
Following the excellent performance of the sector in Q1, Q2 continues to shine! Very high levels of both bookings and billings for the second quarter running. Emech, normally a more stable sector, grew booking by a staggering 21.6%, and billings by 17.1% over the same quarter last year!

**2ND QTR. 2017 EMECH COMPONENTS YTD BILLINGS TREND** *Graphic E4*

Cumulative sales of E-mech components through distribution by country for the current year showing the growth/decline % compared with the same period prior year

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On a country by country Emech billings basis, it can be seen that the strong performance compared with both the prior quarter and the same quarter last year is right across Europe, particularly in France.

***"Emech billings when compared with both the prior quarter and the same quarter last year is right across Europe"***

# The South African electronics industry 2017

by Warren Muir
AREI
*adec@icon.co.za*

*Many in South Africa believe that Industrialisation is one solution to the recession we find ourselves in, and that with more focus on manufacturing burning issues such as unemployment can be addressed.*

The Manufacturing Indaba was held at Emperors Palace in the Eastrand near Johannesburg from 26-28 June 2017. **Arei** represented it's 42 members at the exhibition spread over two days of the Indaba.

Exhibitors characterized a broad spectrum of the manufacturing sector in South Africa, Government and Academic Institutions. The attendance was reasonable but like most recent exhibitions in South

Africa lacked the number of feet that one would expect to see, especially at an important gathering such as this.

> ***"Many in South Africa believe that Industrialisation is one solution to the recession we find ourselves in"***

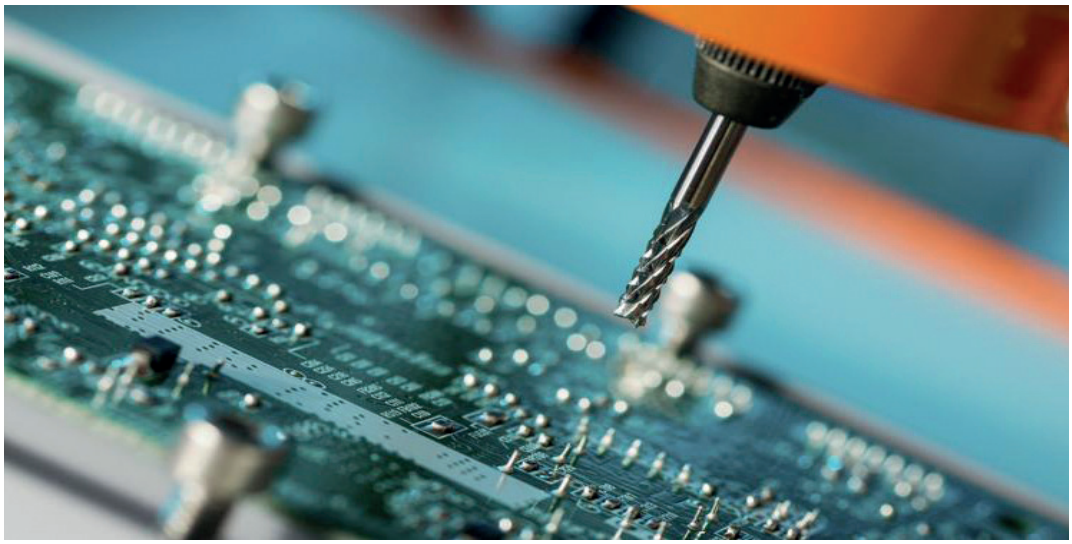
Attending some of the world class presentations that were held over the three days, it was further evident by the poor attendance that general apathy towards manufacturing as a whole may be setting in.

## THE SACCI BUSINESS CONFIDENCE INDEX 2015=100

*Table 1*

| Month | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|
| January | 110.8 | 119.4 | 112.4 | 108.8 | 104.5 | 103.4 | 92.6 | 97.7 |
| February | 113.2 | 118.0 | 115.2 | 107.7 | 106.4 | 107.4 | 92.7 | 95.5 |
| March | 113.5 | 120.6 | 110.8 | 104.7 | 107.3 | 103.2 | 94.0 | 93.8 |
| April | 114.8 | 118.7 | 109.2 | 106.9 | 107.2 | 104.1 | 95.5 | 94.9 |
| May | 111.8 | 117.2 | 107.4 | 104.4 | 102.9 | 100.6 | 91.8 | 93.2 |
| June | 115.7 | 118.5 | 109.9 | 104.4 | 103.8 | 97.9 | 9T.1 | **94.9** |
| July | 115.0 | 114.6 | 105.2 | 105.0 | 101.8 | 101.8 | 96.0 | |
| August | 119.5 | 114.2 | 110.0 | 104.8 | 103.0 | 97.6 | 92.9 | |
| September | 119.8 | 106.2 | 105.8 | 103.3 | 94.5 | 90.3 | | |
| October | 117.2 | 112.9 | 106.5 | 105.5 | 102.8 | 102.3 | 93.0 | |
| November | 118.7 | 112.8 | 106.2 | 105.1 | 105.1 | 95.1 | 93.9 | |
| December | 119.5 | 114.7 | 107.7 | 106.4 | 102.2 | 92.2 | 93.8 | |
| | | | | | | | | |
| AVERAGE | 115.8 | 116.3 | 108.9 | 105.8 | 104.2 | 100.0 | 93.5 | |

*Source: SACCI.org.z*



Listening to an International Speaker quoting statistics that the manufacturing sector employs less than 20% of the world's population, and that global manufacturing had declined over the past 2-3 years were not facts one would want to hear about a possible lifeline to our woes.

> *"Normalise to the US Dollar, the DTAM for H1-2017 is up more than 28% on the first half of 2016"*

Fortunately, general sentiment of those who did attend was positive, and many echoed that they believed that through Collaboration in the Manufacturing Sector we would be able to save our economy. The increased profile of Government at the event was comforting and their initiatives seemed to be aligned with a more Industrialised Economy.

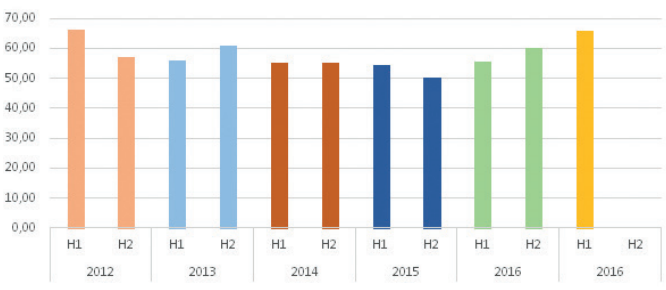
The Statistics echo the positive sentiments. In Rand(ZAR) terms, the TAM numbers declared by the Distributors (DTAM) in the first half of 2017 are up by nearly 2% on H1-2016, and 4% higher than the 2nd half of 2016. Normalise to the US Dollar, the DTAM for H1-2017 is up more than 28% on the first half of 2016, due to a strengthening of the ZAR and increased sales in Logic, Analogue and Power Devices.

A positive feeling on the market is also supported by the **South African Chamber of Commerce (SACCI) Business Confidence Index (BCI)**, having manufacturing as a component of the statistics, which is up from an average of 93.6% in the first half of 2016 to 95% for 2017.

> *"Although Political Instability remains an issue in South Africa, the statistics indicate growth in the market"*

Although Political Instability remains an issue in South Africa, the statistics indicate growth in the market, and supported by positive sentiment further growth is expected for the balance of 2017.

*DTAM Declared per Half Year (Source AREI)*




## Now is the time to start planning your participation at Embedded Conference Scandinavia (ECS) 2017

Whether you come as a speaker, exhibitor or delegate, put the dates of November 7-8 in your diary now and plan for your participation in Europe's largest embedded conference, ECS. Language: English.

2,000 participants from 25 countries, six parallel conference tracks and around 80 exhibitors sum up Embedded Conference Scandinavia in Stockholm, Sweden, which is now held for the 12th time.

The Call for Papers can be found on *www.embeddedconference.se* and the deadline for submitting your proposals is June 1. Should you wish to exhibit, please check our *Exhibitor Invitation*. Attending ECS as a delegate is free of charge and the registration will open in September when also the conference program will be published. For further information, please check our *website*.

The event is organised by the Swedish Trade Association (Svensk Elektronik): Embedded Conference Scandinavia (ECS).

- Deadline for papers 1st June
- Europe's largest embedded conference.

# Trade Secrets legislation and the electronic components supply network

*The blend of ingredients required produce the unique Coca Cola taste is a classic example of a trade secret (Intellectual Property). Despite competitors' attempts to produce the same or a broadly similar soft drink details of the recipe have endured without breach since 1891. Some 126 years on and legislators in Europe and the US have finally moved to protect SMEs (small medium sized enterprises) from theft or abuse of their trade secrets. The EU 'Trade Secrets Directive'. will come into force in 2018 and despite BREXIT is very likely to be adopted into UK law along with other harmonisation activities.*

by Adam Fletcher
ECSN

The World Trade Organisation's Agreement on **Trade Related Aspects of Intelligence Property Rights (TRIPS)** was agreed in 1994.

The document identifies the three key factors that define a trade secret:
**1.** It is not generally known to the public;
**2.** The holder gains an economic benefit from it not being publicly known and
**3.** The holder has taken reasonable steps to maintain its secrecy.

## TRADE SECRET OR PATENT?

Patents protect **Intellectual Property (IP)** that is useful, non-obvious and novel. Part of the premise of all IP - be it a new product, process, software, or data - is that it starts out as a secret and needs its value to be acknowledged and controlled with the granting of a Patent, Trademark or in some cases, Copyright.

> ***"The process also requires the applicant to place large amounts of detailed information in the public domain"***

Organisations in the electronic components sector often hold a patent(s) on the fundamental physics or properties of their product, process, software or data. The granting of a Patent also protects against derivative or extension workarounds by competitors using a slightly different solution.

The strong reliance on patents to protect IP in the **technology sector** remains but the cost of gaining meaningful global patent protection and the protracted timescales needed to achieve it has made the process less attractive for many organisations especially SME's. Counter intuitively, the process also requires the applicant to place large amounts of detailed information in the public domain.
Trade Secret law on the other hand protects any information that is not *"commonly known"* and about which the owner has taken reasonable steps to maintain confidentiality. Trade secrets don't have to be technical, they can simply be anything of commercial value that is not in the public domain. Trade Secret law however, only protects against **"misappropriation"**, which means wrongful taking, and is therefore much more limited than with a Patent. On the plus side, trade secrets, unlike patents, have no expiry date!

## HARMONISATION AND UK LAW

The EU's "Trade Secrets Directive" legislation aims to achieve harmonisation across EU members, and in the process will effectively codify existing English law, the principles of which are based on the laws of equity and were set down in the 19th century. Basically a derivative of common law, all IP protection legislation has two primary themes:

**1.** the "tort* of misuse" of personal information and
**2.** an 'equitable breach' of confidence in commercial or technical secrets.

**Tort*: *wrongful act or an infringement of a right leading to legal liability*

Like much of English law existing trade secret legislation is entirely judge made (rather than defined by Parliamentary or EU legislators) and is based on evidence presented in court. Their judiciary held that trade secrets cannot be classed as "property" and therefore cannot be stolen and consequently, there is no criminal sanction against their disclosure or use. That said, a successful action in the civil courts for deliberately taking or using a trade secret carries severe penalties, provided the claimant is able to demonstrate the significance, secrecy and value of what

has been misappropriated. The claimant must also prove that a breach of confidence has taken place and demonstrate the damage done to its finances and/or its reputation.

## HARMONISING US LAW

The **Defend trade Secrets Act (DTSA)** creates a level of federal legislation that largely mirrors the state by state laws adopted under the Uniform Trade Secrets Act but enables ex parte seizure of goods or information immediately to avoid the party ordered the opportunity to destroy, move or hide information from the court.

It also provides a level of protection for whistle blowers from any retaliatory action so long as the whistle blower disclosed confidential trade secret information to the government or court.

## DUTY OF CONFIDENTIALITY

It is very difficult to prove the existence of a duty of confidentiality if there is no written contract.

Critical confidentiality issues in most business-to-business transactions are today covered by mutually binding confidentiality agreements or by Non-Disclosure clauses written into an organisations general terms and conditions of trade but the loss of **"soft IP"**, for example the misappropriation of a previous employer's customer list detailing the components they purchase and the prices they paid, can also be extremely commercially threatening.

> *"The EU's 'Trade Secrets Directive' legislation aims to achieve harmonisation across EU members"*

That said both employers and employees generally accept that some "leakage" of IP and trade secrets will inevitably occur when people change jobs, possibly in both directions.

The inclusion of duty of confidentiality clauses in employment contracts is also increasing and employers now routinely seek to formally bind employees for a specific period of time, but once employment has terminated it can be very difficult to determine the extent of an employee's obligations to their former employer.

For their part employees have to know how to reasonably recognise a potential or actual trade secret within the information they have access to and what information they may reasonably pass on to others without breaching trade secrets legislation.

Employers may also need to consider how - as the (possibly unwitting) recipient of a trade secret that was unlawfully obtained from another - they can protect themselves from the wrongful activities of the people they employ.

With the increasing use of trade secrets rather than patents and the strengthening of trade secret legislation there is now greater incentive for all parties to act appropriately.

> *"The Defend trade Secrets Act (DTSA) enables ex parte seizure of goods or information immediately to avoid the party ordered the opportunity to destroy, move or hide information from the court"*

I suspect organisations will increasingly seek to positively identify their trade secrets and ensure that they are able to define, use and/or communicate them whilst still benefiting from legal protection.

Obvious first steps for organisations in the electronic components supply network include identifying and monitoring access to their trade secrets, reviewing their Employment Contracts, Non-Disclosure Agreements, Terms and Conditions of Trade etc., but importantly, they must also ensure all employees, particularly new employees from competitor organisations, recognise, understand and respect the policy and procedures for honest commercial practice that they are signing up to.

# US legislation on Online buying of commercially off the shelf Items (COTS) advances in congress

by Robin Gray
President ECIA (USA)

The House passed on July 14 the National Defense Authorization Act of 2018 (NDAA), H.R. 2811, which contains language requiring the Administrator of the General Services Administration (GSA) to *"establish a program to procure commercial products through online* ***marketplaces*** *for purposes of expediting procurement and ensuring reasonable pricing of commercial products."*
H.R.2811 further directs the Secretary of Defense to use the marketplaces selected by the Administrator to purchase, as appropriate, commercial products.

The House summary of the section of NDAA 2018 notes that online marketplaces: *"… allow the government to use online commercial sites like Amazon, Staples, or Grainger just as businesses do."*

The legislation directs the GSA Administrator to contract with one or more commercial online marketplaces providers for Federal government-wide use in the purchase of commercial-off-the-shelf (COTS) products.

> **"It appears that electronic component distributors and part aggregator sites may meet the criteria for becoming an online marketplace provider"**

This House defense authorization bill defines *"online marketplace provider" as "a commercial, non-Government entity providing an online portal for the purchase of commercial products aggregated, distributed, sold or manufactured by such entity."*
H.R. 2811 sets forth the following criteria that the GSA Administrator shall use in selecting online marketplace providers.
The marketplaces shall:

- be widely used in the private sector, including B2B e-commerce
- provide dynamic selection and pricing
- provide offers from multiple suppliers on the same or similar products that can be filtered by price, delivery date and reviews
- not prioritize or feature a product based on compensation paid to the marketplace by the seller
- provide procurement oversight controls, including spending limits, order approval and order tracking
- provide consolidated invoicing, payment and customer service on behalf of all sellers
- meet requirements for supplier and product screening

With regard the latter, i.e., meeting the requirements for supplier and product screening, it is important to note that the proposed legislation specifically stipulates that marketplace provide *"the ability to search suppliers and products and identify such suppliers and products* ***as authorized or not authorized****"*
Another noteworthy provision is that the marketplaces selected "agree not to sell or otherwise make available to any third party any of the information…" regarding the DoD purchase.

It appears that electronic component distributors and part aggregator sites may meet the criteria for becoming an online marketplace provider.
This legislation was originally part of H.R. 2511 before being incorporated into H.R. 2810. The legislation now moves to the Senate for consideration. ECIA will continue to monitor the progress of this legislation through Congress and keep ECIA members informed of its status.

# Turnover and orders picking up in Finland

by Kari Pekkela
Elkomit

The turnover of technology industry companies in Finland totalled **EUR 68.7 billion** in 2016. This is about one-half per cent higher than in 2015. The turnover of all main sectors expanded towards the end of 2016.
In January 2017, turnover was 14 per cent higher than twelve months earlier. Export turnover also picked up. In 2008, prior to the financial crisis, the turnover of technology industry companies in Finland was EUR 86 billion.

Technology industry orders were up between January and March. New orders were at a higher level than twelve months earlier, although slightly down from the previous quarter.
Order books were stronger than in December. The number of requests for tender received by technology industry companies continued to increase. Competitiveness determines the extent to which these translate into actual orders.

The companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders between January and March was four per cent lower than in the preceding quarter, but 13 per cent higher than in the corresponding period in 2016. Of the respondents, 57 per cent reported that the number of new orders was up since the October- December period, 36 per cent said it was down and seven per cent said it had remained stable.

At the end of March, the value of order books was three per cent higher than at the end of December, and slightly higher than in March 2016.
59% of companies reported an increase in their order books after December, while 31% reported a decrease and 10% had seen no change.

> *"In January 2017, turnover was 14% higher than twelve months earlier"*

Judging from order trends in recent months, the turnover of technology industry companies is expected to be higher in the spring of 2017 than in the corresponding period last year.
The number of personnel employed by technology industry companies in Finland increased slightly in the first quarter and totalled some **288,000** at the end of March. Personnel increased by less than one per cent, or more than 2,000 employees from the 2016 average.
Temporary or part-time lay-offs affected 7,000 employees. Compared with the end of 2016, personnel increased in 53% of technology industry companies, deceased in 27% and remained unchanged in 20%.
Technology industry companies' recruitment activities picked up markedly in early 2017. They recruited 11,000 new employees between January and March. In 2016, total recruitments came to 28,500. Some companies were increasing their personnel, while others were hiring new employees due to retirements and employee turnover.

## ELECTRONICS AND ELECTROTECHNICAL INDUSTRY IN FINLAND

The turnover of companies in the electronics and electrotechnical industry (telecommunications equipment, electrical equipment and medical technology) in Finland totalled **EUR 14.3 billion** in 2016.

This is 2% less than in 2015. In January 2017 however, turnover was 21% higher than twelve months earlier. In 2008, prior to the financial crisis, turnover in Finland was EUR 30.4 billion.

Both new orders and order books in the electronics and electrotechnical industry were higher in early 2017 than twelve months earlier. However, the value of orders did not quite reach the level recorded at the end of 2016.
The electronics and electrotechnical companies that took part in the Federation of Finnish Technology Industries' survey of order books reported that the monetary value of new orders in the industry between January and March was 8% lower than between October and December, but five per cent higher than in the corresponding period in 2016.
At the end of March, the value of order books was down four per cent from the end of December, but 5% higher than in March 2016.
Judging from order trends in recent months, the turnover of electronics and electrotechnical industry companies is expected to remain higher in the spring of 2017 as in the corresponding period last year.

The number of personnel in electronics and electrotechnical companies in Finland declined slightly in the January-March period, totalling some **37,200** at the end of March.
Personnel decreased by more than two per cent, or some 800 employees from the 2016 average.



Source:Bishop & Ass.

# The World Cable Assembly Market

by Ron Bishop
Bishop & Associates

*Design engineers and purchasing personnel want to use the best connector companies for their design and purchasing requirements. However, identifying the best companies is not an easy task. Asking the following questions helps narrow the field.*

The worldwide market for cable assemblies was **$139.7 billion** in 2016. The cable assembly market grew 4.2% in 2016. The worldwide growth included North America up 2.8%, Europe up 5.5%, Japan down -6.4%, China was up 12.1%, Asia Pacific was down -3.0% and ROW up 4.9%.

The worldwide cable assembly market will grow at a compound annual rate of **6.2%** from 2017 to 2022, to a market value of $198.5 billion. No worldwide recessions are projected during this timeframe. Regional GDP growth was used as the primary basis for the projections of industry growths.

## THE MARKET BY REGION OF THE WORLD *(Tables 1,2)*

China was the largest cable assembly region in 2016 at 28.9%. North America, Europe and Japan are all expected to lose market share through the forecast period 2017-2022.

**WORLDWIDE CABLE ASSEMBLY MARKET BY REGION 2016, 2017 & 2022** *Table 1*

| Region | 2016 | 2017 | 2022 | 5 Year CAGR |
|---|---|---|---|---|
| North America | $ 32.0 | $ 33.4 | $ 42.8 | 5.1% |
| Europe | $ 30.0 | $ 31.3 | $ 41.2 | 5.6% |
| Japan | $ 11.4 | $ 11.8 | $ 15.0 | 5.0% |
| China | $ 40.4 | $ 42.7 | $ 61.7 | 7.6% |
| Asia Pacific | $ 20.0 | $ 21.1 | $ 29.3 | 6.8% |
| Rest of world | $ 5.9 | $ 6.2 | $ 8.5 | 6.6% |
| **Total** | **$ 139.7** | **$ 146.6** | **$ 198.5** | **6.2%** |

*Source:Bishop & Ass.*

**WORLDWIDE CABLE ASSEMBLY MARKET SHARE BY REGION 2016, 2017 & 2022** *Table 2*

| Region | 2016 | 2017 | 2022 |
|---|---|---|---|
| North America | 22.9% | 22.8% | 21.6% |
| Europe | 21.5% | 21.4% | 20.7% |
| Japan | 8.1% | 8.0% | 7.6% |
| China | 28.9% | 29.1% | 31.1% |
| Asia Pacific | 13.3% | 14.4% | 14.8% |
| Rest of world | 4.2% | 4.2% | 4.3% |
| **Total** | **$ 139.7** | **$ 146.6** | **100%** |

*Source:Bishop & Ass.*

> ***"The worldwide cable assembly market will grow at a compound annual rate of 6.2% from 2017 to 2022"***

Worldwide market share in the cable assembly market is beginning to stabilize. In the past, it seemed that China would take it all, but that trend has slowed for various reasons. Part of the change is that China already has a significant share of the computer market, which in itself has slowed, leaving little for China to gain (plus China is "off-shoring" cable assemblies to lower labor rate areas). Additionally, some of the cable assembly business will ultimately stay where the final products are being assembled.

The **automotive industry** is a good example of on-shore inclination, and automotive represented 29.5% of the cable assembly industry in 2016.

**China** will likely retain their new status as "world's manufacturer" and the prosperity (and increasing costs) that come with that success.

## THE MARKET BY MARKET SECTOR *(Tables 3,4,5,6)*

In 2016, Automotive was the largest cable assembly segment with a market value

**WORLDWIDE CABLE ASSEMBLY MARKET BY MARKET SECTOR 2016, 2017 & 2022** *Table 3*

| Total Market Market Sector | 2016 | 2017 | 2022 | 5 Year CAGR |
|---|---|---|---|---|
| Computer/Peripherals | $ 19.7 | $ 20.5 | $ 28.5 | 6.8% |
| Business/Office | $ 1.6 | $ 1.6 | $ 2.0 | 4.4% |
| Istrumentation | $ 3.3 | $ 3.4 | $ 4.5 | 5.4% |
| Medical | $ 4.0 | $ 4.2 | $ 5.5 | 5.3% |
| Industrial | $ 14.3 | $ 15.5 | $ 20.6 | 6.5% |
| Automotive | $ 41.2 | $ 43.0 | $ 57.9 | 6.1% |
| Trasportation | $ 8.7 | $ 9.2 | $ 12.4 | 6.2% |
| Military/Aerospace | $ 13.0 | $ 13.5 | $ 16.4 | 4.0% |
| Telecom/Datacom | $ 24.0 | $ 25.8 | $ 37.2 | 7.7% |
| Consumer | $ 6.0 | $ 6.2 | $ 8.4 | 6.1% |
| Other Equipment | $ 3.9 | $ 4.1 | $ 5.0 | 4.4% |
| **Total** | **$ 139.7** | **$ 146.6** | **$ 198.5** | **6.2%** |

*Source:Bishop & Ass.*

## PERCENTAGE SHARE BY MARKET SECTOR 2016, 2017 & 2022

*Table 4*

| Total Market Market Sector | 2016 | 2017 | 2022 |
|---|---|---|---|
| Computer/Peripherals | 14.1% | 14.0% | 14.3% |
| Business/Office | 1.1% | 1.1% | 1.0% |
| Istrumentation | 2.4% | 2.4% | 2.3% |
| Medical | 2.9% | 2.9% | 2.8% |
| Industrial | 10.2% | 10.3% | 10.4% |
| Automotive | 29.5% | 29.3% | 29.2% |
| Trasportation | 6.3% | 6.3% | 6.3% |
| Military/Aerospace | 9.3% | 9.2% | 8.3% |
| Telecom/Datacom | 17.2% | 17.6% | 18.8% |
| Consumer | 4.3% | 4.2% | 4.2% |
| Other Equipment | 2.8% | 2.8% | 2.5% |
| **Total** | **100%** | **100%** | **100%** |

*Source:Bishop & Ass.*

## WORLDWIDE CABLE ASSEMBLY MARKET BY MARKET SECTOR 2016, 2017 & 2022

*Table 5*

| Product Type | 2016 $ | 2017 % of total | 2022 $ | 2022 % of total |
|---|---|---|---|---|
| PCB | $ 7.6 | 5.2% | $ 10.4 | 5.3% |
| Rectangular | $ 36.6 | 25.0% | $ 50.1 | 25.2% |
| RF | $ 13.8 | 9.4% | $ 18.9 | 9.5% |
| Circular | $ 13.2 | 9.0% | $ 17.2 | 8.7% |
| Telephone | $ 8.4 | 5.7% | $ 10.2 | 5.1% |
| Fiber Optics | $ 10.7 | 7.3% | $ 15.9 | 8.0% |
| Heavy Duty | $ 4.1 | 2.8% | $ 5.4 | 2.7% |
| Power/Hi Voltage | $ 2.2 | 1.5% | $ 2.9 | 1.5% |
| Appl. Specific | $ 44.1 | 30.1% | $ 59.4 | 29.9% |
| Other | $ 5.9 | 4.1% | $ 8.1 | 4.1% |
| **Total** | **$ 146.6** | **100%** | **$ 198.5** | **100%** |

*Source:Bishop & Ass.*

of $41.2 billion representing 29.5% of the overall cable assembly market.

***"In 2016, Automotive was the largest cable assembly segment with a market value of $41.2 billion"***

**Telecom/Datacom** was the second largest cable assembly segment with a market value of $24.0 billion, or 17.2% of the market. **Computers and Peripherals** was the third largest market sector with a value of $19.7 billion, or 14.1% of the total cable assembly market value in 2016.

### THE MARKET BY PRODUCT TYPE

Cable assembly types include: Printed Circuit Board (PCB) assemblies, Rectangular I/O assemblies, Radio Frequency (RF) assemblies, Circular assemblies, Telephone/ RJ45 assemblies, Fiber Optic (FO) assemblies, Heavy Duty assemblies, Power/ High Voltage assemblies, Application Specific assemblies and Other assemblies.

By market value, the largest group of cable assemblies in 2017 is Application Specific at **$44.1 billio**n. The largest segment within Application Specific is automotive assemblies.

The second largest group of cable assemblies in 2017 is Rectangular assemblies with a market value of $36.7 billion. This group of assemblies are widely used for I/O functionality across all market sectors. The largest market sector within Rectangular cable assemblies is Automotive.

Application Specific and Rectangular combined equal 55.1% of the overall cable assembly market by product type.

The above table shows the product types used in the cable assembly industry for 2017 and 2022.

As can be seen in the above table, the product types as a percent of the total is shifting over time.

***"Fiber optics assemblies are increasing as they displace telephone assemblies"***

Comparing 2017 to 2022, the larger changes by product type are occurring in:

- Fiber optics assemblies are increasing as they displace telephone assemblies for higher speed interconnect in datacom and high performance computing.
- Application Specific is down (in value) as the local markets for automotive grow in China and Asia Pacific (with their lower costs).
- Circular is lower as military/ aerospace grows at a slower pace.
- Rectangular is up with growth in computers, automotive and other markets.

For more in-depth information on the cable assembly market, the 2017 World Cable Assembly Market report is available on our web site here.

# Come to Italy, the European Centre for smart lighting!

## At Illuminotronica, 12th-14th October

ILLUMINO TRONICA / HUT

by Silvio Baronchelli
Assodel

**IlluminoTronica** is a unique Italian professional trade showcasing the evolution and latest trends and technologies in home and building automation, LED lighting and safety/security fields.
It is not just a matter of visitor numbers (which are raising steadily)... **IlluminoTronica** is a community event where you can meet up with technicians and experts in the world of smart lighting, home and building automation and security integration while following the technological evolution whose heart and being is based on LEDs lighting and IoT, Internet of Things.

> *"Training and Information sessions will be non-stop over the three days"*

IlluminoTronica takes place in Padova on the 12th-14th October 2017.

For the 2017 event, the fair is launching different special areas dedicated to video-surveillance and privacy, smart lighting and smart cities. There will be many professional training courses and opportunities for discussions with experts, plus testimonials and presentations to keep operators and professionals up to date.

These include discussion groups, workshops, display arenas, demo areas and practical drills.
IlluminoTronica is promoted by HUT and by Assodel (The Italian Federation of Electronics Clusters).

### AREAS OF ILLUMINOTRONICA

**1 SMART LIGHTING**
From the lighting system components to the solutions for driving, automation and control process whilst not forgetting the design aspect by our exhibition of lighting appliances (indoor and outdoor) selected for quality and technology.

The fifth Codega Prize event is the international event for Smart Lighting. It is the award assigned to lighting design excellence. Where and when? On the 13th October 2017 in Venice.
https://premiocodega.it/

**2. VIDEO-SURVEILLANCE AND PRIVACY**
A dedicated area for all the innovative solutions concerning video-surveillance within an IoT scenario meeting privacy policy requirements.
https://illuminotronica.it/sicurezza/

**3. SMARTPRO ACADEMY**
This is a training path for installers and those who deal with Smart Home technologies to seize the opportunities offered by a market growing at +20%.
https://illuminotronica.it/formazione/

> *"A new Video-surveillance area"*

**4. STARTUP**
A project by Assodel in cooperation with BACKtoWORK24 to promote all those brand-new ideas in the Internet of Things, Smart Home technologies, eHealth.
https://illuminotronica.it/startup/

**5. IoT and CYBERSECURITY**
An exhibition area where you can see the newest technologies in the field of IoT with successful projects and demos on wireless devices, modules, software package, sensors and power supply solutions.
https://illuminotronica.it/internet-of-things-iot/

**6. INTERNATIONAL AREA**
We have completed an expo area thanks to the support friom IDEA. This expo area shows the result from the work at an international level between 13 nations. We now have agreements for showrooms in USA, China and EU countries. Several opportunities for B2B meetings among manufacturers, distributors, wholesalers and EMS's to mutual growth and development also at an international level.
https://illuminotronica.it/international/

*Padova, from the* ***12th to the 14th October 2017***
*Training and Information sessions will be non-stop over the three days*

**7. SMART AREAS**
SMART VILLAGE: We have recreated an over 200 sm 'smart' village with four separate environments demonstrating the connected world.

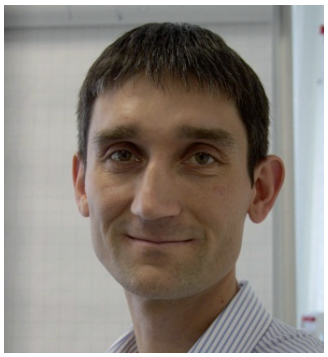
SMART SHOP: highlights new channels where you can buy technology. This is designed for all those who design and install the latest solutions and want to know where to buy them.

SMART CITY: from lighting to traffic and parking management, from the safety to communication: all the ingredients to build up a citizen-scale city.
https://illuminotronica.it/smart-home/

# Digital economy: ecosystems vs corporationsa

*Editors comment*
*I find this quarter's article from our russian colleague Ivan, most thooght provoking!*
*Well worth a read!*

by Ivan Pokrovsky
Executive Director ASPEC



*The program «Digital economy» is being developed in Russia. It implies the widespread introduction of modern technologies, but does not explain how Russia should participate in the development of those technologies! An approach which would be worthwhile, not only for Russia but for other countries too,is proposed in this article.*

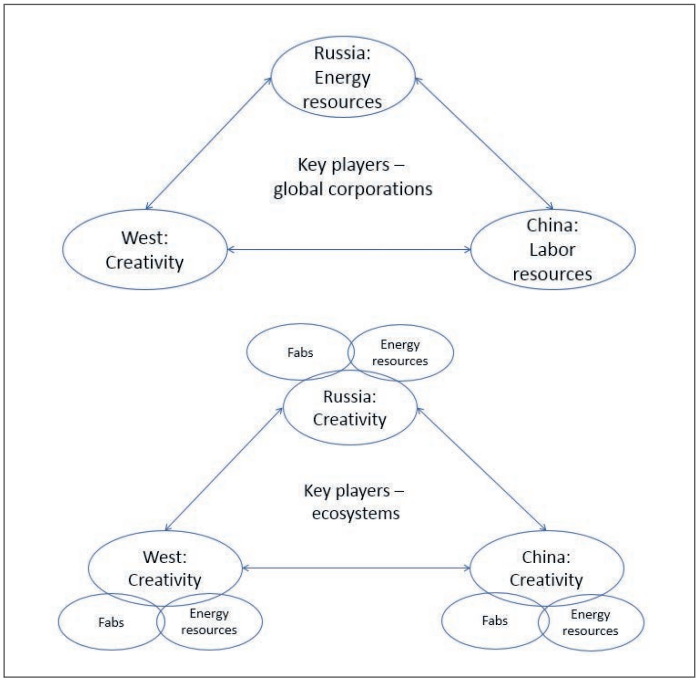
**Information technologies** are now entering all areas of people`s activity in all countries. The economy will become digital sooner or later, the only alternative is the complete isolation of the country.
The current key issue is whether a country participates in technology development, using digitalization for its own economic and safety purposes or it is an object of the digitalization - being a passive consumer of technologies and a supplier of raw materials and low-cost labor resources.

Russia now is closer to the second way, significantly increasing national economic dependence on technology-leader countries.
This digitalization leads to the polarization of profits – the economic growth of countries that develop and manage technologies, and economic decline in countries that simply supply the raw materials and labor.
The main challenge for Russia is a transition from passive consumption to the active role in design and development of technologies.
The main hurdle for this transition is Russia's widespread use of foreign corporations' proprietary solutions. As the matter of fact, Russia is dependent on these corporations and their technologies.

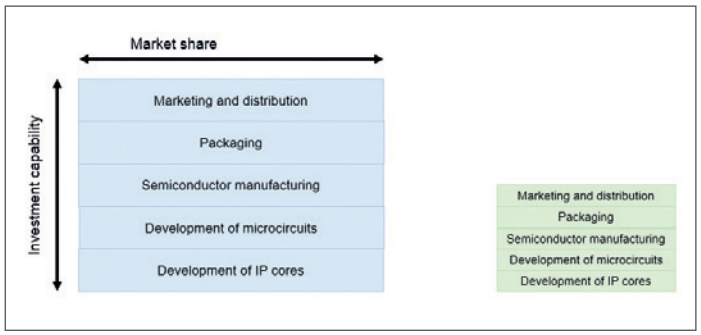
> ***"The solution to this problem is a transition from using closed proprietary technologies toward using open, freely distributed or commercially affordable technologies"***

It is more convenient for Russian customers to use foreign corporations` solutions, paying a technological rent to those who hold the rights to the intellectual property.
What is usually called a **"transfer of technology"**, is, de facto, creating a dependence.
Russian companies can use proprietary technology, but not to develop it further and not to participate in development processes.
Only using Russian proprietary technologies is not a way out.

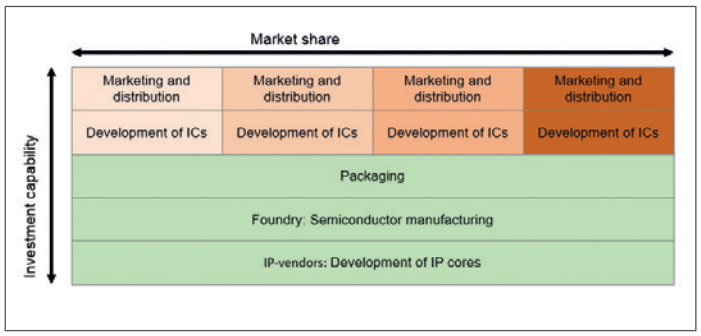
The impact of political risks is decreasing, but the risks of technological conservation and market feudalization are increasing; the lag behind a "world class" level is rising.
When the gap becomes too big, customers start using technologies from foreign companies.
The solution to this problem is a transition from using closed proprietary technologies toward using open, freely distributed or commercially affordable technologies.




*Pic. 1*




*Pic.2 Vertically-integrated model: small companies cannot compete on open markets*




*Pic. 3. Sharing economy: small companies are using the scale of an ecosystem*

The transition from the buying closed solution model towards the collective use and development of technologies is a key transformation.
This solution is applicable not only to Russia, but to all countries, and it solves the problem of the technology dependence.
The commercialization that is created in this model at the expense of development, facilitates the introduction of many related service technologies.

The resultant profit level reduction will not lead to a decrease in the development dynamics compared with the proprietary model because of the benefits provided by involving much wider company and specialist audiences from different countries into the technology-perfection process.
It is a rebirth of globalization in **a new paradigm**, the cooperative development and using of the technologies - instead of the current self-exhausting, primitive division of roles between countries. *(see the pic. 1)*

> **"It is a rebirth of globalization in a new paradigm"**

These principles are now widely used in the development of software.
The balance between proprietary and free distributed software is movable, although it is considered that the balance is constant and the element of free-distributed software hasn't increased.
The open software developers` ecosystems hold back the market leaders, not allowing them to dominate controlled markets, but allowing customers to choose a worthy alternative.

Sometimes the open technologies ruin the market for proprietary solutions at one level and at the same time create a base for monopolization at another level. For example, it happened in the 80`s during the introduction of the open architecture IBM-PC computers. Open technology facilitated the formation of huge software ecosystem developers and producers of computers and hardware. Another monopoly in proprietary solutions, the Wintel standard- software Windows + Intel x86 processors, rose on this wave.

Now 450 design companies in the ecosystem, united around the British company ARM, are destroying Intel`s monopoly in the market of processor architectures. ARM offers a more open licensing model for the use of its processor cores, and at the same time has started to dominate the IP market, where the percentage of ARM licenses is approaching 40%.

On the other front of struggle where Intel dominates, TSMC offers production resources for collective use and makes advanced semiconductor technologies available to a wide range of developers. TSMC brings together more than 450 customers too and has high and stable level of capacity utilization.
By increasing the number of customers, TSMC is gathering pace in investments and technological development and now has more than 60% of the world foundry market. In each case, new, more narrow competence markets are being formed. We see the integrated stack of competences is divided into developers of IP-cores, foundry and developers of microcircuits.

> **"These principles are now widely used in the development of software"**

The last become technology integrators in the new division of labor.

Perhaps participating in ecosystems is the only chance to bridge the gap in the scale of activity for Russian developers and producers. Being smaller than global competitors by around 1000 times, it is impossible to compete one-on-one.
In the sharing economy the size of the company is not critical. The ecosystem size is more important. *(see the pic.)*

The **formation** and **development of ecosystems** does not depend on the government, but on the readiness of companies to work in the community, combining competition and cooperation based on the open respectful relations.
Perhaps building these relations is the most vital and key technology for our digital future.

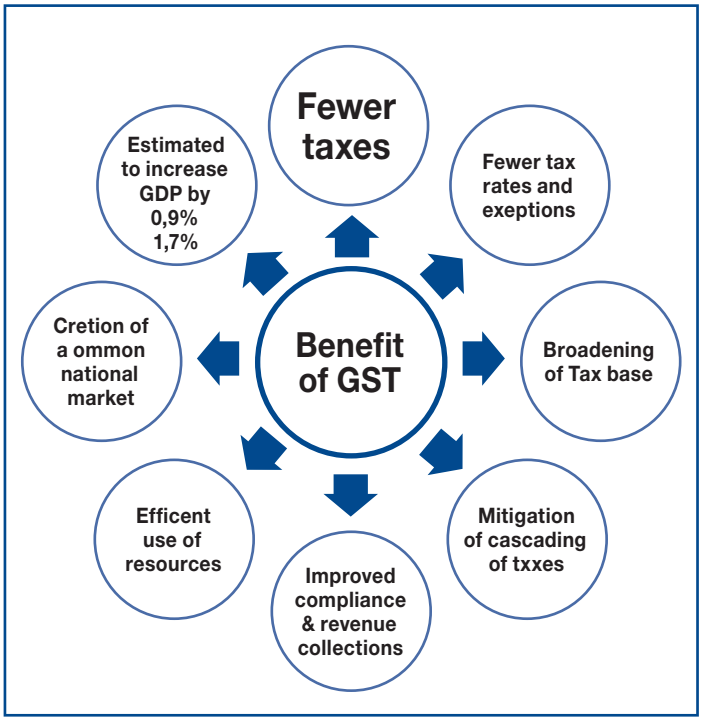
# Goods and Services Tax-Transforming the India Indirect Tax System

by Rajoo Goel
Elcina
www.elcina.com

India has entered a new stage of economic renaissance.
The last one was the **"New Economic Policy 1991"** which liberalized the sleeping giant of the world.

This policy was launched with a goal to make Indian economy more market oriented and to have greater international trade interface. It lead to sharp reduction of import tariffs, deregulation of the market, and opened up the economy for foreign direct investment.
The New Economic Policy of 1991 also led to review and re-engineering of Industrial Policy, Trade Policy, Valuation of currency, thrust on Infrastructure and more.

The key outcome was liberalization of Indian economy, fewer controls, licenses and permits and greater freedom in internal and external trade.




The step to introduce GST across the country is transformational in nature and aims to end the indirect tax system inherited from the colonial era.

*"GST is one indirect tax for the whole nation. which will make India one unified common market"*

GST is one indirect tax for the whole nation. which will make India one unified common market.
GST is single tax on the supply of goods and service, right from the stage of manufacture to the end consumer.

Credits of input taxes paid at each stage will be available in the subsequent stage of value addition, which makes GST essentially a tax only on value addition & each stage. The final consumer will thus bear only the GST charged by the last dealer in the supply chain: with set-off benefits at all the previous stages.
This will help to address the issue of cascading effect of multiple taxes which has been highly regressive for the economy.
GST would be applicable on "supply" of goods or services as against the earlier concept of tax on the manufacture of goods or on sale of goods

## GST RATES ACROSS THE WORLD

*Table 1*

| Country | Rate |
|---|---|
| Canada | 5% |
| Francwe | Standard: 20%<br>Reduced rate:5,5% & 10%,<br>Super reduced rate of 2,1% |
| United Kingdom | Standard: 20%<br>Reduced rate:5% |
| Japan | Standard rate: 8% |
| Australia | 10% |
| Malaysia | 6% |
| India | Suggested revenue neutral rate: 27% |

*Source: Deloide*

or on provision of services. GST would be based on the principle of destination based consumption taxation as against the present principle of origin based taxation.

It was a constitutional challenge to implement One Nation One Tax in a federal structure like India, where the constitution allows all states and local bodies to levy their own taxes. To overcome this challenge the central government constituted a GST council with representatives from all states and central government.
The **GST model** in India has two components one meant for center (CGST), the second component is for state (SGST).
A provision of IGST has also been adapted which will serve the purpose of distribution of taxes among states during interstate movement of goods & services.
The GST subsumes a large number of central indirect taxes including the central excise, countervailing duty and service tax.

It also subsumes State VAT, Octroi and Entry tax, luxury tax, and more.
With GST, the 2% central sales tax, levied by the central government on interstate sale of goods, and earmarked entirely for the tax originating state, are also done away with.

> *"The advantages of GST far outweigh its disadvantages"*

In India presently **a multi rate system has been introduced**.
There are four rates i.e, 5%, 12%, 18% and 28% to meet out the existing revenue targets.
Cesses have also been introduced to compensate the revenue loss due to the implementation of GST. Simultaneously the government has also revealed its intention to gradually converge to a single rate regime across sectors, products & services.
The advantages of GST far outweigh its disadvantages.
GST is a transparent tax which drastically reduces

the number of indirect taxes and has no hidden taxes thus reducing the cost of doing business.
It is expected that prices will come down as compliance improves and there are no hidden taxes and distortion in pricing and taxation is ironed out.

> *"It reduces logistic costs and time during interstate movement of goods"*

GST will be levied only at the final destination of consumption based on VAT principle and not at various points (from manufacturing to retail outlets).
This will help in removing economic biases and bring about development of a common national market.
GST will also help to build **a transparent and corruption free tax administration**.

A major positive of this system is that it reduces logistic costs and time during interstate movement of goods, paperwork, simplifying procedures and enhancing efficiency of the manufacturing and trading sectors of India.
Though it will take time to learn and cope with the provisions of the GST system and taxation regime, there is a strong perception that this step of government will have a significant positive impact on trade and commerce and ease of doing business in India.
A **robust online platform** (GSTN) is handling the implementation of GST and is effectively integrating the complex provisions of GST for the Central as well as State Governments.
ELCINA is hopeful that our Indirect Tax system and implementation will soon be comparable with the most efficient countries in the world.

IDEA

**IDEA NEWSLETTER**
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EDITOR IN CHIEF: Gary Kibblewhite

EDITORS: Adam Fletcher (UK);
Ivan Pokrovski (Russia)
Jens Dorwarth (Germany)
Karl Pekkala (Finland)
Lena Norden (Sweden)
Rajoo Goel (India)
Robin Gray (Usa)
Ron Bishop (USA);
Silvio Baronchelli (Italy);
Warren Muir (South Africa)

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