

# The Good News and the Bad News on Working Conditions in Electronics Supply Chains

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The Business of a Better World

# Good News and Bad News

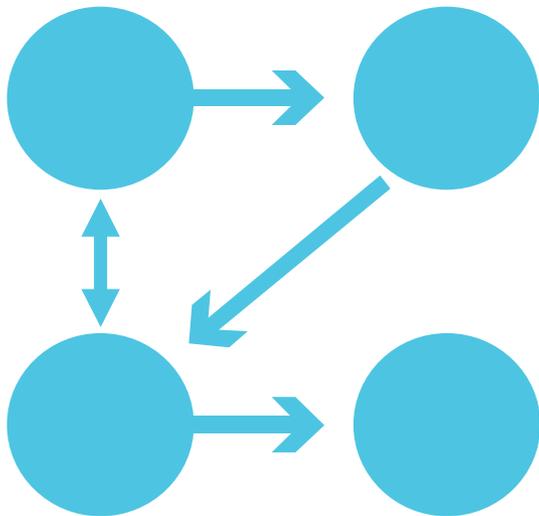
1. Landscape
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# Landscape

What does the global electronics supply chain look like?

# Landscape

The supply chain is much more of a web with component manufacturers buying and selling among each other in a process obscured to brands



- These products and components appear in commercial and consumer markets across numerous industry sectors – from consumer electronics, to apparel, automotive, and toys
- Important manufacturing hubs for components and assembly of final products are in China, South East Asia, and Mexico
  - Smaller hubs are in the USA, Japan, Europe, and Israel
- Dominated by skilled workers, operating particular and specialized equipment
  - Demographics in electronics manufacturing skews a bit younger (under 30 years old) and is approximately 60% women

# Landscapes

There is one key actor influencing working conditions in electronics



- **Responsible Business Alliance**: Founded in 2004 by a group of leading electronics companies, the Responsible Business Alliance (RBA), formerly the Electronic Industry Citizenship Coalition (EICC), is a nonprofit comprised of electronics, retail, auto and toy companies committed to supporting the rights and wellbeing of workers and communities worldwide affected by the global electronics supply chain.
  - RBA members commit and are held accountable to a common Code of Conduct and utilize a range of RBA training and assessment tools to support continuous improvement in the social, environmental and ethical responsibility of their supply chains.
  - Derived from UN and ILO standards

## At a glance:

- 110 members
  - Brand names
  - OEM/ODM
  - Components
    - Printed Circuit Boards
    - Semiconductors
- Combined annual revenue over \$4.75 trillion
- Over 3.5 million workers

# Landscape

Key issues for the electronics supply chain are broken into 4 categories

Labor	Health & Safety	Environment	Ethics
<ul style="list-style-type: none"> <li>• Forced labor</li> <li>• Child labor</li> <li>• Working hours</li> <li>• Harassment and abuse</li> <li>• Fair wages and benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Safe use of hazardous substances and chemicals</li> <li>• Occupational safety</li> </ul>	<ul style="list-style-type: none"> <li>• Climate change</li> <li>• Waste and effluents</li> <li>• Energy management</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict minerals</li> <li>• Ethical raw material sourcing</li> <li>• Transparency and reporting</li> </ul>

# Progress

How far have we come?

# Progress

It has not always been a very pretty picture...

JOEL JOHNSON MAGAZINE 02.28.11 12:00 PM

## 1 MILLION WORKERS. 90 MILLION IPHONES. 17 SUICIDES. WHO'S TO BLAME?



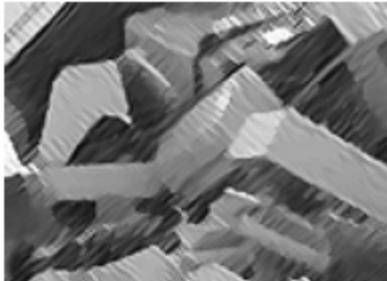
The work at Foxconn's Shenzhen plant can be repetitive, exhausting, and alienating—like manufacturing jobs anywhere in the world. Photo: Tony Law

# Progress

It has not always been a very pretty picture...

## Poison PCs and Toxic TVs:

California's biggest environmental crisis that you've never heard of



*"While millions of computers have been 'junked' over the past few years, the rate of recycling has decreased due to a lack of effective systems or policies. The industry's 'planned obsolescence' policy of frequently introducing upgraded products threatens to make the disposal problem worse."*

– Ted Smith, Executive Director, Silicon Valley Toxics Coalition,  
"Should PC Makers Recycle Wares?" – zdnet, June 24, 1999

# Progress

It has not always been a very pretty picture...

 GoodElectronics



## The Poisonous Pearl

Occupational chemical poisoning in the electronics industry in the Pearl River Delta, People's Republic of China

Authors: Labour Action China (LAC)  
Labour Education and Service Network (LESN)  
Centre for Research on Multinational Corporations (SOMO)

Supported by Bread for All/Swiss Catholic Lenten Fund

# Progress

It has not always been a very pretty picture...

## A Fire Broke Out At A Samsung Battery Factory



**Ben Sin**, CONTRIBUTOR  
FULL BIO ▾

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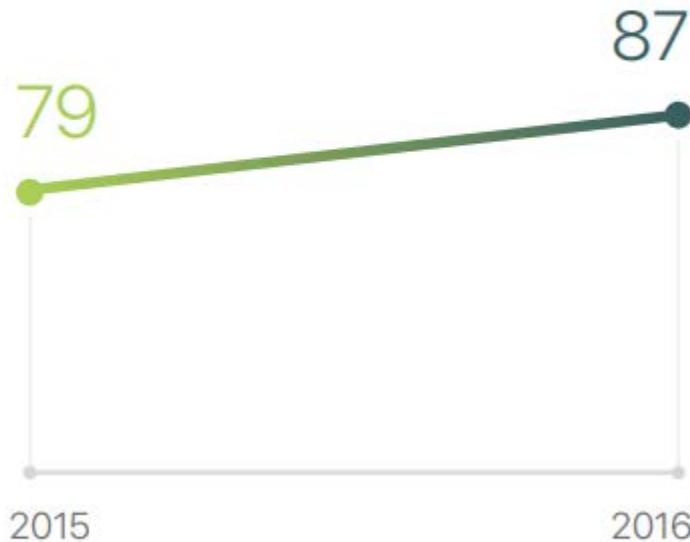
*A Samsung affiliated factory in Tianjin, China -- one that produced some of the batteries for the Galaxy Note 7 -- caught fire on the morning of February 8. Photo: Weibo*

The following story is so sensational, so "nooo way!" that I sat on it for a few hours after first seeing photos and "tweets" about it on [Weibo](#) (aka China's version of Twitter): the factory that made batteries for the Samsung Galaxy Note 7 caught fire.

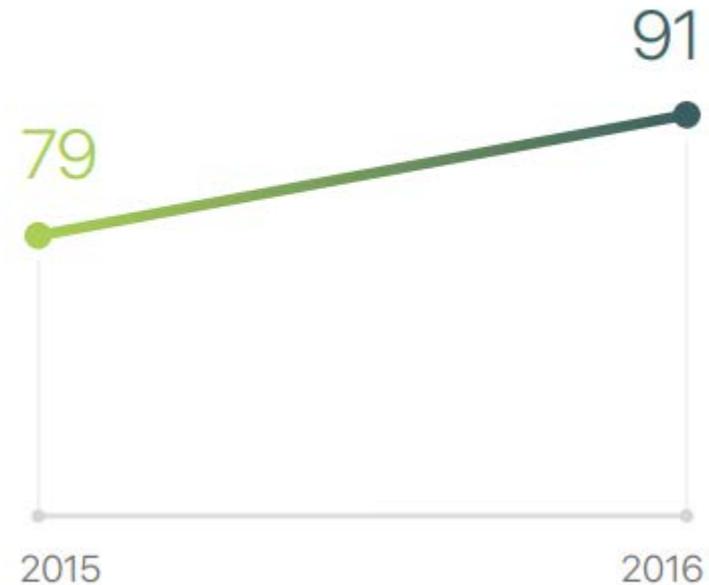
# Progress

Collaboration is leading to objective progress for Apple

Average Labor and Human Rights Score



Average Health and Safety Score



# Progress

## Collaboration is leading to objective progress for HP

	2014	2015	2016
<b>Working hours</b> Suppliers' employees working less than 60 hours per week on average <sup>2</sup> [%]	84	88	89
<b>Day of rest</b> Suppliers' employees receiving at least one day of rest each seven day workweek <sup>2</sup> [%]	91	96	96
<b>Suppliers with few student workers</b> Suppliers in China with student workers representing 20% or less of total employees <sup>2</sup> [%]	94	91	98
<b>Core labor rights</b> Zero-tolerance audit findings (immediate action required) related to the ILO Declaration on Fundamental Principles and Rights at Work: freedom of association; forced, bonded, or indentured labor; child labor; or discrimination	0	1	2
<b>Critical health and safety issues</b> Zero-tolerance audit findings (immediate action required) related to occupational safety, emergency preparedness, or industrial hygiene <sup>3</sup>	5	5	2

# Progress

Industry is showing anecdotal progress on the key issues

## Labor

- Forced labor: Develop RLI and improved assessments
- Child labor: New standards on student workers

## Health & Safety

- Safe use of hazardous substances and chemicals: Standardization via REACH RoHS
- Occupational safety: Improved ergonomics and automation

## Ethics

- Transparency and reporting: Brand companies leading the way on supplier responsibility disclosure

# Challenges

What issues remain difficult to address

# Challenges

Chemical management remains challenging due to the wide array of substances, such as solvents, resins, cleaning agents, soldering material and fluxes, and other bonding substances

## Risks

- Surface and skin exposure
- Respiratory
- Central nervous system
- Long-term low level exposure
- Carcinogens

## Potential Solutions

- Clean Electronics Production Network (CEPN) is working with RBA and its members to prototype, pilot and scale effective monitoring and control systems.
  - Continuous digital monitoring
- Industrial hygiene training focused on preventing chemical risks during product and workstation cleaning, plating and etching, bonding and gluing, painting, and chemical transportation as well as proper storage, labeling and personal protective equipment.

# Challenges

Physical hazards still abound in electronics manufacturing

## Risk

- Noise
- Radiation
- Repetitive work related musculoskeletal strain
- Eyestrain
- Emergency management

## Potential Solutions

- Automation and digitalization is rapidly replacing workers in the most hazardous roles, especially those roles that require miniature or micro-level work
- Training, re-skilling, and up-skilling is mitigating some of the risk, but often is not sufficient to eliminate it
- Partnerships between suppliers and customers are leading to improved emergency management and common standards are reducing duplication of effort

# Challenges

Human rights violations often are the root cause of other labor condition challenges in electronics

## Risk

- Forced labor
- Excessive working hours
- Child labor
- Harassment and abuse
- Living wage

## Potential Solutions

- RBA's Responsible Labor Initiative is leading to common standards and tools for the sector to address forced labor – particularly among migrant workers
- Appropriate incentive structures and effective grievance mechanisms are key tools for empowering workers and for companies to demonstrate respect for human rights
- Digitalization and automation allow for greater transparency and reducing the labor demand driving some risks

# Summary

So, how are we doing?

# Summary

- Electronics is leading many other manufacturing sectors in labor conditions through the RBA's common standards and common tools
- Risks of human rights violations threaten to undermine the progress made and expose workers to other hazards, such as toxic substance exposure and excessive working hours
  - The lack of qualified, factory-level industrial hygienists exacerbate these risks
- Automation, digitalization, and collaboration are potential solutions to creating a safe, just, and sustainable electronics manufacturing workplace!

BSR is a global nonprofit organization that works with its network of more than 250 member companies and other partners to build a just and sustainable world. From its offices in Asia, Europe, and North America, BSR develops sustainable business strategies and solutions through consulting, research, and cross-sector collaboration. To learn more about BSR's 25 years of leadership in sustainability, visit [www.bsr.org](http://www.bsr.org).



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