

# Establish New Development Structure for Global Market: International Technology Development Center

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## 1. INTRODUCTION

Furukawa Electric Group created an international organization in July 2016 to develop strategic products for the global market. The organization is called the International Technology Development Center (ITDC). The ITDC utilizes efficiently unique technologies, a state-of-the-art developing environment and excellent human resources of the Furukawa Electric Group worldwide to develop strategic products effectively and to supply them to the global market promptly. The ITDC is organized within the Furukawa Electric Group's companies which have the necessary technologies, the environment and the human resources for this development. The Furukawa Electric Group targets on the Utility / Internet of Things (IoT) market, the Telecom / Multiple System Operator (MSO) market and the Mobile / Wireless market as a globally growing market, focuses on developing the strategic products for the markets and will provide the products in series starting Financial Year (FY) 2017.

## 2. FURUKAWA G PLAN

Furukawa Electric Group promoted the efficiency in production, purchasing, sales, etc. through the medium term plan for 2015, known as "Furukawa G Plan 2015". It strengthened the Group's global management in terms of its core business, specially its optical fiber business. Optical fiber production of the Furukawa Electric Group worldwide increased the efficiency of the fiber production and strengthened the global business, and the optical fiber business enabled faster business expansion in a growing global market. We also established the "Solution & System division" in 2015 and "Furukawa Global Sourcing" (FGS) in 2016 to further strengthen the solution business in the global telecommunication market.

In the new medium term plan "Furukawa G Plan 2020" announced in 2016, we plan to accelerate the global business with the comprehensive strength of the Furukawa Electric Group. The creation of the ITDC is part of that strategy to build a global development organization of the whole Furukawa Electric Group. The ITDC

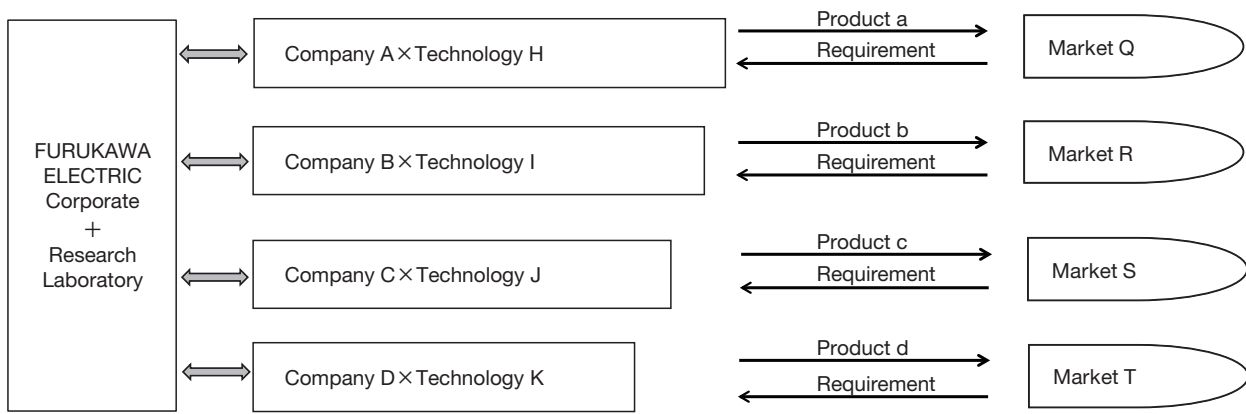
focuses on entering markets that are expected to grow globally, such as the Utility / IoT, telecom / Wireless and Mobile / Wireless, using the unique technologies, the development environment and the human resources of the Furukawa Electric Group (Figure 1).

## 3. STRATEGIC LOCATION OF ITDC

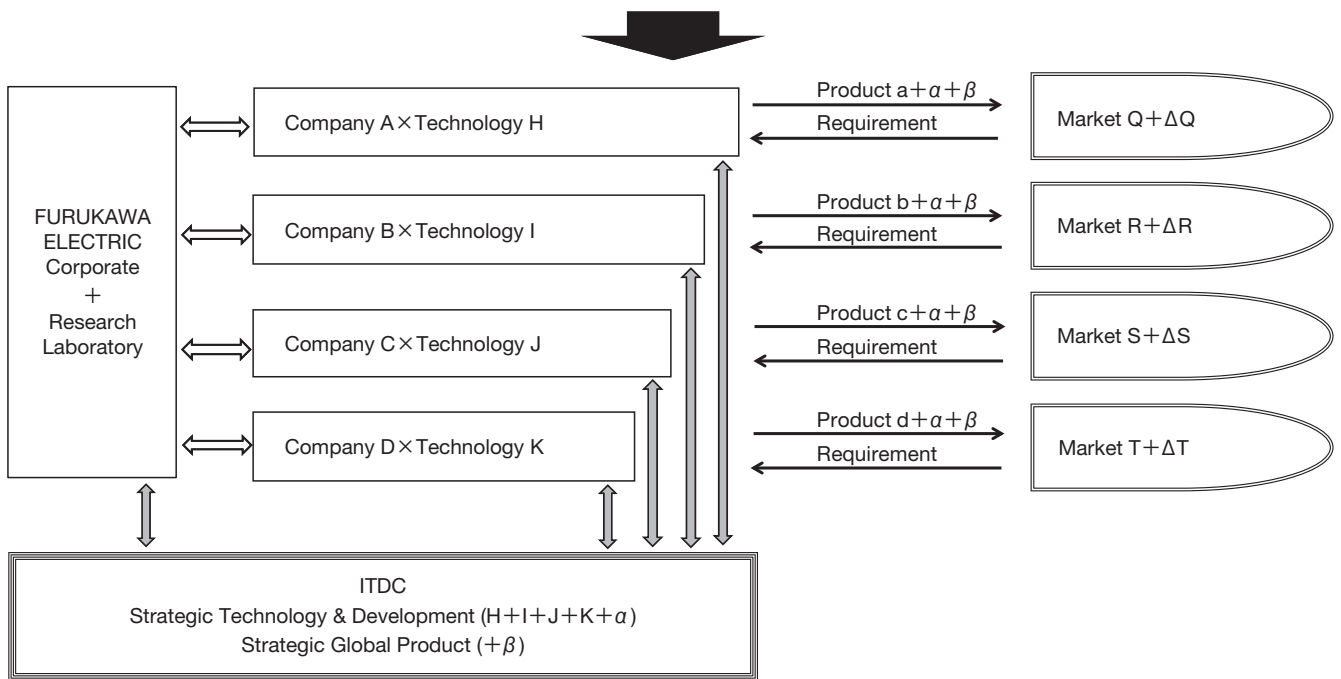
Furukawa Electric Co., Ltd and each of the companies of the Furukawa Electric Group has already conducted the development of the business for the mobile & wireless infrastructure markets, the power & utility infrastructure markets and the telecommunication & broadcast markets – which represent important social infrastructures. Companies and divisions in various places in Japan, North America, Europe and Latin America have core development bases for these businesses. Since the development centers are located close to the customers and the markets, we have developed technologies and businesses that fit the needs of each customer and have been able to supply products promptly. The establishment of the ITDC aims to develop the strategic products that have more competitiveness in the global market with collecting technical and development capabilities contained in each company of the Furukawa Electric Group to the ITDC. We have established the base of the ITDC firstly in Hiratsuka City in Japan and Curitiba City in Brazil. Since the time difference between Japan and Brazil, in particular, is usually 12 hours, the Furukawa Electric group is able to have the development center operating 24 hours a day. Moreover, we are taking advantage of each country's unique development environment and performance, for instance, a location that is good at software development is focused mainly on the software development. Same concept is also applied to others such as hardware and application, so that we can concentrate resources and optimize global strategic products in short time. In addition, the ITDC will be able to employ the excellent human resources of the Furukawa Electric Group with various background and experience (Figure 1). The Furukawa Electric Group is considering introducing the ITDC in North America and plans to expand its base in Europe and Southeast Asia in the future.

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(a) Current Technology Development Structure in FURUKAWA Electric Group



(b) New Concept of Technology Development Structure in FURUKAWA Electric Group for Global Market

Figure 1 The Current development structure and the new global development center.

#### 4. FURUKAWA ELECTRIC GROUP TECHNOLOGY & DEVELOPMENT COMPANY

Companies participating in the ITDC have been selected because of their specific unique technologies, their strong development capabilities and their excellent human resources amongst the Furukawa Electric Group. The first participating companies to the ITDC are shown in table 1 and the ITDC sequentially plans to include other companies in the future.

In terms of the initial strategic technologies, we have defined high capacity IP-communication technology, high frequency technology and optical transmission technology, which the Furukawa Electric Group has been advanced as strategic core technology (Figure 2). The ITDC will develop the strategic products using these core technologies. In addition, we will promote the globalization of the Furukawa Electric Group's business through development of applica-

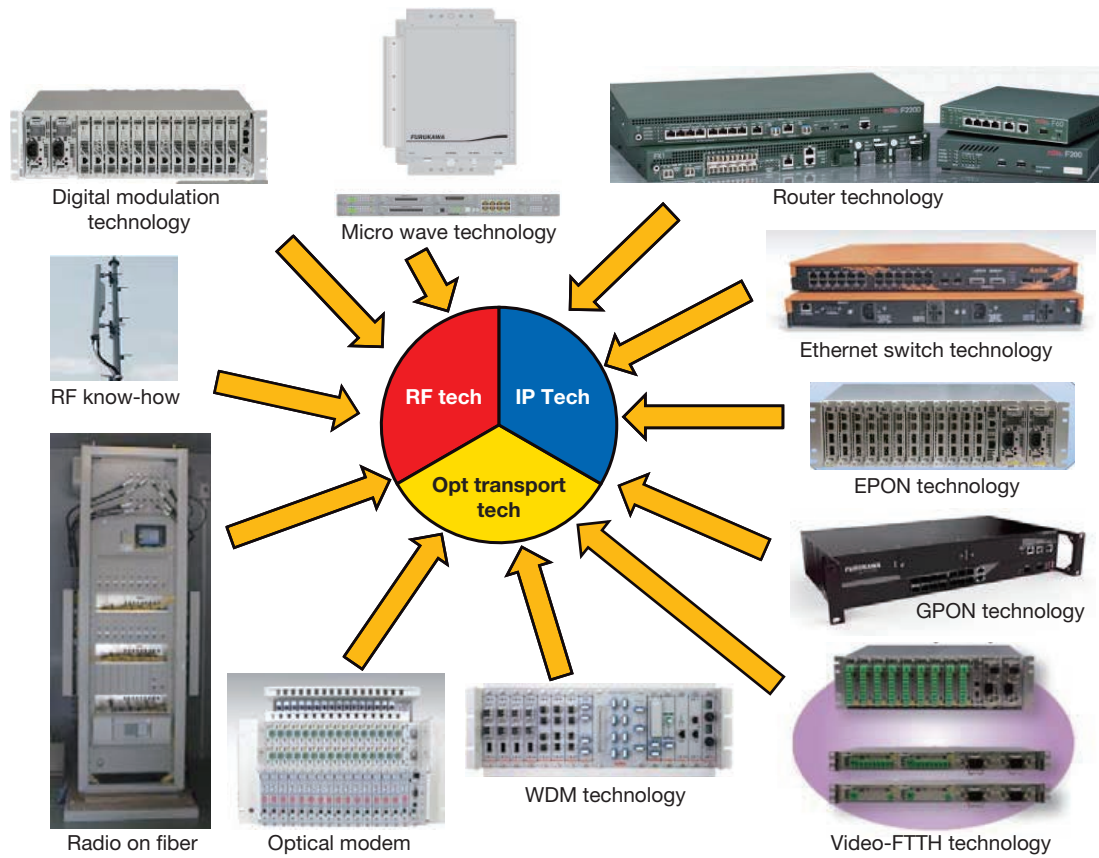
tions, business and global human resources, associated with the strategic technologies and products.

#### 5. CONCLUSION

As mentioned above, the Furukawa Electric Group has restructured the sales division, the production division and the research & development division to better address the globalization market. The establishment of the ITDC is one of the measures to respond to the customers' needs over the world for the development of the technology and the product. We would seriously like to develop the strategic products and enter the global market with the products, and also we would like to increase the presence of the technology & the products, the brand strength and the corporate value. Please look forward to the product releases from the Furukawa Electric Group in the near future.

**Table 1 Participating companies to ITDC.**

Company	Core Technology & Development	Market & Product
<p>FURUKAWA Industrial S/A (Brazil)</p>  <p>www.furukawa.com.br</p>	<p>Power Grid Communication Technology, GPON Technology, EPON Technology, WDM Technology, Wireless Communication Technology, Network Switch Technology, etc.</p>	<p>Telecommunication Market, Data Center Market, ISP Market, Power Grid Market, MSO Market, SOHO/Enterprise Market, etc.</p>
<p>Furukawa Network Solution Corporation (Japan)</p>  <p>www.fnsc.co.jp</p>	<p>IP Routing Protocol Technology, etc.</p>	<p>Telecommunication Market, Enterprise Market, etc.</p>
<p>Furukawa C&amp;B Co., Ltd. (Japan)</p>  <p>www.furukawa-fcb.co.jp</p>	<p>Wireless Technology, Broadcast Radio Frequency Product, Micrometer and Millimeter Wave Technology, etc.</p>	<p>Broadcast Market, Mobile Communication Market, Wireless Infrastructure Market</p>
<p>Miharu Communications Inc. (Japan)</p>  <p>www.miharu.co.jp</p>	<p>Digital Modulation Technology, Optical Transport Technology, IP Transport Technology, etc.</p>	<p>MSO/CATV Market, Broadcast Market, Satellite Broadcast and Data Communication Market, Telecommunication Market, etc.</p>
<p>Furukawa Electric Broadband Business Division (Japan)</p>  <p>www.furukawaelectric.com</p>	<p>IP Technology, Optical Transport Technology, RoF Technology, Power Grid Communication Technology, Optical fiber Sensor Technology, Optical Device Technology, FURUKAWA Research Laboratory Technology, etc.</p>	<p>Telecommunication Market, Wireless Infrastructure Market, Power Grid Infrastructure Market, Transport Infrastructure Market, Sensor Market, etc.</p>



**Figure 2 The Development of the core technologies using the knowledge of the Furukawa Electric Group.**

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