In 2017, GS1 Japan has conducted the GS1 SmartSearch (*1) pilot project, collaborating with major manufacturers, retailers and other companies. As the results, introduction of GS1 SmartSearch in a correct way was confirmed to make Search Engine Optimization (SEO) effective. On the other hand, it was also showed that the result could be negative depending on the way of introduction. Based on the above results, GS1 Japan is committed to expansion of the use of GS1 SmartSearch through its activities, aiming to support companies to spread their product information effectively and to increase consumers’ accessibility to it.

**GS1 Japan SmartSearch Committee**
In 2017, GS1 Japan launched the GS1 Japan SmartSearch Committee, which consists of 15 domestic companies including retailers, wholesalers, manufacturers, data base providers, and SEO firms (Fig. 1). In the Committee, they translated GS1 Web Vocabulary in Japanese, defines the format of structured data to embed product information on the web. Then, the committee was prepared and two types of pilot. Also, aiming to expansion of domestic use of GS1 SmartSearch, the committee members considered introducing additional items and codes, and discussed other usage of GS1 SmartSearch than for SEO like referencing from smartphone Apps.

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*GS1 Japan SmartSearch*  
*Pilot Project*

*1  https://www.gs1.org/gs1-smartsearch*
Two Types of Pilot Experiments
The GS1 Japan SmartSearch Committee conducted two types of pilot experiments in FY2017.
In the first experiment, GS1 Japan created a pilot website based on the product information provided by companies to investigate the search ranking results and the page views of those products among other test items. The second experiment was conducted on several e-commerce (EC) or corporate websites, which are actually operated by the companies. GS1 Japan loaded the structured data on those websites to observe the difference between before and after data loading.

Websites for Pilot Experiments
Overview
GS1 Japan was provided with product information from three retailers and three manufacturers, and then created a pilot website, and published 28 product pages that loaded with structured data on it. Simultaneously, 22 pages without structured data that showed similar products were published for comparison. (*2)
In this experiment, the effect brought by the presence or absence of the structured data was evaluated using various indexes on whether the search rankings, page views (PVs), explanation of snippet (*3) displayed under the searched words were differentiated.

Results
As the searching results of about 80 words, the effect of the structured data aligning with GS1 SmartSearch on search rankings was clearly identified (Fig. 2). In over 60 % cases, the pages with the structured data received a higher valuation from search engines than those without structured data. Consequently, the result statistically proved that introduction of GS1 SmartSearch is significantly effective for SEO.
On the other hand, as for the effect on page views, the amount of data obtained during the test period was too small to evaluate them. Also, as for the effect on snippets, there was no significant difference between the presence and absence of structured data.

Pilot Experiment on the Company Websites
Overview
In this test on company websites, the structured data was loaded on the websites of two retailers and two manufacturers. The search rankings, number of page views, conversion rates (CVR) and other test items were investigated for 16 product pages for four weeks including the periods before and after introduction of the structured data.

Results
As the results of the pilot experiment, there was no positive effect neither on search ranking nor PVs (Fig. 3 Fig. 4). The search rankings of target

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*2 https://gs1japanss.org/
*3 a brief description of the page displayed under the searched word (s)
products did not rise, and also their PVs, number of unique users (UU), or CVR did not increase.

**Consideration on the Results of Pilot Experiments**

In the pilot websites, search rankings of the products were raised, which proved that the structured data had a positive effect as SEO. On the other hand, the structured data did not influence the company websites. This means the result on the pilot websites and that on the company websites contradict each other. The committee formulated a hypothesis on this contradiction as follows.

Google has released its guidelines for using structured data. (*4) In the document, Google requires users not to include the structured data that are not visible on screen. In the above experiment, however, some letters were displayed as images and some items including tax rates or tax categories were not written on screen but written in the structured data. Therefore, these violations could have caused the lower valuation from the search engines as a penalty.

**Next Step**

As an additional pilot program, verification on the hypothesis that discrepancy between HTML and structured data caused negative impact on search rankings has been underway.

GS1 Japan will put genuine efforts to expand the domestic use of GS1 SmartSearch based on the above experiment results.

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*4 Structured Data General Guidelines
https://developers.google.com/search/docs/guides/sd-policies