As data conceal valuable and useful information, decision-makers always need a systematic way to use these data to enhance the competitiveness of their enterprises. Data acquisition is not restricted to be done solely from internal sources, but can also be acquired by other open data sources from outside of an enterprise, which are also very important for the purpose of decision making. However, the acquired open data may originate from many different sources and may change over time. Most of all, the broadness and complexity of these data will need to be reviewed and analyzed with lots of effort as well.

In this paper, we propose a multi-functional module which can automatically convert and update the acquired data into visualization charts. Data analysts can upload a variety of data sources to the module which will then be converted into a uniform format through standardization process. The data of the module will be updated if it detects data transaction and convert the data into charts through the visualization tools, which will immediately help the decision-makers understand and analyze what is contained in the data. This module also applies the encryption technology to generate useful charts to the company’s own website and share the information with relevant decision-makers so that the purpose of data sharing can be achieved.

The module has been tested and evaluated with multiple open data sources. The results show that it can effectively solve the problem of diversified data sources and integrate the data sources. It can also reduce the burden for the data analysts in analyzing the data, and make it much easier for decision-makers in delivering the information in the enterprise.

關鍵字：open data, data transaction detection, data visualization, visualization charts