

**A. Kavalenka<sup>1</sup>, A. Krivko-Krasko<sup>2</sup>**

*School of Business of BSU, Minsk, Belarus,*

<sup>1</sup> oleg.kavalenka@gmail.com, <sup>2</sup> krasko@sbmt.by

## **BUSINESS INTELLIGENCE EXTENDS HUMAN CAPABILITIES IN SEEING AND UNDERSTANDING BIG DATA**

*Olympic Game had been a peace-making event through the World history. There is a data of more than 100 years publically available on Internet. Many interesting facts, information and knowledge is hidden in the thousands of data records. Business Intelligence software can provide a powerful key to the hidden data. Number of public tutorials and courses teaches us how to master BI tools.*

**Keywords:** business intelligence, multidimensional data, data visualization, Olympic Games

**О. А. Коваленко<sup>1</sup>, А. В. Кривко-Красько<sup>2</sup>**

*Институт бизнеса БГУ, Минск, Беларусь,*

<sup>1</sup> oleg.kavalenka@gmail.com, <sup>2</sup> krasko@sbmt.by

## **БИЗНЕС-АНАЛИТИКА РАСШИРЯЕТ ВОЗМОЖНОСТИ ЧЕЛОВЕКА ПО ВИДЕНИЮ И ПОНИМАНИЮ БОЛЬШИХ ДАННЫХ**

*Олимпийские игры на протяжении многих лет новейшей истории играли миротворческую роль в нашем мире. В Интернете публично доступны данные более чем за 100 лет. Много интересных фактов, информации и знаний скрыто в тысячах записей. Современные инструменты бизнес аналитики могут стать элегантным ключом к скрытым данным. Ряд общедоступных учебных курсов учит нас тому, как осваивать инструменты BI.*

**Ключевые слова:** бизнес аналитика, многомерные данные, визуализация данных, Олимпийские игры

Software for Analytics and Business Intelligence (BI) has been drawing our attention recent years, as it becomes a very important player, an IT tool in Business sphere [1]. The leading software tools of BI field in 2022 are Microsoft Power BI, Salesforce (Tableau), and Qlik [2].

Data may tell you very interesting and important story. Our goal is to show how to see and understand data. Our practical experience we base on so called Tableau Marathon available on Internet [3]. We used free Tableau Online version for that purpose (Fig. 1).

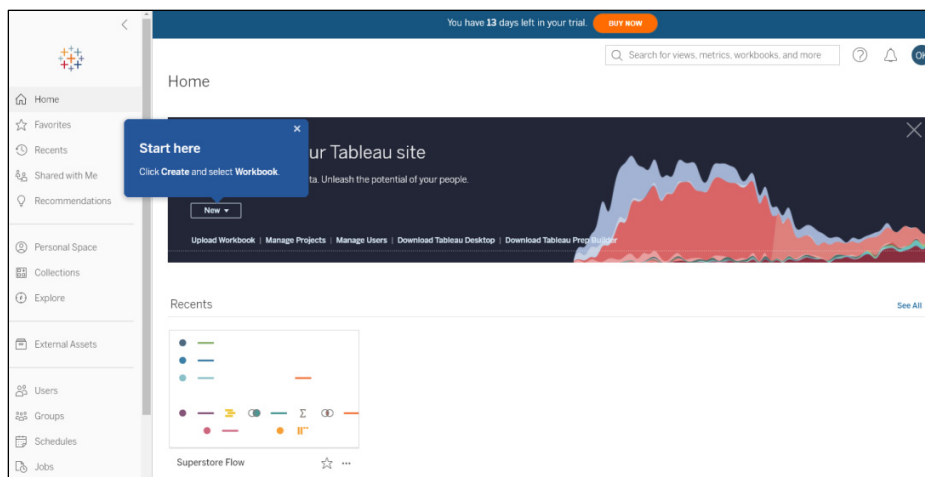


Fig. 1. Tableau trial online

First, we learnt that available data contains records from Olympic Games during 120 years from 1896 until 2016. Second, using Number of Records we discover the total number of the participants in all those games 271,116. Then with the help of simple horizontal bar chart (Fig. 2) based on Games (Dimensions) и Number of Records (Measures), we could see which Olympic Games gathers the higher number of the participants. The 2000 Summer Olympic Games gathered 13 821 sportsmen and the 2014 Winter Games gathered 4891. While at the 1896 Summer Games participated only 380, and at the 1932 Winter Games 353 sportsmen, which is the lowest ever number.

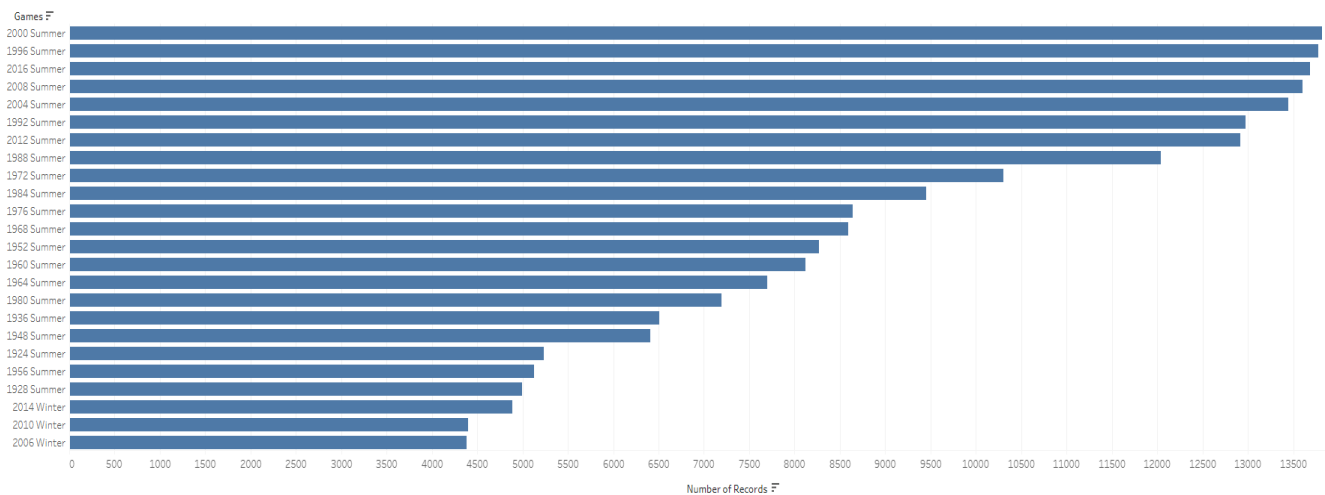


Fig. 2. Diagram showing the Number of Records vs Games

Next diagram shows the number of participants for each country and each Olympic Game. For Belarus, top participation was at 1996 Summer Games and 2002 Winter Games with 259 and 123 participants correspondingly (Fig. 3). In comparison with the USA 1 109 and 367 participants at Summer Games 1904 and Winter Games 2014 correspondingly, Germany has the following records: 1041 and 271 at 1972 Summer Games.

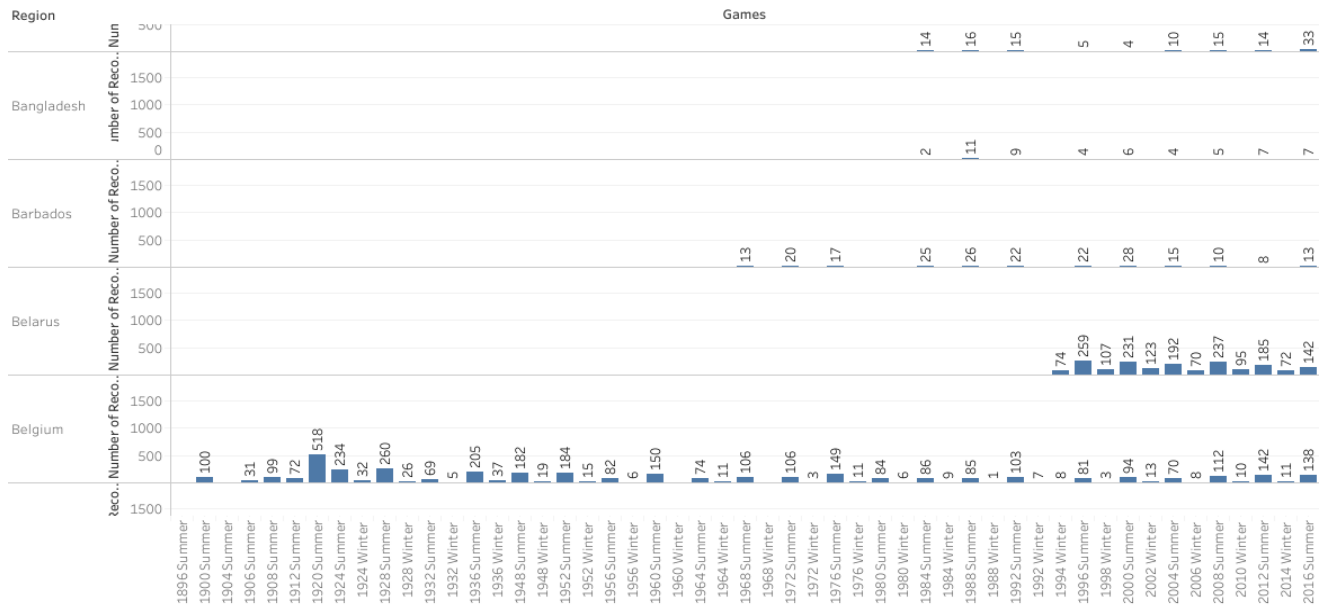


Fig. 3. Number of the Olympic Games participants from Belarus compared to Belgium

Diagram on Fig. 4 shows the number of medals in difference countries. Sportsmen from Belarus collected 24 Gold, 44 Silver and 71 Bronze medals within the period 1994–2016. Sportsmen from USA collected 2 638 Gold, 1 641 Silver and 1 358 Bronze medals while Germany – 1 301 Gold,

1 195 Silver and 1 260 Bronze medals correspondingly. The USA missed one Olympic Game in 1980 while Germany missed five Olympic Games.

According to age distribution (Fig. 5) the oldest sportsmen in Olympic Games history is John Quincy Adams Ward who participated at the age of 97. Interestingly, his work was part of the sculpture event in the art competition at the 1928 Summer Olympics. And the youngest sportsmen of all times of Olympic Games was Dimitrios Loundras from Athens who was 10 years old when participated at 1896 Summer Olympics in Athens.

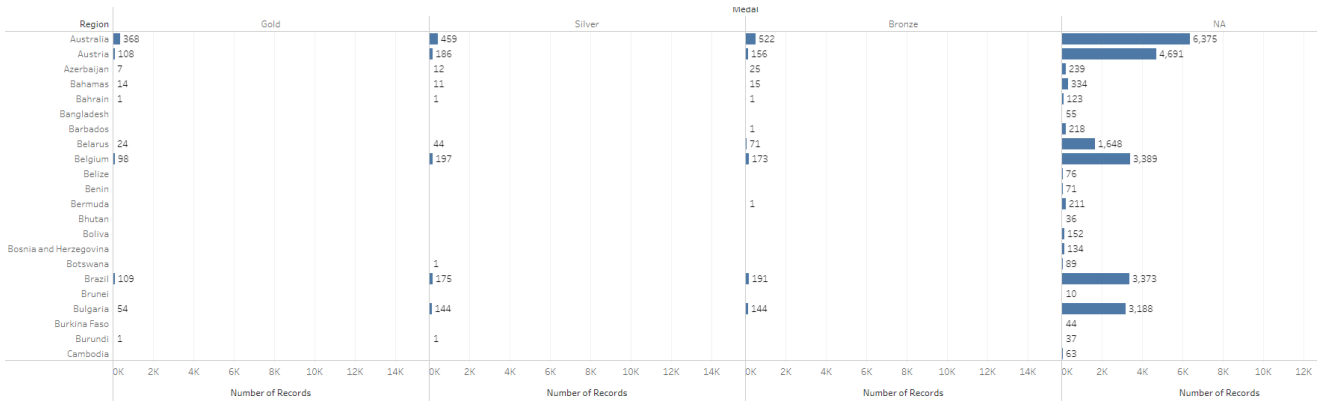


Fig. 4. Number of the medals won by sportsmen from Belarus

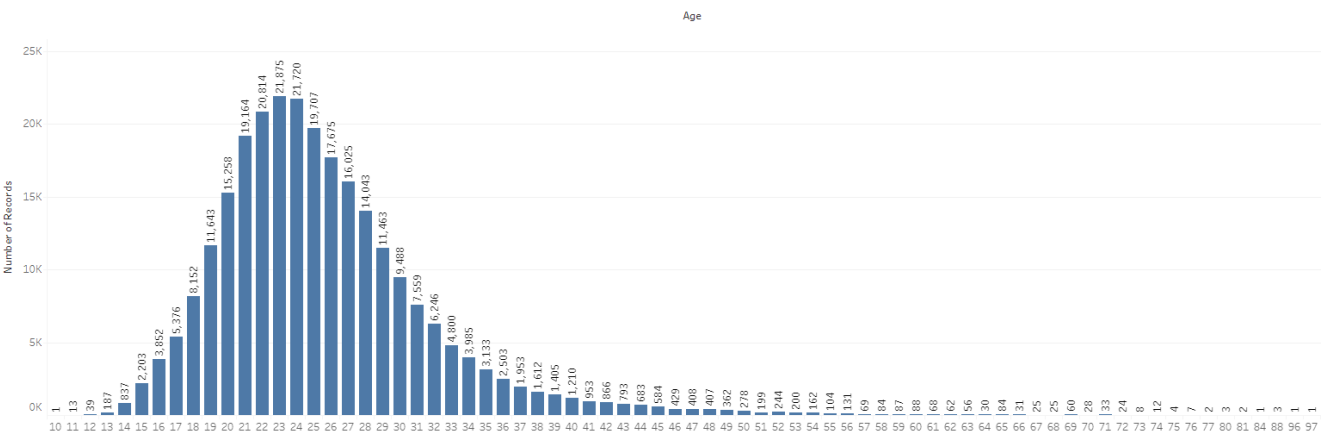


Fig. 5. Number of the medals won by sportsmen from Belarus

The highest total number of Gold, Silver and Bronze medals can be derived from the analytics shown in Fig. 6: Summer Olympic Games 2008 in China: 671, 667 and 710 medals and Winter Olympic Games 2014 in Russia: 202, 198, 198 medals correspondingly.

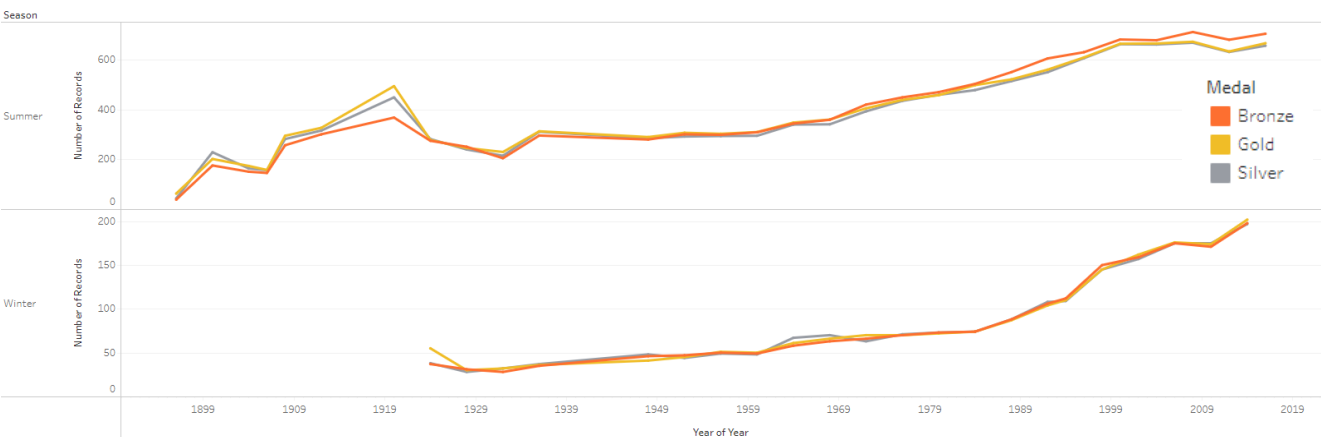


Fig. 6. Total Number of Gold, Silver and Bronze medal through the history of Olympic Games

Sport is what supposed to unite and bring people together, fight negativity and evil. In this article we have shown how BI tool Tableau (Salesforce) can quickly and efficiently answer a number of questions hidden in the data from Olympic Games.

To conclude, we should add that the implementation of Business Intelligence systems allows not only see and understand public data, but also optimize the business processes and activities of any company.

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