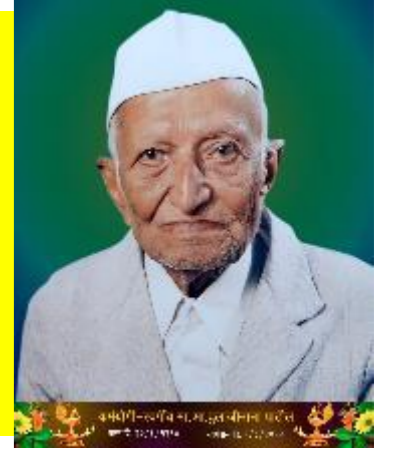




Parashari Vidya Prasarak Sanstha's  
**Aided Secondary & Higher Secondary Ashramschoo**  
**Mukhed Tal- Niphad Dist- Nashik**



# Big Data –Big Insight

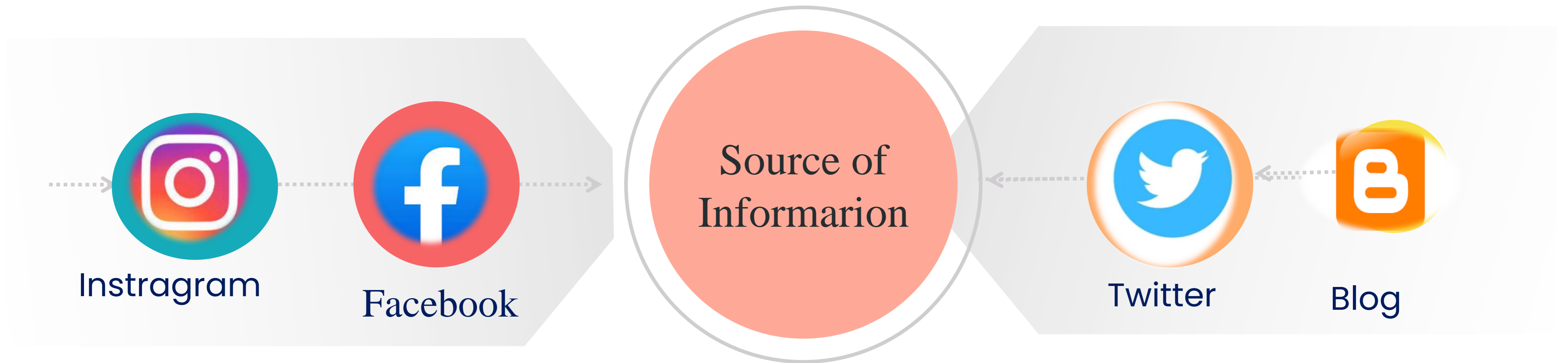
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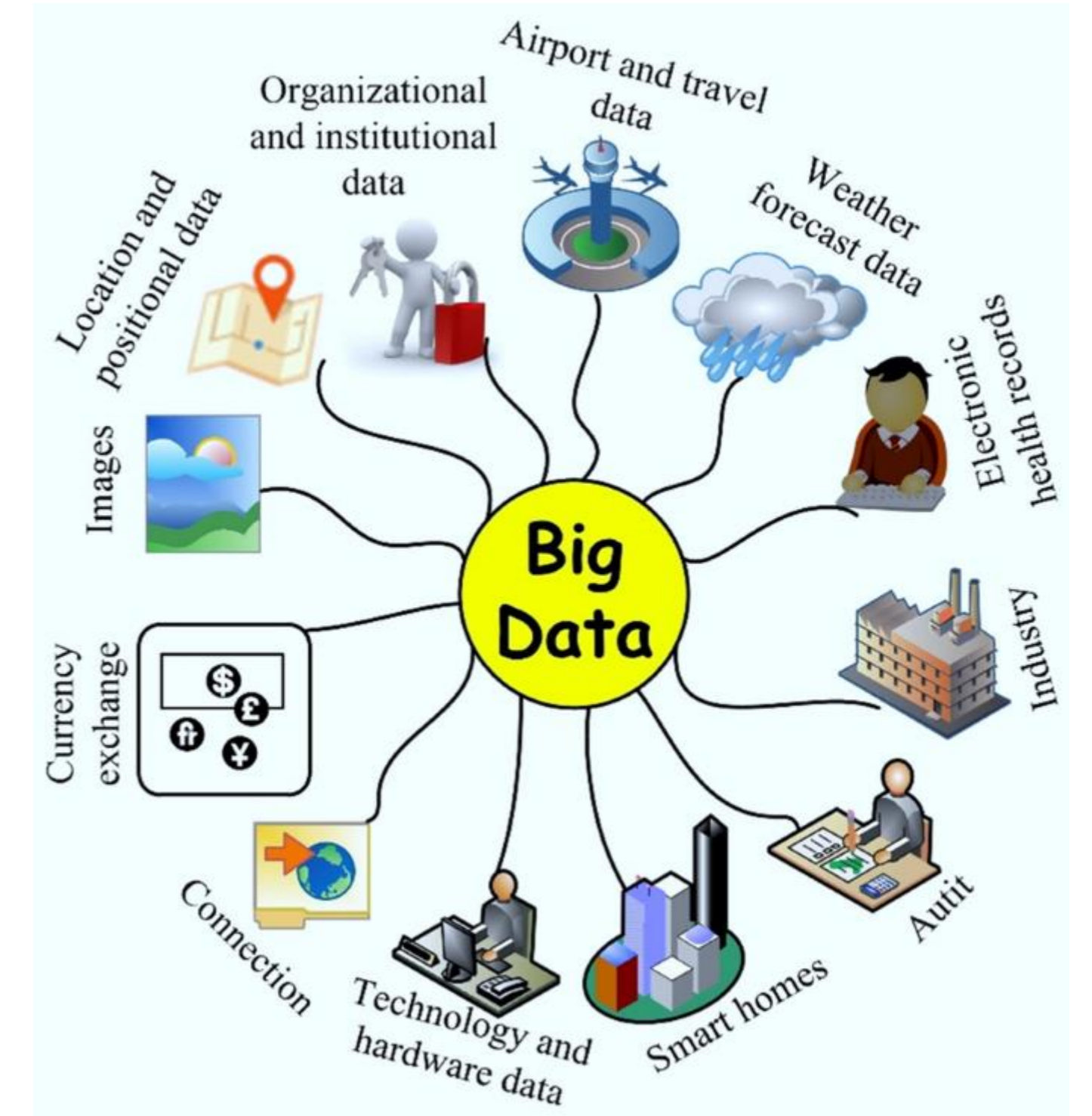


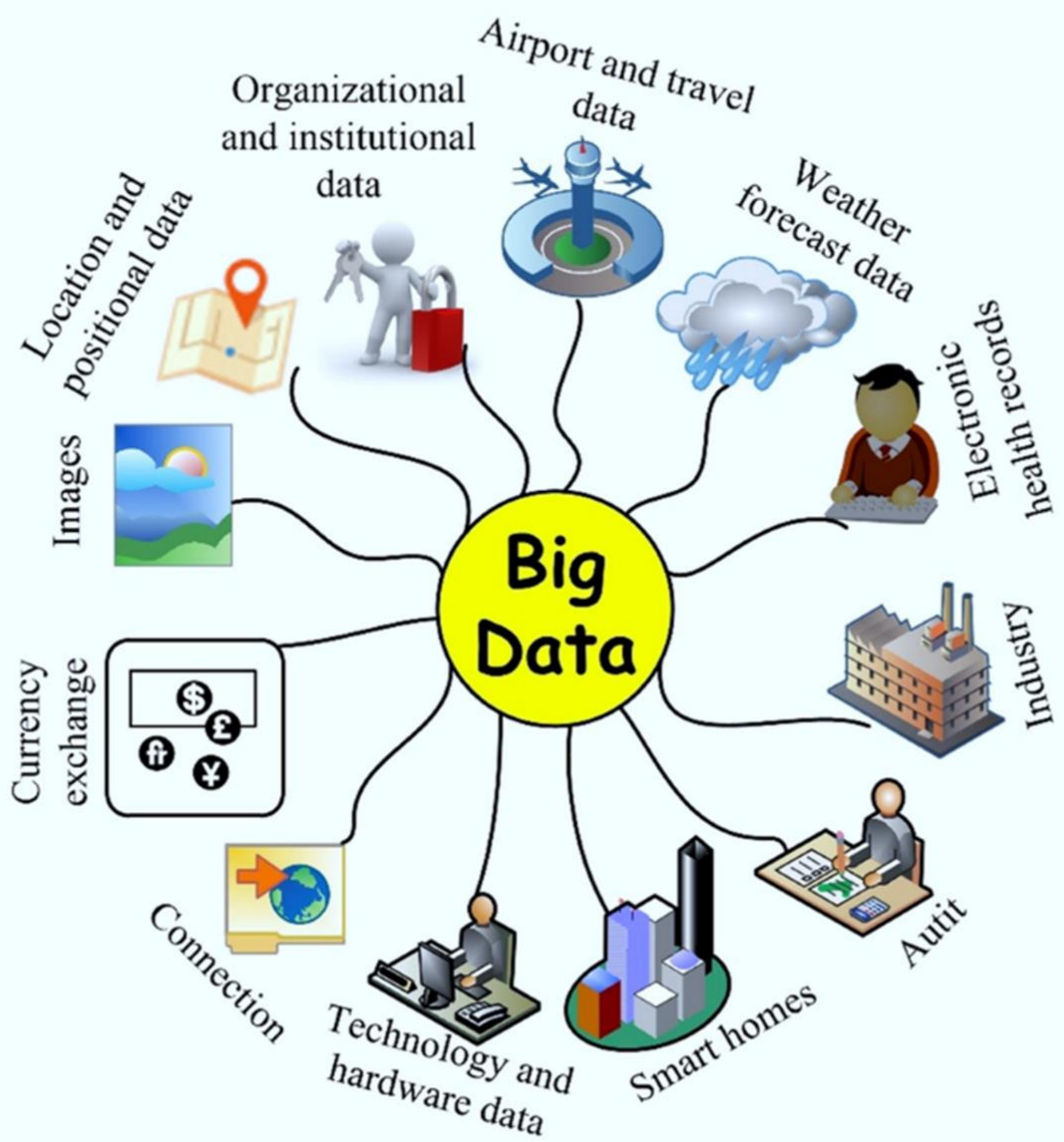
# Big Dta- Big Insights

❖ People get information from various sources: Can you name a few

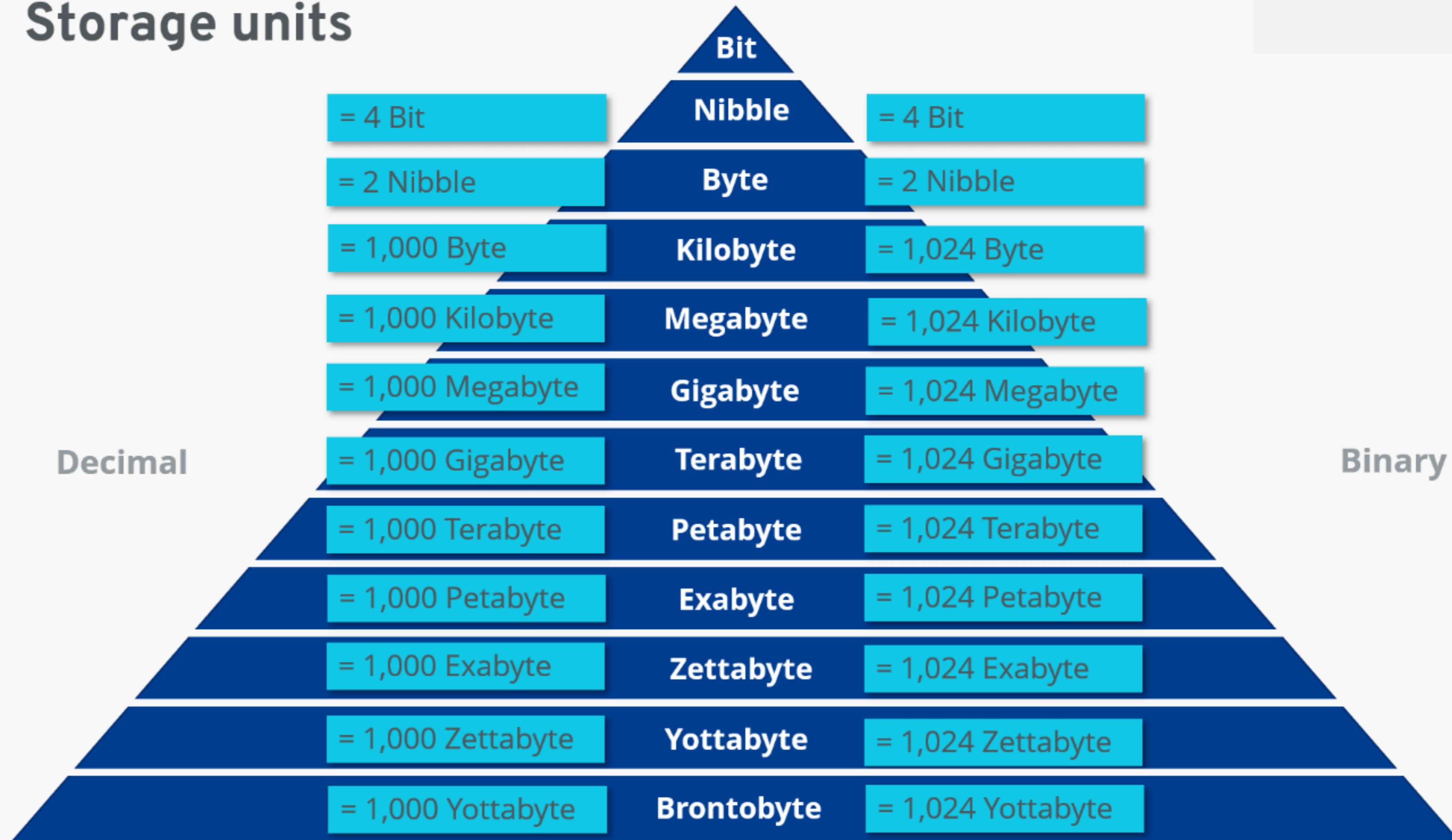


There is a **revolution** (क्रांती) in the life style of people which has been affected by Big Data. Our food habits, our health care, our travelling, our scientific pursuits, you name it and everything has changed 360 degrees. The **massive** (प्रचंड) data available with us can really work wonders. Friends, do you know what happens when we like a post on Facebook or share a post on WhatsApp, visit any website, make online purchases, or watch videos? Yes, whatever activity we do online is recorded, **monitored** (निरीक्षण केले जाते) and analyzed. So a huge amount of data is collected. Let me give you an idea of how huge the data might be. Big Data can be **petabytes** (एका हजार दशलक्ष माहितीची युनिट्स) or **exabytes** (एक अब्ज गिगाबाईट माहितीचे एकक) of data consisting of billions to trillions of records of millions of people- all from different sources, for example web, sales, customer contact center , social media, mobile data and so on.





# Storage units



Petabytes or Exabytes

The data available to industries and companies is enormously increasing in **volume** (प्रमाण), **variation** (भिन्नता), **velocity** (वेग), **veracity**(सत्यता) and **value** (मूल्य). Such a Big Data is easy to obtain but so massive that it challenges the current computing technologies and hence Big Data analytics is used to give insights that were previously **incomprehensible** (न समजण्याजोगे ). Big Data analytics is the complex process of examining large and varied data sets or Big Data to uncover information- such as hidden patterns, unknown **correlations**(सहसंबंध), market trends and customer preferences. With such a huge data available with the industries they can have **innumerable** (असंख्य) advantages hence all the industries are trying to reap the maximum benefit from it. Many industries have advanced by miles from their competitors. It's not the amount of data that is important but what the organizations do with the data is what matters.



# Uses of Big Data

**1. Location Tracking** : Big Data has been useful in identifying and tracking the exact location of a place. Your **GPS (Global Positioning System)** and Google Maps make use of Big Data. With geographic positioning and radio frequency identification sensors we get the real-time data about traffic, **congestion(गर्दी)** on a particular route, information if the route is closed or if it is a one-way route, understanding accident prone areas etc. You can plan your own route according to the travel time and the transportation of goods. If you have ordered something online you can track the location of your goods in transit, you can also track the condition of the goods. This has **immensely(अफाट)** helped the logistics companies to reduce risks in transport, improve speed and reliability in delivery.





## 2. Understanding the Weather Patterns

There are weather sensors and satellites set-up all around the globe. Huge amount of data is continuously being received from them. They help us to understand the weather and help in weather forecasting. Weather patterns give us warnings of the **impending**(आगामी) natural **calamities** like floods, earthquakes, tsunami etc. Necessary preparations to combat(लढण्यासाठी) them can be made well in advance. We can study global warming, (जागतिक तापमानवाढ) predict availability of natural resources like water.



**Flood**



**Earthquake**



**Tsunami**

**3. Health Care Industry** : Today, we see that people have become **health conscious** (आरोग्याबाबत जागरूक ) . The smart watches, other **wearable** (घालण्यायोग्य), health apps in our phone keep on collecting data. We can say that they are our own mini biomedical research devices. They detect our heart rate, monitor the patient's sleep pattern, keep a record of his exercise, the distance walked etc. The analysis of this data collected can give new insights and provide a personalized, individual feedback to each and every person. Nowadays we have gadgets to monitor blood sugar, blood pressure etc. at home; 24 x 7 monitoring can be provided to patients in hospitals too. With the help of Big Data the doctors can now have better diagnosis of any **ailment** (आजार), the effect of any drug etc. Unnecessary guesswork can be significantly reduced. Past records of the patients can be maintained and better analysis of the health can be obtained. Big Data helps in monitoring the outbreaks of **epidemics** (साथीचे आजार) and diseases. Just when you post your message, 'I'm down with flu' on WhatsApp or Facebook it will be monitored and the areas affected by 'flu' can be easily located and necessary precautions can be taken. Pharmaceutical companies would pay huge amount to receive the health data of people to promote research in the particular area. With the help of the data gathered, individuals are often given suggestions and solutions for the problems they are encountering. (समोरे जात असलेल्या)



**4. Banking, Finance and Trading :** With the Big Data **analytics**(विश्लेषण), the investment patterns of the people can be studied. New insights have enabled the banks and finance companies to come with suitable plans. Big Data has enabled smooth functioning of these agencies and institutions.

Banking and finance sector is using Big Data to predict and prevent cyber crimes, card fraud detection, archival of audit trails, etc. By analyzing the past data of their customers and the data on previous **brute force attacks** banks can predict future attempts. Big Data not only helps in predicting cyber crimes, but it also helps in handling issues related to **mised-transactions** (चुकीचा व्यवहार) and failures in net banking. It can even predict possible spikes on servers so that banks can manage **transactions** accordingly.

The Securities Exchange Commission (SEC) is using Big Data to monitor financial markets for possible illegal trades and suspicious activities. The SEC is using network analytics and natural language processors to identify possible frauds in the financial markets.

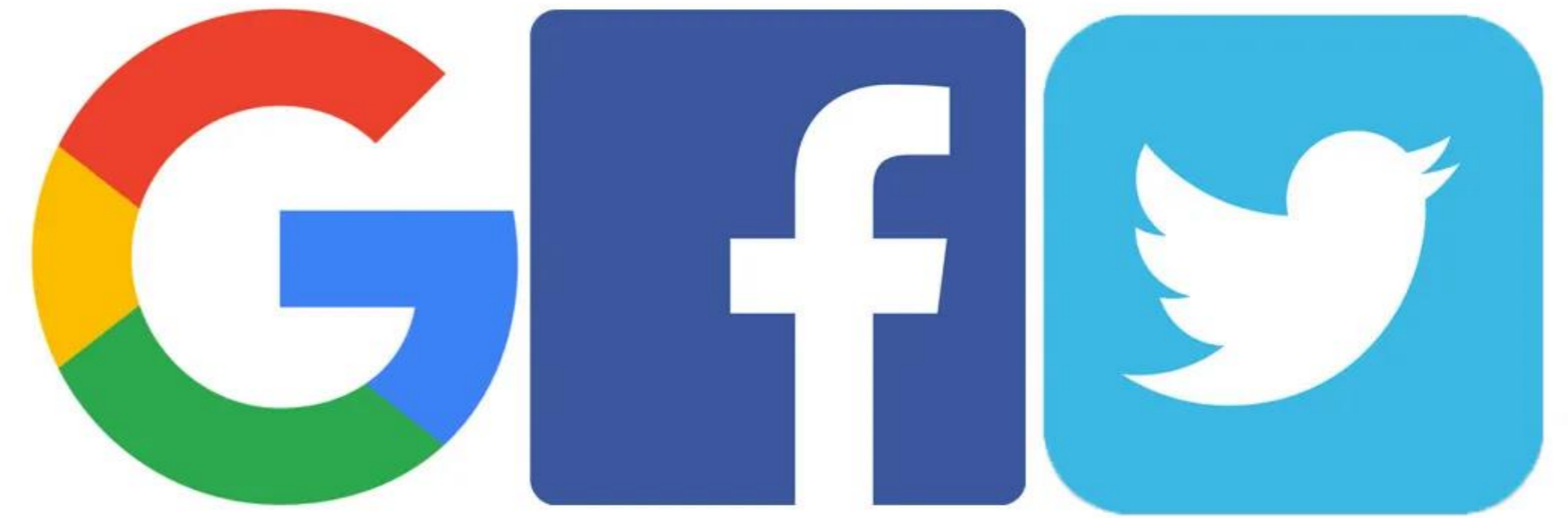
High-Frequency Trading (HFT) is an area where Big Data finds a lot of use today. Here, Big Data **algorithms**(संगणकाद्वारे गणना करण्याची प्रक्रिया) are used to make trading decisions. Today, the majority of **equity trading**(शेअर खरेदी) now takes place via data algorithms that increasingly take into account signals from social media networks and news websites to make, buy and sell decisions in splitseconds



**5. Sports** : When watching a cricket match, we are shown so many permutations and combinations of statistical analysis. A **gigantic**(huge प्रचंड) data has been created over a period of time from the recording of matches, training sessions and workouts. The data enables a sportsperson to study his performance as well as of the other players worldwide. It has tremendously helped in improving individual as well as team performance. The sensors embedded in the sports equipment help us to understand our game from close quarters. The sensors help us to understand the field conditions, the weather, individual performance etc. Video analytics help us to see each and every performance minutely.



**6. Advertising :** Advertisers are one of the biggest players in Big Data. Be it Facebook, Google, Twitter or any other online giant, all keep a track of the user behaviour and transactions. These internet giants provide a great deal of data about people to the advertisers so that they can run targeted campaigns. Take Facebook, for example, here you can target people based on buying intent, website visits, interests, job roles, **demographics** (लोकसंख्या शास्त्र) and what not. All this data is collected by Facebook algorithms using Big Data analysis techniques. The same goes for Google, when you target people based on clicks you will get different results and when you create a campaign for leads then you will get different results. All this is made possible using Big Data.



**7. Entertainment and Media** : In the field of entertainment and media, Big Data focuses on targeting people with the right content at the right time. Based on your past views and your behaviour online you will be shown different recommendations. This technique is popularly used by Netflix and Youtube to increase engagement and drive more **revenues** (महसूल).

Now, even television broadcasters are looking to segment their viewer's database and show different advertisements and shows accordingly. This will allow better revenue from ads and will provide a more engaging user experience.

The YouTube logo, featuring the word "You" in black and "Tube" in white inside a red rounded rectangle.The Netflix logo, featuring the word "NETFLIX" in white capital letters on a red rectangular background.

**8. Education Industry** : Big Data has **inundated** (भरभराट होने) the education industry. It has transformed it in **leaps and bounds** (झपाट्याने). Now we have information about the students, their study patterns, and we can now prepare customized and dynamic learning programmes according to the need of an individual student. Every student's comprehension level is different. The course material can now be designed catering to different requirements of the students. Big Data makes it **convenient** (सोयीस्कर) to understand their choices, their difficulties, information regarding various courses and their specialties; we also have an access to the results. From the results we can gauge the progress of the students, understand his strengths and weaknesses. This will also help in guiding the student regarding the best career for him based on his mental make-up and abilities.



An in-depth study of all this would definitely give new insights into the education industry and help in improving the operational effectiveness and working of educational institutes. This would in general, enhance progress of all students. Big Data has provided a solution to one of the biggest **pitfalls** (संकट) in the education industry, that is **one – size- fits- all**(सर्वासाठी एकाच पर्याय).

We have **innumerable** (असंख्य) uses of Big Data. It is helpful in scientific researches, understanding geographical **phenomena** (घटना) , helping in the smooth working of the government machinery etc. It is a genie in our hands. It lies in our hands to make the **optimum** (अनुकूल) use of it for the benefit of mankind.

