New technologies

Case Study The research focuses on various forms of new technologies and the influence they make. Augmented realities will totally change the way products are being sold. High-frequency trading caused earlier and can cause in the future another flash crash that many do not understand. Performance measures can be viewed by innovative dashboards which keep managers informed when things are going onto a wrong path. All this new technologies change businesses and our lives. Technological advances have affected many areas of our daily life.

Augmented reality has higher marketability. The flash crash was caused by computers programmed often to trade at high frequency level. The innovative information monitoring indicators of performance at Valero Energy track company's production levels. Although these three themes seem to be very different, they are all based on the advanced technology. The case number one 1. The difference between augmented and virtual is that Virtual reality is generated by a computer and it is three-dimensional interactive environment which surrounds people, and in augmented reality a person can maintain his presence in unreal world.

2. Virtual reality is not so attractive as augmented reality for advertisers , because it gives them a small range of options regarding the types of products that are developed. 3. Augmented is better for real-world applications of commercial goods, because if one walks through the neighborhood and want to buy a property, applications can be developed so that to show where the building is available. a 3-D view of a building seems to raise out of magazine's page With augmented reality.

To view such ads on screens and smartphones the property listings would be equipped with the buttons and keys for selection. 4. Another useful application would be when a virtual model would show how desirable cloth looks like without trying it on yourself in a shop. The case number two A confluence of forces unleashed by structural and organizational features of electronic trading systems, it allows to work with most of the operations of the Dow and the rest of the largest markets performing in the world. The electronic trading systems offer significant advantages over human runners, such as speed, low cost and more liquid markets.

The high-frequency traders have assumed many of the responsibilities once held by specialists at the exchange market, whose task has been to efficiently match buyers and sellers. Many current commerial systems, such as high-frequency traders, automated algorithms operations almost instantaneous. Some high-frequency trading commercial firms and hedge funds now use machine learning for their teams to use trade resources efficiently. Learning programs of the machine are capable of producing large amounts of data calculations in a short period, they are able to " learn" what works, and their trading strategies in real time are based on the dynamics of changes of the market and the economy in global adaptation. This method is far beyond human possibilities.

It seems, however, in situations such as the flash crash, where a computer algorithm was not sufficient enough to reduce the complexity of the event. Technologies have the potential to make a bad situation even worse. Response 1. The preconditions for the flash crash have involved investors' fears whether the market would follow a bear trend and or remain uncertain.

2. The pluses of electronic trade are: lower cost , speed, and more liquid market, and the algorithms that know what works in the market and can adjust their trading strategies on the basis of the market's « values".

3. The result of automated and electronic trading programs was that the algorithm caused the accidental sale of 80000 contracts in twenty minutes what automatically made other traders to start selling also. 4. the flash crash could have been avoided if the machines would never be allowed to wholly control buying and selling. In this kind of control of computer, no matter what its quality is, there will be always the possibility that something may go wrong. Unless the people to return to command.

The case number three In 2008, Chief Operating Officer of Valero has required the development of a balanced scorecard showing real-time data on plants and equipment reliability, inventory, security and energy. Using a series of monitors on the walls of the headquarters operations of the room, Dashboard with a large center window displayed a live view of the refining company. the Chief Operating Officer and other plant managers were able to evaluate the performance of the signs of the 16 major refineries in the United States and Canada. The Chief Operating Officer and his team could evaluate the performance of each refinery in terms of how each plant wass performing with respect to the production of the company. In case of any deviation from the plan, up or down, the plant manager with the group expects an explanation and a description of corrective actions.

The headquarters of the group are from the executive leevel of the refinery and the operator of the system shows the level of performance. Valero

Refining Dashboard is also viewable on the website, in case the plant managers are away. The data is updated every five minutes. The instrument panel is connected directly with the SAP Manufacturing Integration and Intelligence in which each story of crop production and production data current. Valero panels Management estimates $ 230 million a year in 16 refineries, when in use.

Panel of Valero refinery is so successful that the company has separate cards that provide detailed statistics on energy consumption per unit of society, and every plant development. Using shared data allows administrators to share best practices with each other, and changes in equipment to reduce energy consumption while maintaining production goals. The dashboard has the unintended consequence of helping managers to learn how the business really works. One of the dangers of the real-time management is not measuring the right things. Dashboard's information relating to the strategic objectives of the company might be irrelevant.

Valero objectives and performance measures were inspired by comparative studies used in the gas and oil industries. Response1. The topics to be referred in the development of the dashboard Valero was sure that is what should be measured, limits the degree of innovation they were, and a host of others beyond reckless oriented metrics and goals and budget management approaches obsolete technophobia 2. The chief operating officer of Valero wanted to provide real-time information on facilities and equipment reliability demo, inventory, security and energy measures of performance showing the dashboard's edge information that managers could receive timely, so you can take immediate corrective action when the plans differ

from the objectives. 3. The system required for the Valero dashboard is Integration of manufacturing and the Intelligence software.

4. Valero board, to contribute effectively to drive the company that the executive level, refineries, and even individual transmission system-level view of the dashboard. It ' s so successful that thousands of companies are trying to create similar systems to Valero's. 5. Valero's board should not focus on things you can not control. If you are out of your hands, it makes no sense for people to worry about.

They should focus on the factors that control, so they could identify and correct the internal problems in timely manner.