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## Abstract

The ministry of housing recently developed a new initiative to support the housing sector in Saudi Arabia, which is the building technology stimulus initiative (BTSI). The needs of this initiative arose due to the high demands on housing units. Also, the importance of the BTSI appears on its ability to reduce the construction time period and to provide a better life cycle with reasonable prices. Therefore, this paper discusses the positive and negative aspects of this initiative in a social, economic and environmental sides. Also, it studies how this initiative can fulfill the kingdom's vision of 2030. As a result, the paper found that the positive aspects of this initiative are high according to the survey analysis.

Key words: Building, technologies, housing, affordability, 2030 vision, Saudi Arabia.

## Research Problem

There are many initiatives and strategic directions that work to help housing affordability and implementation of proper housing units for Saudi families. Even so there might be many positive and negative aspects of these initiatives, which makes the evaluation of these initiatives is necessary in order to help implement the goals and strategic .

## Concept of Building Technology

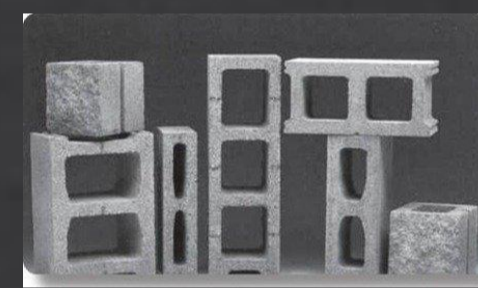
building technology means assembling building parts by using technical process and methods (O'Sullivan, 2014). Also, modern building technology is basically based on preparing the building parts, walls and roof outside the building sites in specialized factories, to be ready to install on the site by professions either on concrete or steel structure. As a result, this technique will decrease the time of constructing a building (Alfahad, 2019).

## Approved methods in building technology

- precast insulated concrete system



- lightweight concrete structure



- light steel structures technique



- isolated concrete blocks



- tunnel molds technique



- reinforced concrete units



## Analysis Summary of Survey

<b>Social Sector</b>	<p>Reduce the time period for construction and provide high life cycle units with low costs that meet the social desires and need of families.</p> <p>Provide healthy housing units for families</p> <p>Provide housing units that are financially adequate to all types of society.</p> <p>Provide adequate housing units that meet the standards for natural ventilation, heating and lighting.</p> <p>reduce the use of limited skilled labor and increase the high-level profession career opportunities,</p> <p>Reduce the costs of electricity and water bills.</p> <p>Reduce the maintenance of building which lead to decrease the life cycle cost.</p> <p>Reduce the cost of affordable housing provided by the Ministry of Housing for low-income people</p>
<b>Economical Sector</b>	<p>Provide different alternative units to meet the different financial capacity of families.</p> <p>Localize the vehicle production industry for housing construction.</p> <p>Support investors.</p> <p>Encourage developers to reach local building technology providers.</p> <p>Help networking with building technology companies around the world.</p>
<b>Environmental Sector</b>	<p>Reduce environmental pollution and provide healthy environment and housing units for families.</p> <p>Reduce energy waste.</p> <p>Reduce visual pollution and waste.</p>

## Recommendations

Based on the results of the study that explain the effect of BTSI from the social, economic and environmental sides, there are some recommendations to enhance the positive aspects of this technology and to increase the awareness of this initiative:

- Providing awareness of the importance of this technology for specialist and the advantages of using advanced building technology to enhance the building industry.
- Developing the building technology industry sector with high standards and quality.
- Developing regulations and standards to control the negative impact of this technology. These standards include the type of materials used, the quality of the materials, the sustainability and the costs of the materials.
- Providing regulations for the factory owners to control their control of the market.