

SKANSKA

Career Readiness Online Challenge



By: Farishta

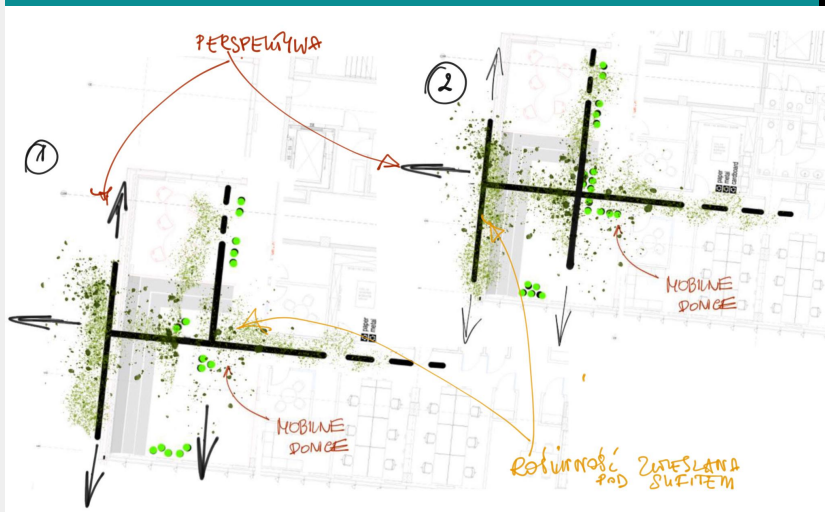
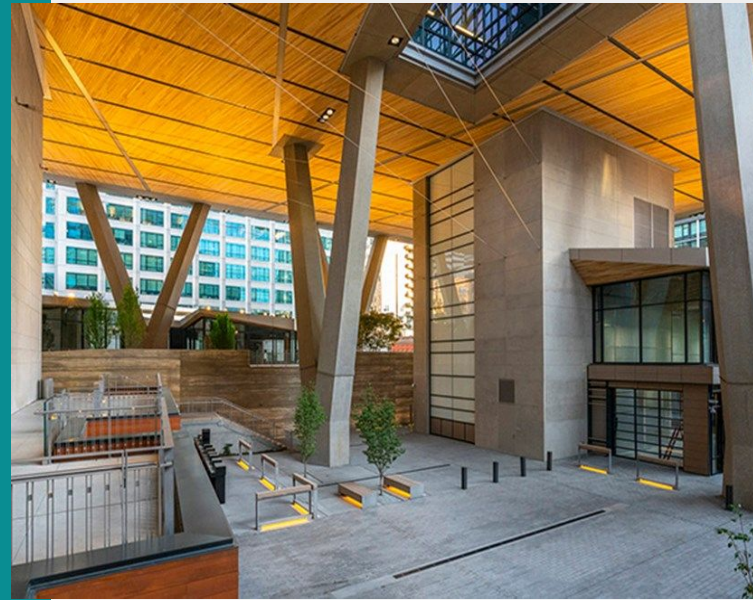
Team 393W

Legacy Magnet Academy, Tustin CA

▪ LMA Robotics Gazette ▪

Career Readiness Online Challenge

Skanska is a multinational construction and development company based in Sweden. Founded in 1887, Skanska was created to develop building solutions that are innovative, sustainable, and benefit the community. I chose this company for this challenge, because Skanska not only uses the engineering design process, but because the company revolves around and embodies STEM in a unique way and relates to VEX robotics.



Professionals in this company apply steps of the engineering design process in a variety of projects, but I wanted to focus on a project they did in Washington, called the Urban Village. “The Urban Village includes 24,000 SF of open space designed for gathering and connecting tenants, neighbors, and visitors with local retail, and arts and

cultural space. Part of the Urban Village is The Studio, a 1,000 SF, rent-free arts and culture space design for artists and performers to showcase their talents.” To complete the Urban Village, designers and builders had to use the engineering design process. First, they identified their objective, which in this case was to build an area of

community, culture, and art. They also identified the criteria and constraints, such as making the building sustainable (criteria), and the amount of space that can be used (constraints). After that, they brainstormed ideas for the space, such as how to make the building look, and where to place different things, like parking spots and restrooms. The next step the professionals at Skanska do is research. During this time, Skanska researches the best area to place the building, the different ways a building can be developed to be sustainable, and what architectural designs can be used to follow the criteria and constraints. After, Skanska professionals research, they develop ideas and pick the best idea. This is done by creating a design matrix or just discussing which idea best fits the objective. Once the best design is picked, they develop a prototype, and test it on a small scale. Then using feedback and data from testing, such as what makes the building structurally weak, and what other things can be added to make the building more environmentally friendly, the prototype is refined, tested, and evaluated, until it is made the best it can be. Finally, the building is built and advertised, so people can buy or rent the building for whatever they need, in this case, as a community space. The professional approach to engineering design



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matches the approach used by our team, because we also brainstorm, develop, test, and more, like the professionals at Skanska. My participation in Vex has prepared me for my future career, because I learn a variety of soft skills, such as teamwork and organization, and learn technical skills too, such as coding and designing. For this project, I learned about Skanska and how they use the engineering design process, mainly through first-hand knowledge of them speaking, during the Tide Talk program at my school, Legacy Magnet Academy. Tide Talk is a program where

every Wednesday, a person or company is brought to talk about their career and how they embody TIDE (Technology, Innovation, Design, and Entrepreneurship). When Skanska came, I was instantly pulled into it, especially because of its emphasis on sustainability and a diverse workforce. I not only used my first-hand experience of meeting Skanska officials for this project, but also their website to learn more about the different projects they did. As you learn more about other STEM jobs/companies, you will see how connected they are to VEX Robotics.

Credits

- Skanska Logo Image by; By Skanska via <https://group.skanska.com/>
- STEM Image by; Unknown via <https://heyadathere.files.wordpress.com/2018/01/cropped-6.png>
- The Urban Village Image; by Skanska via <https://group.skanska.com/projects/251056/2-U/>
- Brainstorming Image; by workplace we are via <http://workplace.pl/story/office-jungle-in-skanska-hq/>
- The Urban Village being built Image; by The Registry via <https://www.google.com/url?sa=i&url=https%3A%2F%2Fnews.theregistryps.com%2Fskanska-tops-off-its-665000-sqft-2u-building-in-downtown-seattle%2F&psig=AOvVaw3rhFWliUVoWciUYKA8i8kK&ust=1642445554889000&source=images&cd=vfe&ved=0CAsQjRxqFwoTCNC494j5tvUCFQAAAAAdAAAAABAD>
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