

## Seminar 2 Preparation Exercise

### Task 1: Volere Template

Visit IEEE Spectrum (IEEE Spectrum, n.d.).

- Select one of the news reports that you see here, which involves a technology product.

**Bionic Hands give Amputees a sense of touch (Goodrich, 2021) – *Prosthetic hand that vibrates to give a sense of touch***

- Develop a list of customer requirements for this product. These should include at least two functional and two non-functional requirements (see last week's lecturecast).
- Present your requirements using the Volere template entries which are listed at (Volere, n.d.).

#### Functional Requirements

The prosthetic hand shall give sensation (a sense of touch) to the user.

The prosthetic hand shall communicate with a smartphone via bluetooth.

#### Non-functional Requirements

The prosthetic hand shall be equipped with pressure sensors on the index, thumb and pinky fingers.

The prosthetic hand should be the same weight as a typical adult's hand (around 500grams)

The prosthetic hand should not be made of any rigid material which cannot bend such as wood, plastic or metal.

The prosthetic hand should be equipped with a Bluetooth communication device to communicate with a smartphone.

The prosthetic hand will have a smartphone app which can be also used to configure the hand.

The prosthetic hand's inbuilt software shall be updated via the smartphone app.

## Volere Templates for Requirements 1 & 2

<b>Requirement #: 1</b>	<b>Requirement Type: Functional</b>
<b>Description:</b> The prosthetic hand shall give sensation (a sense of touch) to the user.	
<b>Rationale:</b> To provide a more functional prosthetic hand that allows users to feel	
<b>Originator:</b> Aadel Akhtar	
<b>Fit Criterion:</b> the prosthetic hand shall be equipped with pressure sensors to mimic the sensation of touch when the user touches something.	
<b>Customer Satisfaction:</b> 3	<b>Customer Dissatisfaction:</b> 5
<b>Dependencies:</b> Requirement 3	<b>Conflicts:</b>
<b>Supporting Materials:</b> Definition of terms	
<b>History:</b> Date Created - Dec 10 2021	
<b>Requirement #: 2</b>	<b>Requirement Type: Functional</b>
<b>Description:</b> The prosthetic hand shall communicate with a smartphone via bluetooth.	
<b>Rationale:</b> To configure and update the prosthetic hand software	
<b>Originator:</b> Aadel Akhtar	
<b>Fit Criterion:</b> Data shall be transmitted from the prosthetic hand to the smartphone for	
<b>Customer Satisfaction:</b> 3	<b>Customer Dissatisfaction:</b> 5
<b>Dependencies:</b> Requirement 6, 7 & 8	<b>Conflicts:</b>
<b>Supporting Materials:</b> Definition of terms, diagrams	
<b>History:</b> Date Created - Dec 10 2021	

## References

IEEE Spectrum (2021) Bionic Hands Give Amputees Sense of Touch. Available from: <https://spectrum.ieee.org/bionic-hand-simulates-touch> [Accessed 10 December 2022]

Volere (n.d.) Requirements Specification Template. Available from: <https://www.volere.org/templates/volere-requirements-specification-template/> [Accessed 10 December 2022]