



# DEVELOPMENT OF LOCAL POSITIONING SYSTEM FOR A PIPE-LESS PLANT

**Automation & Robotics**  
**Group Project SS18**

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## **Abstract**

Summary. Note that the abstract heading is unnumbered, it should remain so. To remove heading numbering use:

```
\section*{}
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# Contents

<b>1</b>	<b>Introduction</b>	<b>5</b>
<b>2</b>	<b>Pipeless Plant</b>	<b>6</b>
2.1	Existing setup . . . . .	6
2.2	Problems with the Existing Setup . . . . .	6
<b>3</b>	<b>Selection Process</b>	<b>7</b>
3.1	Triangulation . . . . .	7
3.2	Pattern Recognition . . . . .	7
3.3	RFID . . . . .	7
3.4	Map-Based Localization . . . . .	7
<b>4</b>	<b>Theoretical Background</b>	<b>8</b>
4.1	Radio Frequency Identification . . . . .	8
4.2	Trilateration . . . . .	8
4.3	Simulation . . . . .	8
4.4	... . . . .	8
<b>5</b>	<b>Simulation</b>	<b>9</b>
<b>6</b>	<b>Implementation</b>	<b>10</b>
6.1	Hardware (Abdul or Stephan) . . . . .	10
6.2	Communication (Abdul and/or Stefan) . . . . .	10
6.3	Initialization procedure (Stephan and Stefan) . . . . .	10
6.3.1	Recording and filtering data (Stefan) . . . . .	10
6.3.2	Analysing data (Stefan) . . . . .	10
6.3.3	Estimation of position and orientation (Stephan) . . . . .	10
6.4	Results . . . . .	10
6.5	Improvements . . . . .	10
<b>7</b>	<b>Conclusion</b>	<b>11</b>
<b>8</b>	<b>Future Work</b>	<b>12</b>
<b>9</b>	<b>References</b>	<b>13</b>
<b>10</b>	<b>Appendixes</b>	<b>14</b>

List of Figures

List of Tables

1	Should be a caption . . . . .	7
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# **1 Introduction**

Add your name to the file name

## **2 Pipeless Plant**

### **2.1 Existing setup**

### **2.2 Problems with the Existing Setup**

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zb

- Fish eye
- Sunlight..

### 3 Selection Process

About the 4 techniques..

#### 3.1 Triangulation

**Summary**

**Implementation**

**Pro and con**

..

#### 3.2 Pattern Recognition

**Summary**

**Implementation**

**Pro and con**

..

#### 3.3 RFID

**Summary**

**Implementation**

**Pro and con**

..

#### 3.4 Map-Based Localization

**Summary**

**Implementation**

**Pro and con**

..

example:

Col1	Col2	Col2	Col3
1	6	87837	787
2	7	78	5415
3	545	778	7507
4	545	18744	7560
5	88	788	6344

Table 1: Should be a caption

## **4 Theoretical Background**

### **4.1 Radio Frequency Identification**

### **4.2 Trilateration**

### **4.3 Simulation**

### **4.4 ...**



## 5 Simulation

## **6 Implementation**

### **6.1 Hardware (Abdul or Stephan)**

### **6.2 Communication (Abdul and/or Stefan)**

### **6.3 Initialization procedure (Stephan and Stefan)**

#### **6.3.1 Recording and filtering data (Stefan)**

#### **6.3.2 Analysing data (Stefan)**

#### **6.3.3 Estimation of position and orientation (Stephan)**

### **6.4 Results**

### **6.5 Improvements**

## **7 Conclusion**

conclude..

## 8 Future Work

...

## 9 References

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## 10    **Appendixes**