

A group of five people are seated around a long white table in a bright, modern meeting room. They are all looking towards a whiteboard at the front of the room. One man is pointing at the whiteboard. The room has large windows on the left and a white door in the background. The overall atmosphere is professional and collaborative.

## SEARCH INTERFACE IMPLEMENTATION

FOR A  
LEARNING MANAGEMENT SYSTEM

# OVERVIEW



1. Recap
2. Chosen Approach
3. Technical Details
4. Prototypes
5. Testing
6. Conclusion & Future Work


# RECAP



Swissteach





Global Teach (LMS)

Learning Content Search:

 **Catalog search**

[Start search](#)

[Search options](#)[Simple search](#)

	Rating
 <b>Swiss Map Trophy motorisiert / TEST</b> <a href="#">Research --&gt; Guest --&gt; Learning.program --&gt; Map Teaching - Military Topography_</a>	
 <b>Swiss Map Trophy Muskelkraft / TEST</b> <a href="#">Research --&gt; Guest --&gt; Learning.program --&gt; Map Teaching - Military Topography_</a>	

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Displaying page 1 of 1, items 1 to 2 of 2.

# APPROACH



1. Research about User Search Behavior
2. Implement two Prototypes
3. Test Prototypes with Customers Eagle and Purple Berry (Customer Data)
4. Improve Prototypes
5. Last Test to choose final Prototype

Search

chocolate

Search for: Horse, Microsoft, airplane, swiss, bunny or whatever floats your mind!

Submit

<div>Chocolate</div> <div>chocolate milk chocolate product chocolate bloom hot chocolate chocolate bars</div> <div>88%</div>	<div>Candy</div> <div>chocolate bars white chocolate Mint chocolate chocolate eggs Hot chocolate</div> <div>42%</div>	<div>Lego Duplo</div> <div>Kinder Chocolate</div> <div>13%</div>	<div>University of Bern</div> <div>old chocolate factory</div> <div>8%</div>
		<div>Wine</div> <div>chocolate</div> <div>8%</div>	



# TECHNICAL DETAILS



## Used Technologies

- Back-end: .NET Core with C#
- Front-end: React with Typescript
- Search Engine: Azure Search

## System Structure



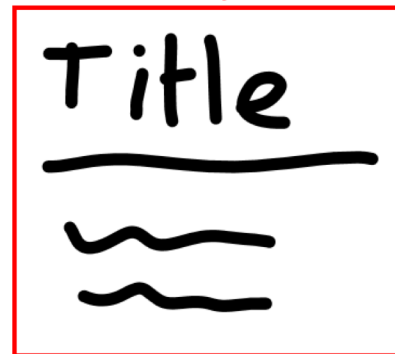
### Search Component



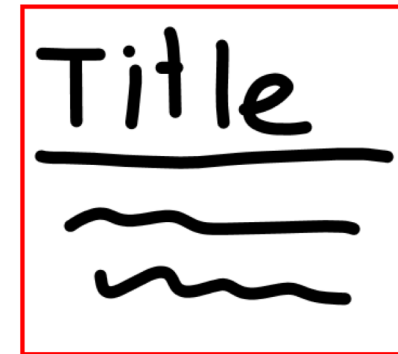
### Suggestions Component



### Result Component



### Result Component



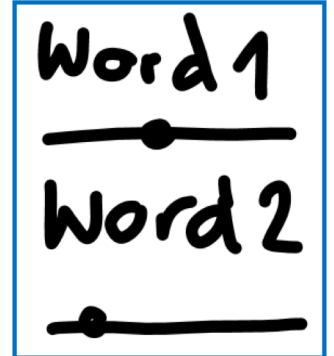
### Result Component



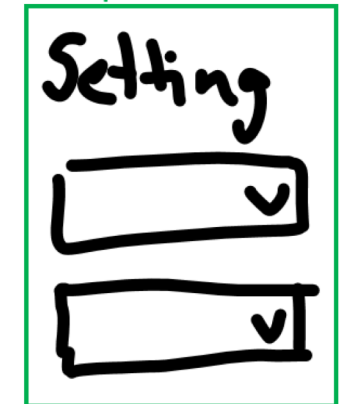
### Result Component



### Word Settings Component



### Permanent Settings Component



# PROTOTYPE ONE



Simple, mimicking Google Search

[Search](#) [Search One](#) [Search Two](#)



Search for: Horse, Microsoft, airplane, swiss, bunny or whatever floats your mind!

No results

# PROTOTYPE TWO



Personalizable, influence Search Parameter and Settings

[Search](#) [Search One](#) [Search Two](#)

Search for...



Search for: Horse, Microsoft, airplane, swiss, bunny or whatever floats your mind!

No results

Additional Settings ^

Suggestion Mode:

One Term



Result display:

Tiles



Maximum # Results:

No Limit



Minimum Score (%):

No Limit



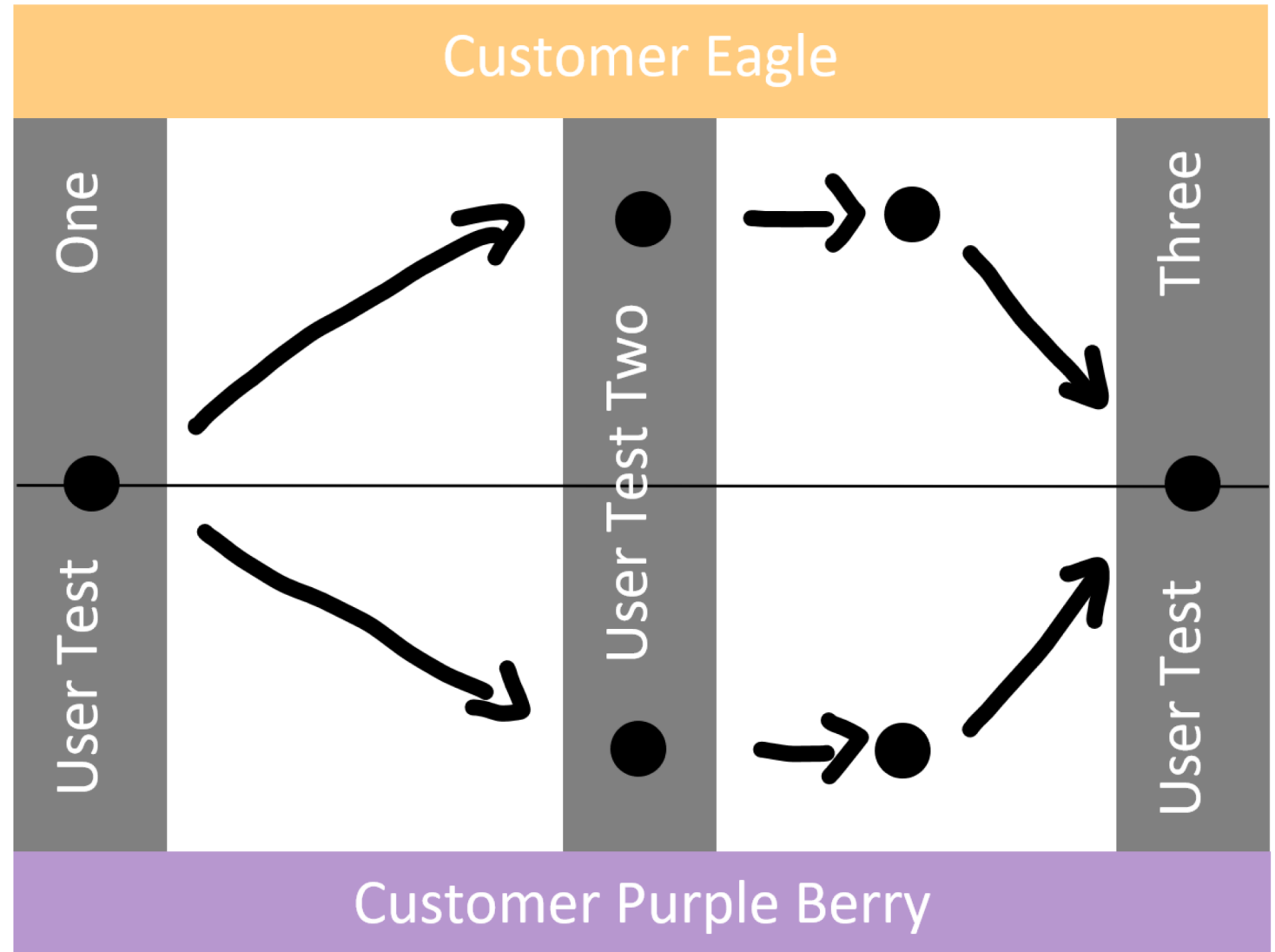
# TESTING PROTOTYPES



2 Prototypes

2 Customers

3 Tests (per Customer)



# USER TEST ONE & TWO



Tasks and related Questions

Results User Test One:



Results User Test Two:



# PREPARATION FOR FINAL TEST



1/3 of Tester preferred Prototype One

New Approach: Combine both Prototypes

## Search

Search for...



Disable Advanced Search

No results

### Word Settings

#### Additional Settings

Suggestion Modes:

- ☐ Synonyms
- ☒ One Word
- ☒ Two Words
- ☐ Last Word with Context

Result display:

Tiles



Maximum # Results:

No Limit



Minimum Accuracy Color:

No Limit



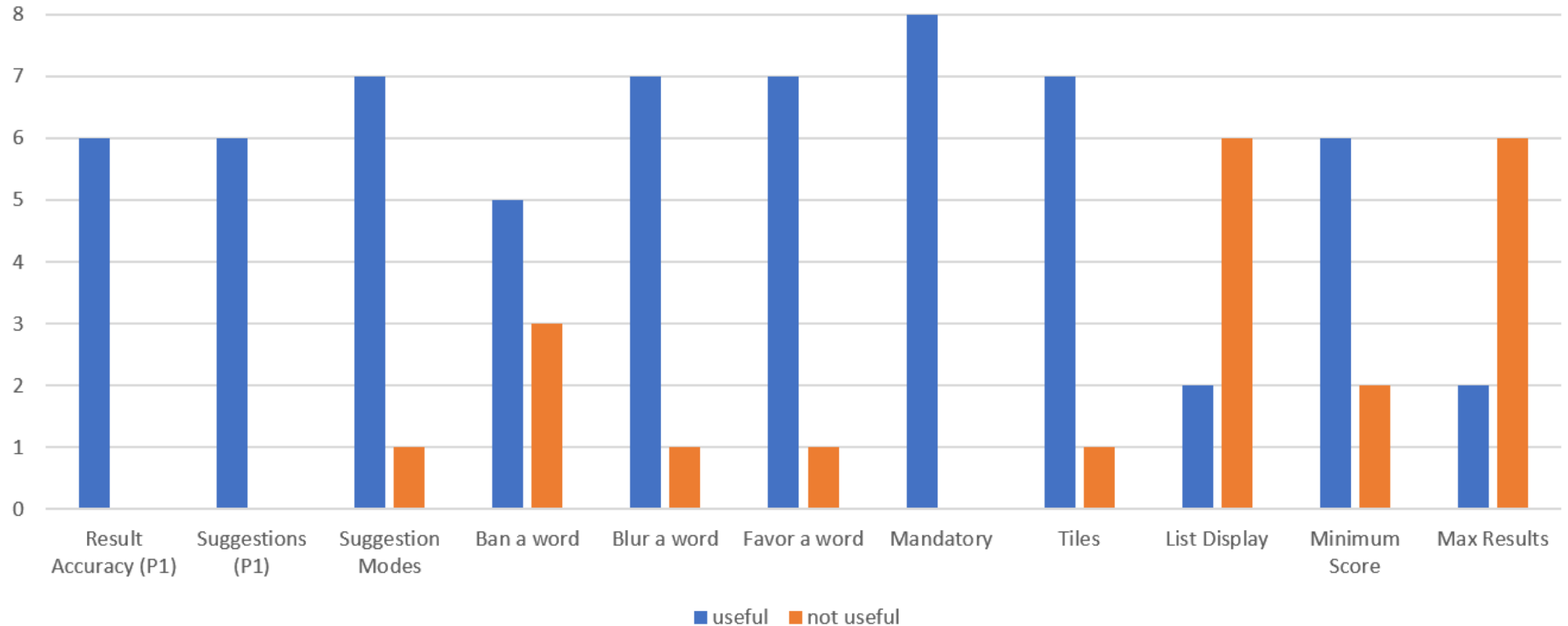
# USER TEST THREE



Combined Features of both customers

No answer:12%

P2: 88%



# CONCLUSION & FUTURE WORK



Final Prototype is useful: Example blur a Word

Interviews instead of User Tests: Quality of Answers

Work into new Technologies properly

Further Action needed

- Usability Test
- Tool for automated indexing of learning content
- Integrate Search in LMS



Company Swissteach is happy with the Result!