SNC Lavalin is prepared for digital times ahead!

Kaiserslautern Consulting
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Key question

Which digital alternatives can provide a sustainable future and growth for SNC Lavalin?

Key recommendation

Stay competitive on the disrupted market of construction in the digital age through implementing

Cloud engineering
Open community
Human resource platform
Virtual Reality

Increasing importance of EDPM within SNC Lavalin

Challenges of increasing importance of digitalization

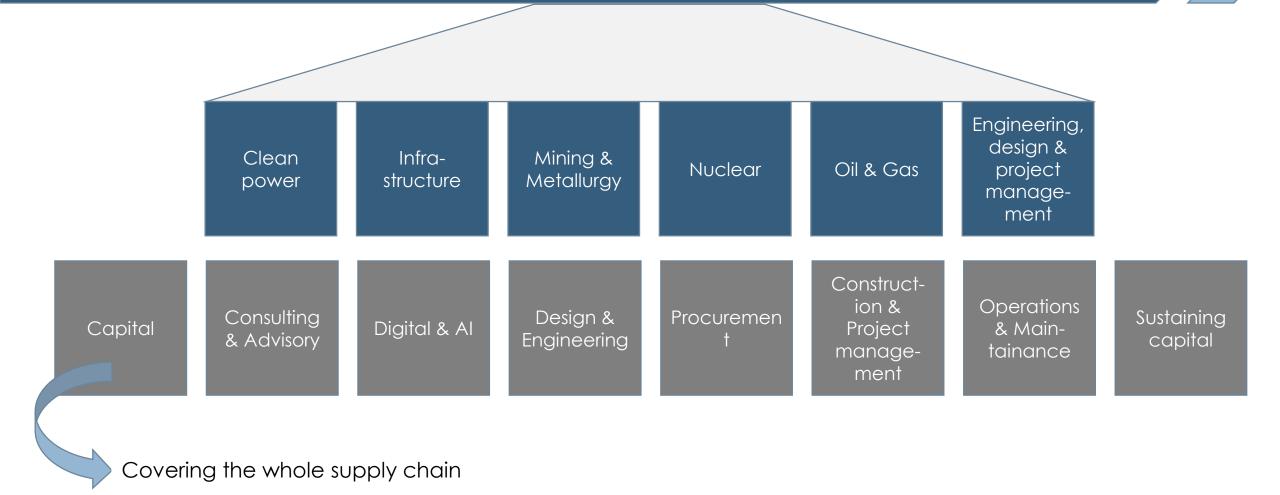
Difficulties of acquiring and keeping high experienced engineers

Increased efficiency results in decreasing billable hours

Todays agenda

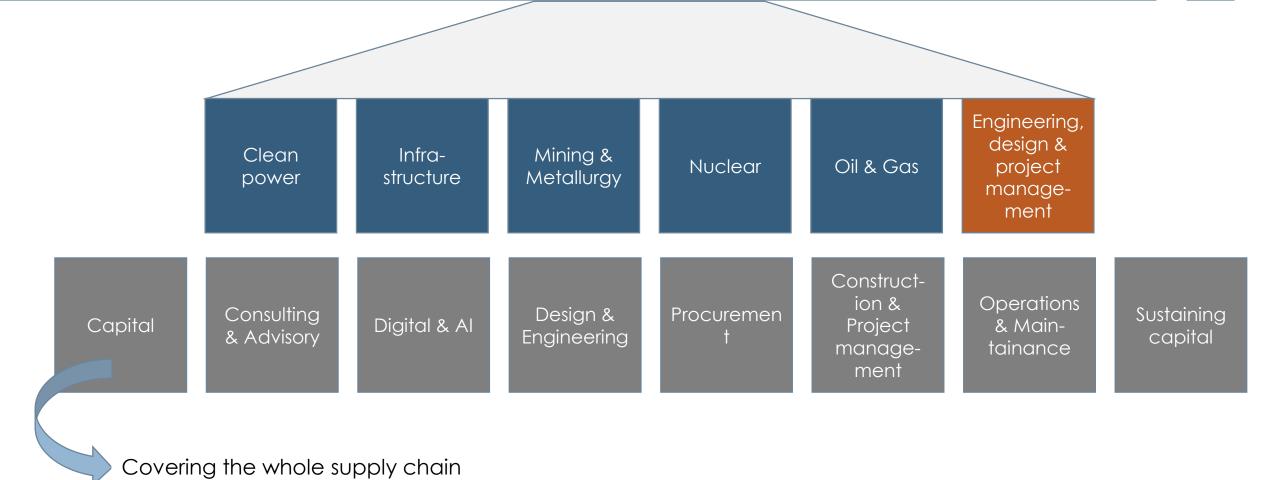
- 1. Analysis
- 2. Alternatives
- 3. Evaluation
- 4. Implementation
- 5. Risks & Contingencies

SNC Lavalin Group



Analysis | Alternatives | Evaluation | Implementation | Risks & Contingencies

SNC Lavalin Group



Analysis | Alternatives | Evaluation | Implementation | Risks & Contingencies

"provide homes, Key activities Customer relations education and connections by building apartment complexes, schools and Key resources Customer segments bridges" Revenue streams

From design to finished project

Physical Financial Human "provide homes, education and connections by building apartment complexes, schools and bridges"

Customer relations

Customer segments

Revenue streams

From design to finished project

Physical Financial **Human**

"provide homes, education and connections by building apartment complexes, schools and bridges"

Customer relations

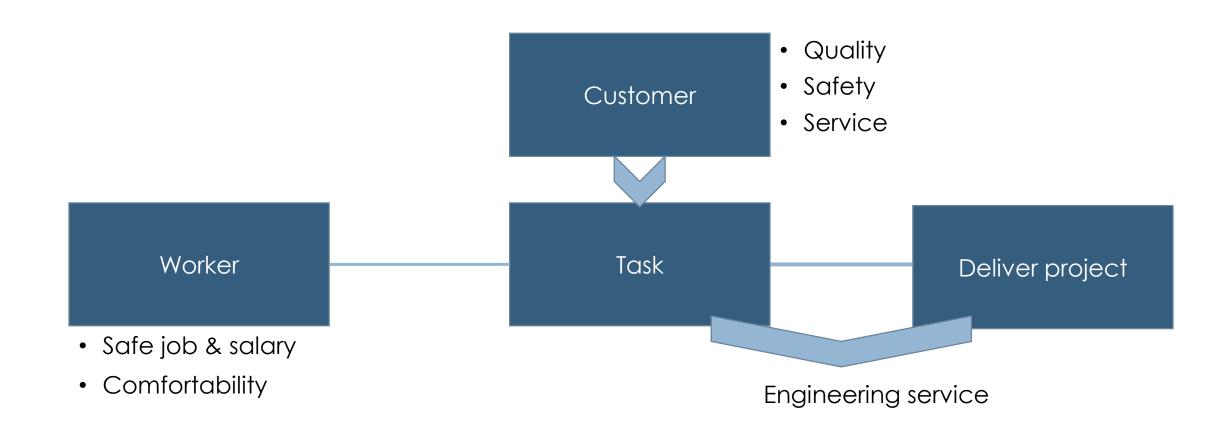
Customer segments

Revenue streams

High experienced engineers

Hard to get and even harder to keep?

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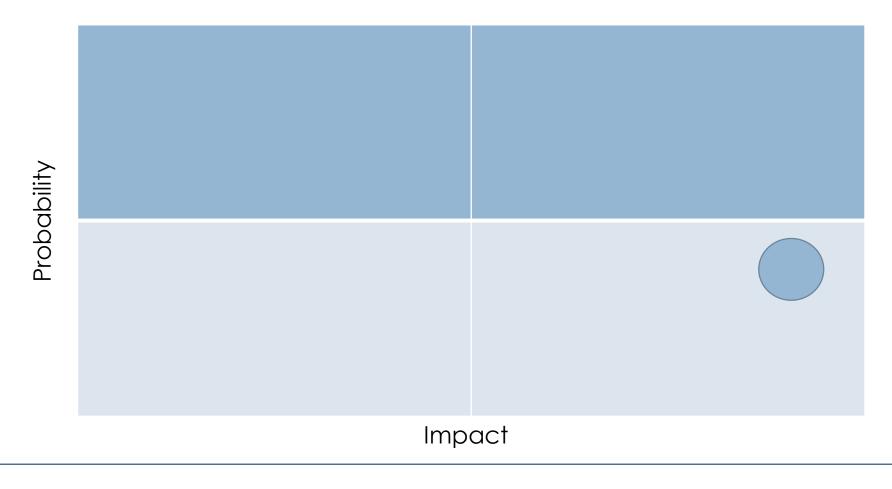
High effort of acquiring

Reduced effort through interaction platforms



Will this affect SNC Lavalin EDPM?

Likelihood of arising affects

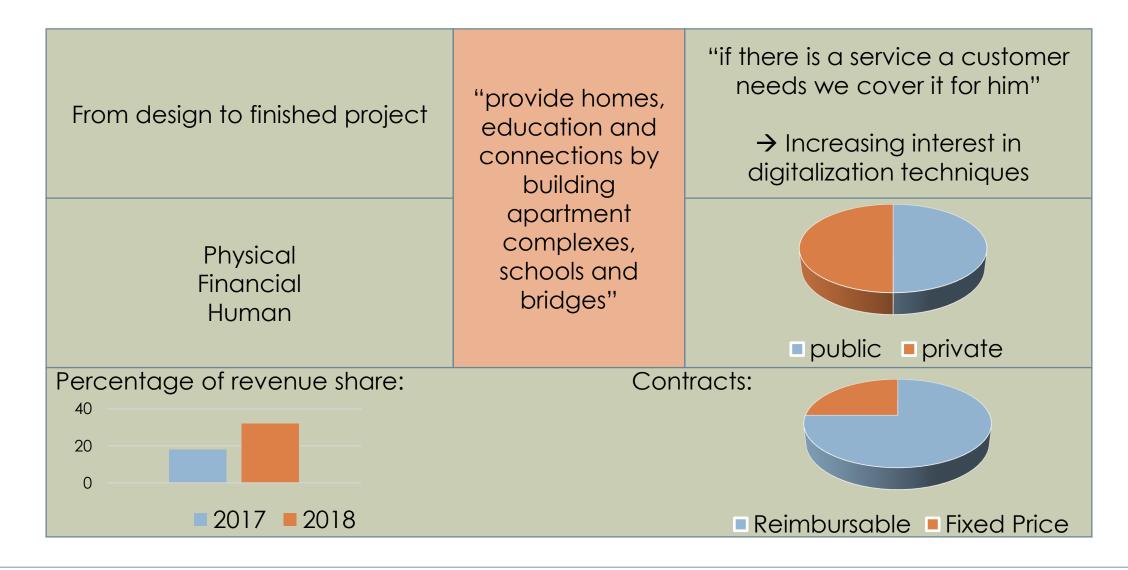


Public and private customers with big projects

"if there is a service a customer needs we cover it for him" "provide homes, From design to finished project education and → Increasing interest in connections by digitalization techniques building apartment complexes, Physical schools and Financial bridges" Human public private Revenue streams

Is SNC Lavalin EDPM digital yet?

In order to stay competitive it is highly important to leverage core values of innovation and collaboration to overcome challenges of digitization!



Analysis | Alternatives | Evaluation | Implementation | Risks & Contingencies

Increased efficiency leads to decreased revenue

Increased efficiency leads to shorter work time



Shorter work time leads to viewer billable hours



75% of the revenue comes from reimbursable contracts

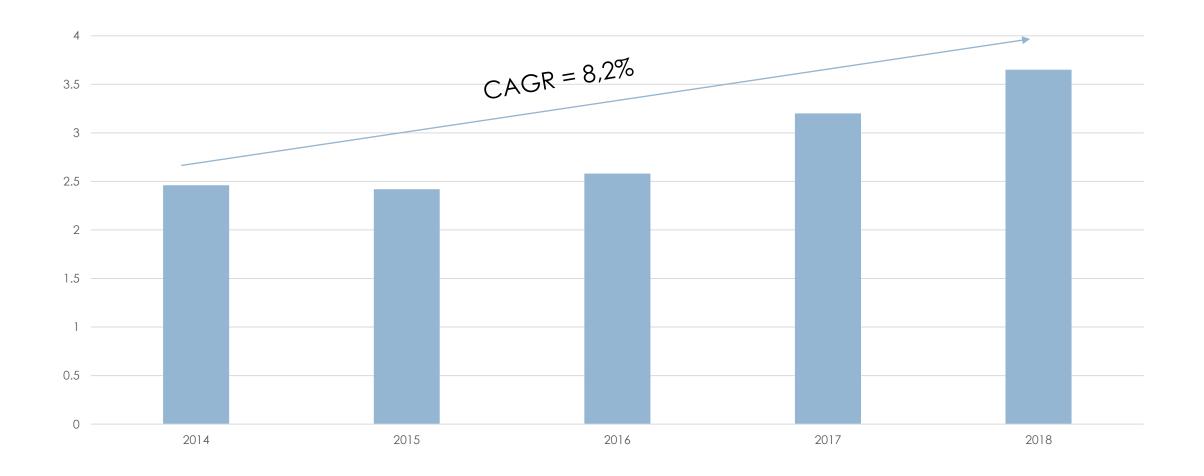


Increasing importance of EDPM



How can SNC Lavalin increase efficiency without compromising revenue?

Earnings per share



In summary

Strength	Weakness
 Innovation and collaboration as core values Financial resources 	Revenue streams rely mostly on reimbursable contracts
Opportunity	Threat
 Construction has low degree of digitalization → "First mover"? Growing world population 	 Fast changes in technology landscape Challenges of acquiring high experienced engineers

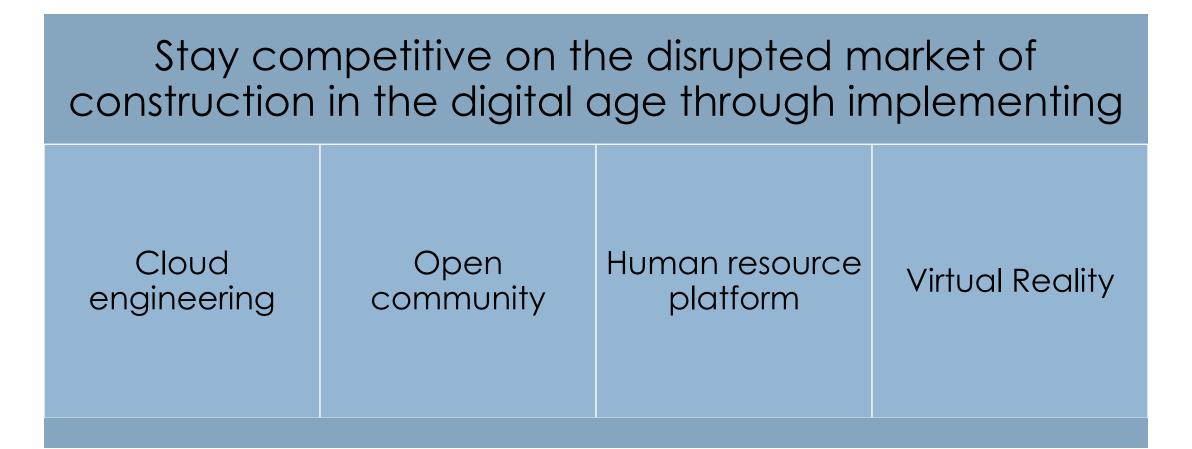
Digital alternatives for future growth

1. Cloud engineering 2. Open community with incentives 3. Human resource platform 4. Artificial intelligence 5. Big Data 6. 3D printers 7. Virtual reality

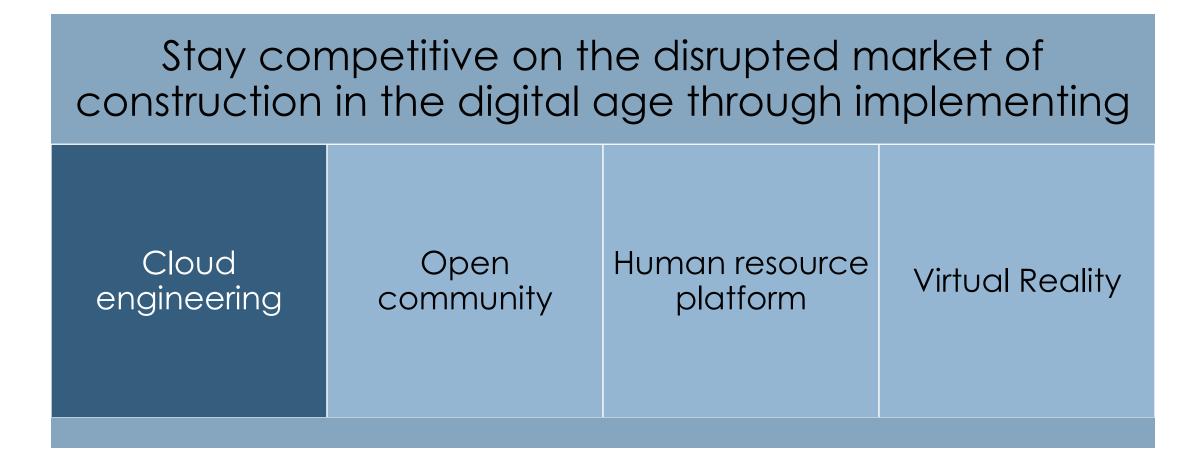
Evaluation of digital alternatives

	Increasing customer service	Employee satisfaction	Costs	Complexity	
Cloud engineering			•		
Open community				•	
Human resource platform			•		
Al					
Big Data	•				
3D printers			•		
VR					

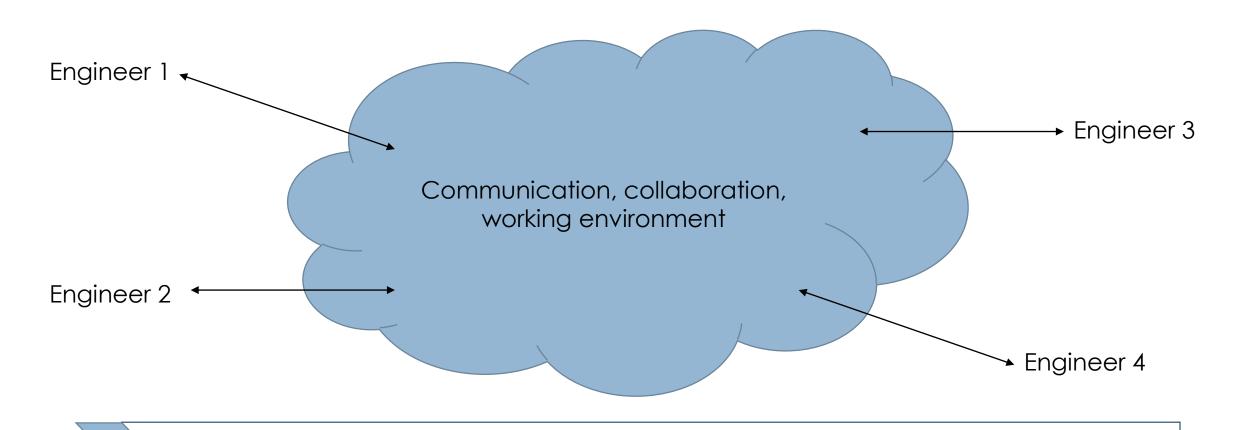
Key recommendation aspects



Key recommendation aspects

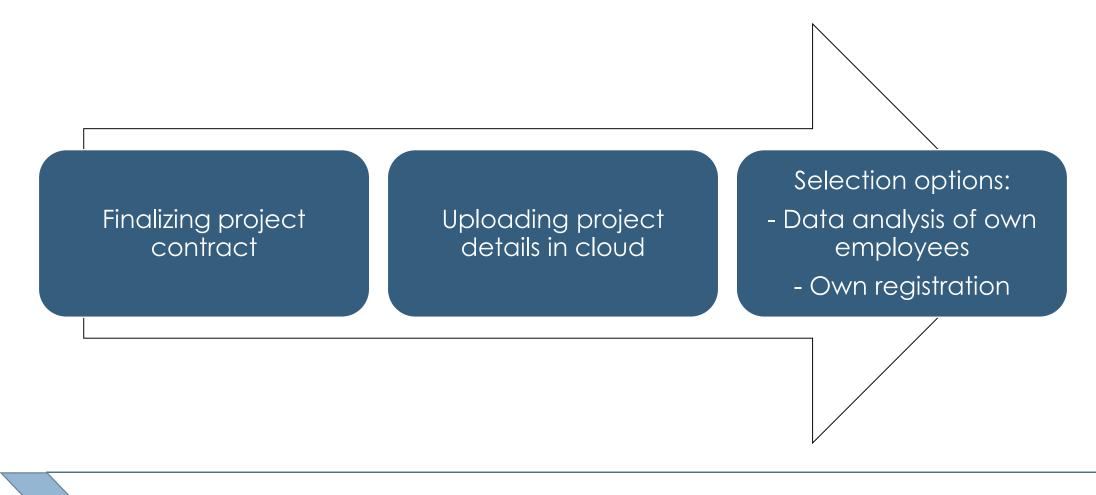


Implementing cloud engineering to set international working teams



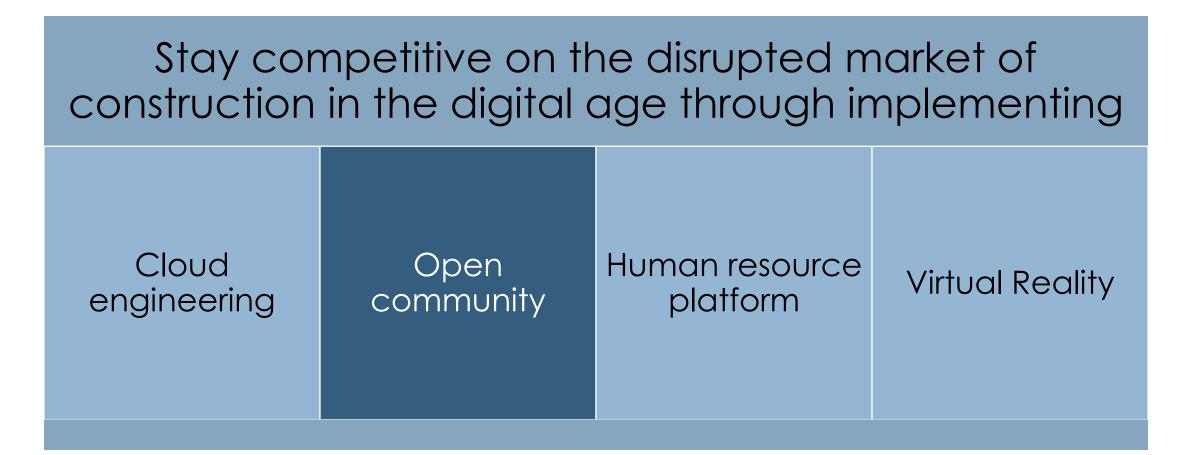
Optimization of HR capacity worldwide

Selection process of project members



Increased efficiency through higher motivation

Key recommendation aspects



Introducing idea finding platform

Online platform

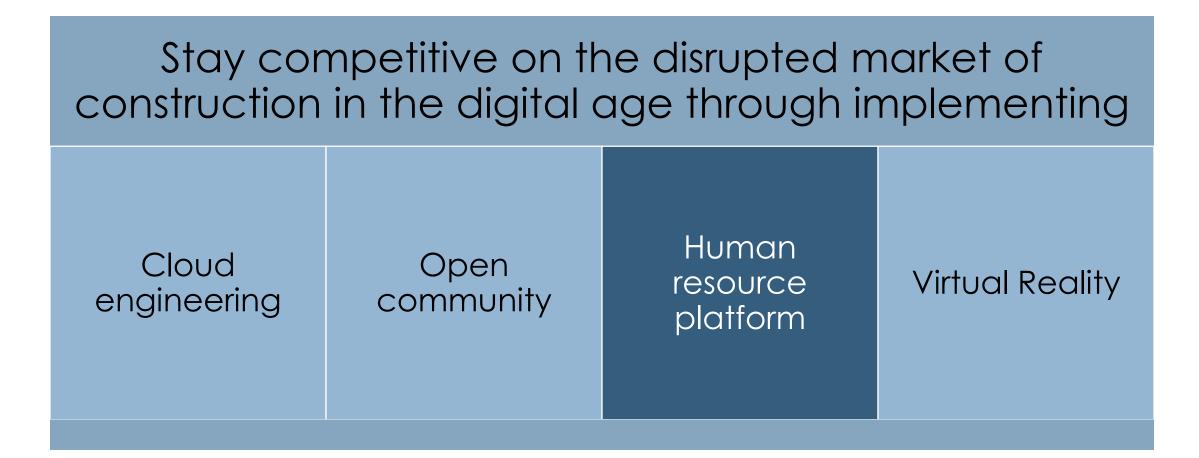
Diversified members

Bringing expertise together

Monetary incentives for best practices

Finding best ideas and practices for problem solving and optimization

Key recommendation aspects



Leveraging human resources without permanent contracting

Scanning engineers with personal data



Selection, negotiation and contracting for project



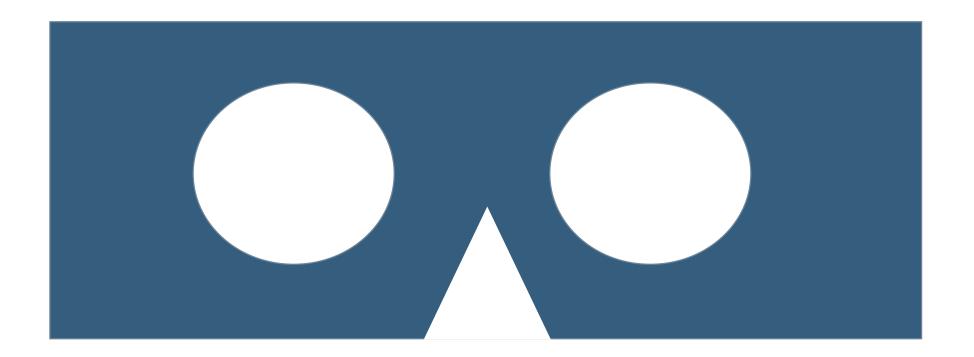
Adding to cloud with own employees to complete team

Overcoming insufficient availability of needed engineers

Key recommendation aspects

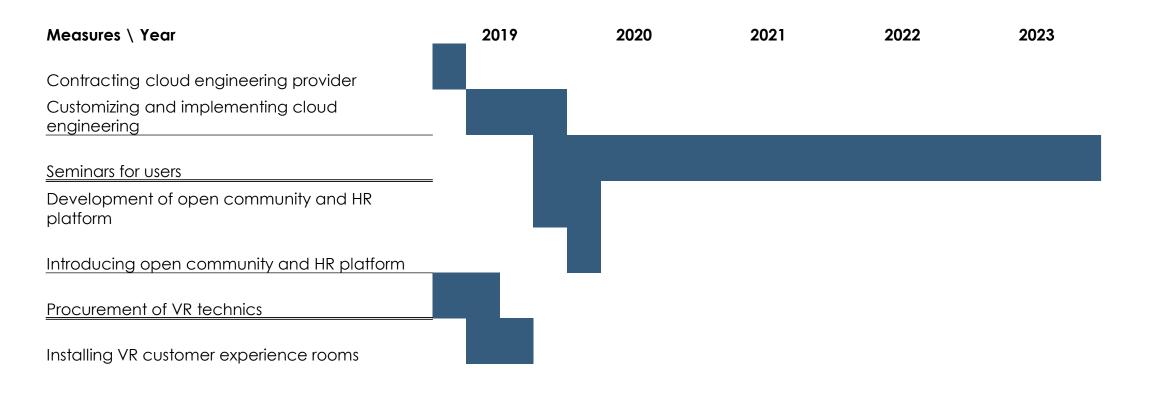
Stay competitive on the disrupted market of construction in the digital age through implementing Cloud Open Human resource Virtual Reality community engineering platform

Introducing virtual reality to reach more efficient project and time management

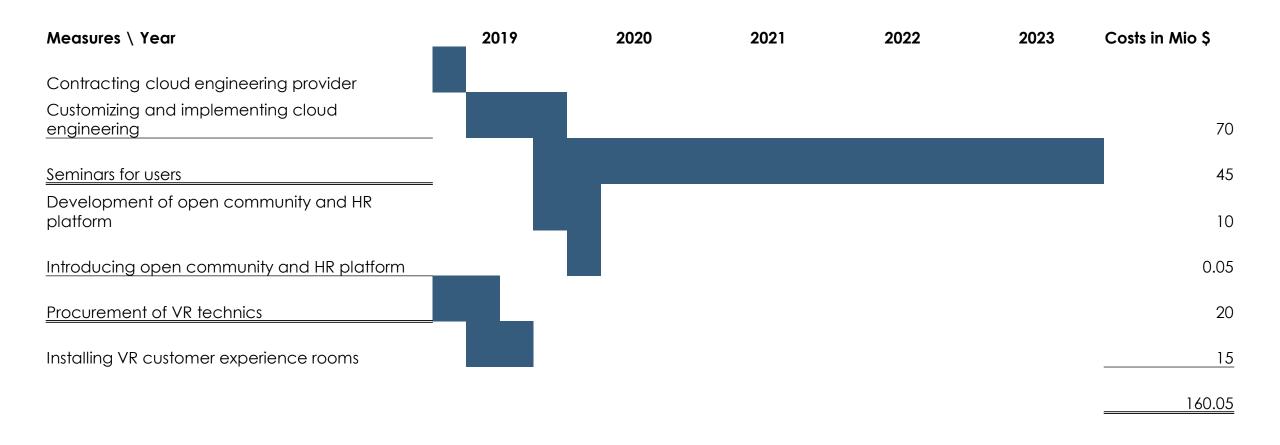


Enabling more satisfying customer management

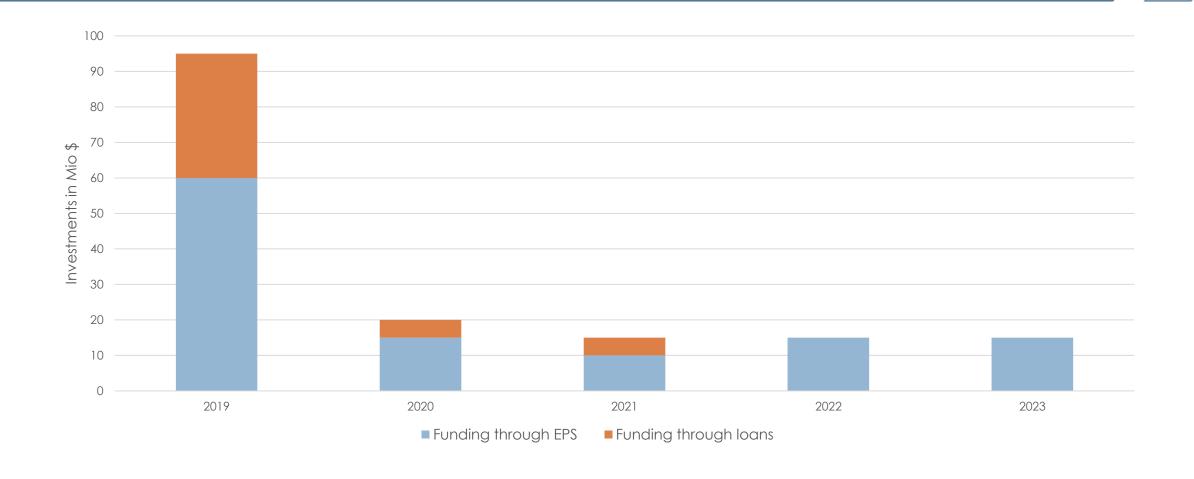
Timeline



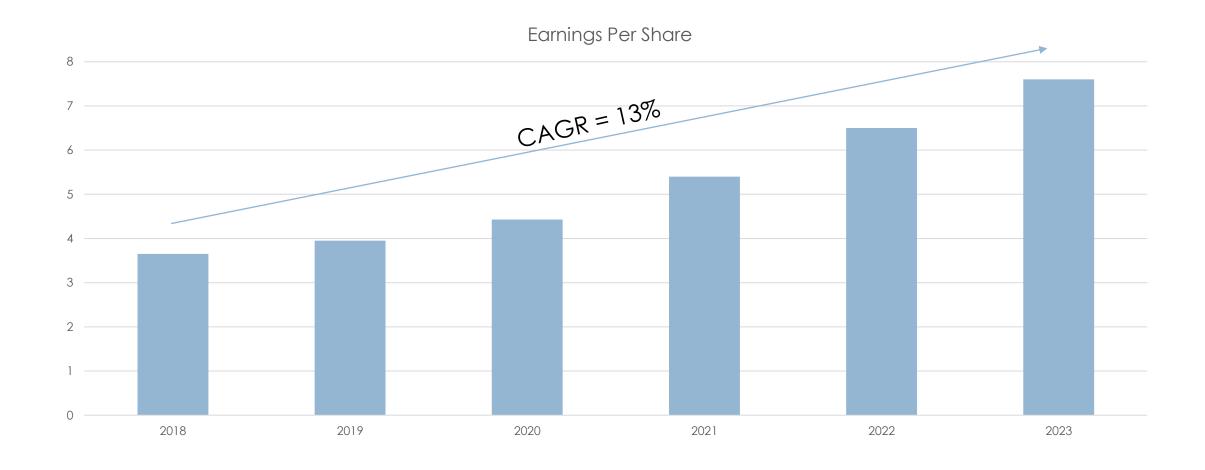
Investment costs



How to fund the investments?



Development of the EPS

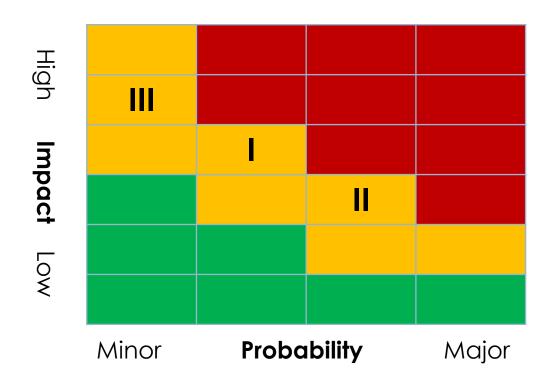


Key Performance Indicator

KPI's	2019	2020	2021	2022	2023	2024
EPS	3.65	3.95	4.43	5.4	6.5	7.6
Employee satisfaction	80%	84%	87%	92%	92%	92%
Billable hours	100%	102%	101%	100%	100%	100%
Loan in Mio \$	35	40	45	35	25	15

Risks & Contingencies

- I. Quality issues
- II. Lack of social skills
- III. Imitation



We are looking to further discuss on the topic with you!

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