

Project Type: Pharmaceutical manufacturing facility expansion

Novo Nordisk: OFP Expansion Måløv

Risk Log

Date: 2023.03.02
Init: MIT/NIRAS

ID	Category	Theme	Description of Risk	Root causes	Likelihood converted	Schedule	CONSEQUENCE			Mitigation action plan	Deadline	Responsible		
							Likelihood converted	Likelihood converted	LxS	Cost	LxC	Quality	LxQ	
1	Technical risks	Authorities: District plan	There is a risk that a dispensation in relation to the district plan is needed, which could potentially delay the project. Building height dispensation. District plan is based on "primary office use" and other specific preconditions. There is a risk that district plan		50,0%	5 1-3 months	3	15	#####	4	20	No risk for business continuity	5	Different scenarios: Move project, project changes. Mitigation: Change production process and capacity (Building layout). Loss of flexibility.
2	External and business risks	Services: Power Supply/Utilities	Power supply. Not enough electrical capacity. Main supplies (electrical, water, heating and cooling) will not be established in time.		50,0%	5 > 6 months	5	25	#####	3	15	No risk for business continuity	5	Early dialogue with Energinet. Supply of services to supplier if required. Close collaboration with CFA. Dialog every 2nd week. Start with power available from construction site (step-by-step start up)
3	Technical risks	Schedule: LLI	Long lead items (LLI) - Critical items		25,0%	4 3-6 months	4	16	#####	3	12	No risk for business continuity	4	Uncertainty regarding what long lead items that will impact project. Mitigation: Early dialog with contractors/vendors. Marked research. Early procurement. Process equipment not considered to be at risk. Active IT-equipment may be a focus area, but not considered to be a risk.
4	External and business risks	Contractor	Lack of potential contractors inside DK. Only a few capable main contractors with sufficient resources. There is a risk that the main contractor will not be able to carry out the design task to a satisfactory quality and that this will cause delays.		50,0%	5 3-6 months	4	20	#####	3	15	No risk for business continuity	5	Robust early procurements strategy. Potential teaming between mid-sized contractors. Consider international contractors (will result in other risks!). Reassess procurement strategy.
5	Organizational and PM risks	Ressources	Ressources overall in basic design and detailed design. Resource challenges in the engineering and/or architectural team may cause delays.	Tight schedule to perform design. High complexity and need for rapid decision-making	25,0%	4 1-3 months	3	12	#####	3	12	Production downtime < 1 day	12	Tight coordination between ressource managers. Detailed scheduling and follow up. Agree on right level/format on decision-making/support.
6	Organizational and PM risks	Design coordination	Design interfaces - Niras/RH/equipment. Tight schedule necessitates many parallel design activities. This causes a high risk of not sharing relevant information between design streams.		50,0%	5 2-4 weeks	2	10	#####	3	15	Production downtime < 1 day	15	3D modelling. Close collaboration/communication. 3rd party review. Redundancy in key-resources. Higher detailing in selected complex areas. Consider off-site manufacturing/buildability. Communicate design intent to contractor. Highlight design constraints and "degrees of freedom" where optimization is
7	Technical risks	Logistic	Robust data as basis for Logistic solutions	Insufficient data Lack of experience from similar projects	25,0%	4 > 6 months	5	20	#####	4	16	No risk for business continuity	4	Provide more resources to perform analysis/retrieve/provide data. Close collaboration between project organization and client.
8	Technical risks	Logistic	Not sufficient Logistic Solutions	Complexity. Unaccuracy between simulation and reality.	50,0%	5 3-6 months	4	20	#####	4	20	No risk for business continuity	5	Strengthen design team. More attention on the logistics on all levels. 3rd party review.
9	Technical risks	Construction site	There is a risk of delays due to complicated logistics on the construction site. It is a complicated puzzle to get the building site, temporary parking, temporary offices, traffic and so on coordinated. Not enough space for parking.		25,0%	4 1-3 months	3	12	#####	3	12	No risk for business continuity	4	Detailed planning
10	Technical risks	Authorities: VVM	Risk of VVM		5,0%	2 > 6 months	5	10	#####	3	6	No risk for business continuity	2	Consider alternative solutions with less impact (brainstorm). Continue design concurrently with VVM process with risk of back-loops.
11	Technical risks	EIA	There is a risk of complications in relation to the EIA which could cause delays		5,0%	2 > 6 months	5	10	#####	4	8	No risk for business continuity	2	
12	Technical risks	Space for technical installations	Not enough space. Detailed design will reveal a higher demand for more space/routing. E.g.: complex and extensive IT-wiring. There is a risk that cableways will not match requirements. High amount of installations on walkable ceiling - consistency [clash?] control failure	Tight schedule to go enough into detail - parallel design may cause "late" recognition of design clash/lack of space	12,5%	3 1-3 months	3	9	#####	3	9	No risk for business continuity	3	Detailed scheduling and follow up. Allocate more time (?). Work-package review and coordination
13	Technical risks	Interface management	There is a risk that a lack of coordination with CFA could delay the project		25,0%	4 2-4 weeks	2	8	2 000 000 kr.	2	8	No risk for business continuity	4	
14	Technical risks	Other: Re-capture of heat/cooling	Requirement for re-capture of heat and cooling, systems might become too expensive and require redesign		25,0%	4 2-4 weeks	2	8	200 000 kr.	1	4		0	
15	Technical risks	Soil	Lack of load - soil depo The soil balance in relation to sustainability, neighbours, authorities		25,0%	4 2-4 weeks	2	8		0	0		0	
16	Organizational and PM risks	Containment	OEB3 requirements: Containment and contamination control. Complete alignment of containment issues and zoning between Novo teams and Niras	Lack of alignment in strategy	12,5%	3 2-4 weeks	2	6	#####	3	9	Production downtime < 1 day	9	Design team and client to agree on strategy and implementation in project
17	Other	Amphibiens	Amphibiens (salamandere)		12,5%	3 2-4 weeks	2	6		0	0		0	
18	Organizational and PM risks	Neighbors	Neighbor hearing turns out negative. Neighbors on eastern side may cause resistance towards the project via local press, social media etc. This may cause bad publicity, vandalism on construction site etc.		50,0%	5 < 1 week	1	5		0	0		0	
19	Technical risks	CE label	CE label		50,0%	5 < 1 week	1	5		0	0		0	
20	Organizational and PM risks	Free Issue items	Free Issue items		50,0%	5 < 1 week	1	5		0	0		0	
21	Organizational and PM risks	Ressources	There is a risk that decisions are not taken or delayed due to a too small Novo Nordisk Team	There is a risk that decisions are not taken or delayed due to a too small Novo Nordisk Team	0,5%	1 1-3 months	3	3	#####	3	3	No risk for business continuity	1	
22	Technical risks	Authorities: Building permit	There is a risk that we will not obtain building permit for early works (site development) which will delay initiation of early works		0	0	0	0		0	0		0	
23	Organizational and PM risks	Contractor	Transition to contract management team from design team		0	0	0	0		0	0		0	
24	Technical risks	Design coordination	Separation of black/grey/white areas in relation to work procedures - coordination risk		0	0	0	0		0	0		0	
25	Technical risks	Interface management	Interface towards stock control in ware house (NOVO/Langebæk) - unforeseen problems		0	0	0	0		0	0		0	
26	Organizational and PM risks	Client stakeholders	Keeping individual Novo stakeholders in alignment with Novo project management. (i.e. Could wasting time)		25,0%	4	0	0		0	0		0	
27	Technical risks	KK4	Risk of ending up in KK4		0	0	0	0		0	0		0	
28	Technical risks	Noise	External noise level will go beyond permit limit		0	0	0	0		0	0		0	
29	Organizational and PM risks	Sustainability	Sustainability. Certified employee		0	0	0	0		0	0		0	
30	Technical risks	Ventilation system vs. process equipment	Ventilation system may influence process equipment in undesirable ways		0	0	0	0		0	0		0	
31	Organizational and PM risks	Ressources	Key project members leaves the project		0	0	0	0		0	0		0	
32	Organizational and PM risks	Schedule	Limited working hours		0	1-3 months	3	0		0	0		0	
33	External and business risks	Schedule	Site cover - unavailability		0	1-3 months	3	0		0	0		0	

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					Likelihood	converted		LxS	0	Cost	0	LxC	0			
34	Technical risks	Space for technical installations	High amount of installations in walls and ceiling near production suites - consistancy [clash?] control may be difficult to perform, since we do not know the exact positioning of outlets.		0			0	0		0	0	0			
35	Technical risks	Space for technical installations	Building height - need to change dimensions of concrete, steel, technical areas etc.			0		0	0		0	0	0			
36	Technical risks	Space for technical installations	Building height/process room sizes - heigher equipment demands or footprint from vendors than estimated by NN			0		0	0		0	0	0			
37	Technical risks	Space for technical installations	Space for CNC fire curtains or fire gates to the process rooms - this also depends on the AGV access requirements.			0		0	0		0	0	0			