OCP Ready COLO Facility Assessment	*N01 Campus*			*Oslo Internet Exchange OS-IX*			*DK01 Campus*		
Self Assessment Status:	COMPLETE-MEETS REQUIREMENTS			COMPLETE-MEETS REQUIREMENTS			COMPLETE-MEETS REQUIREMENTS		
Data Center Location Name	N01 Campus (DCM122)			OS-IX			DK01		
Data Center Location Address	N01 Campus, Stølevegen 39, Vennesla - Norway			Hans Møller Gasmanns vei 9			Guldborgsundvej 14, 6705 Esbjerg, Denmark		
Site Description: White Space Area	1300sqm Built			8600sqm			512 sqm Built- Modular design 1MW modules		
Site Description: Critical IT Power	4MW IT load infrastructure, 25MVA Site Infrastructure installed, 132kV & 110kV supplies for 100MVA			8MVA available			1 MW IT load infrastructure, 3,5MVA Site Infrastructure installed		
Site Description: Network Provider Availability	TELIA, TELENOR, Altibox, Blix, Global connect, Tampnet, TDC,Electricity link			Multiple Carriers 60+ (list available upon request)			TDC, GlobalConnect. Tampnet		
Site Description: Facility Features	Campus layout with two x security houses and Carrier Meet me rooms. Separate DC buildings with first building constructed			3 story building with seperate energy center. Onsite offices and storage.					
Site Description: Other Services	Colocation, Build to suit, powered land on remaining 3sqkm land								
Date Original Assessment is Completed	12th March 2021			12th March 2021			12th March 2021		
Re-Assessment Date:									
REQUIREMENTS - Attribute (Must have an Optimum or Acceptable result)	**Parameter**	**Result**	**Notes**	**Parameter**	**Result**	**Notes**	**Parameter**	**Result**	**Notes**
ACCESS									
Building Access	1. Loading dock with lift or leveler	Optimum		1. Loading dock with lift or leveler	Optimum	Loading bay consisting of loading dock. Accessible by truck or van. Access for Semi Trailer not possible. Trucks that are not able to deliver directly to dock level needs to be equipped with tail lift for ground delivery before goods can be transported in	1. Loading dock with lift or leveler	Optimum	
Delivery pathway, Loading dock to Goods in	1. ≥2.7m (108in) H x ≥2.4m (96in) W x ≥2.4m (96in) D unobstructed access and threshold free	Optimum		1. ≥2.7m (108in) H x ≥2.4m (96in) W x ≥2.4m (96in) D unobstructed access and threshold free	Optimum	Loading dock: Length = 8150 mm Width = 3800mm Height from ground = 1150mm Height from dock to covered area ceiling = 3500mm Door opening width from dock = 2400mm Door opening height from dock = 2500mm	1. ≥2.7m (108in) H x ≥2.4m (96in) W x ≥2.4m (96in) D unobstructed access and threshold free	Optimum	
Delivery pathway, Goods in to White space	2. ≥2.3m (90in) H x ≥.9m (36in) W with thresholds (notes required)	Acceptable	Goods lifter into white space	2. ≥2.3m (90in) H x ≥.9m (36in) W with thresholds (notes required)	Acceptable	Max 120cm corridors in certain areas. Threshold on one door for one zoned area, with mini ramp	2. ≥2.3m (90in) H x ≥.9m (36in) W unobstructed access and threshold free	Acceptable	
Corridor floor rolling load	1. ≥680kg (1500lb) (6.67kN)	Optimum	Solid floor	1. ≥680kg (1500lb) (6.67kN)	Optimum	Up to 1500 kg/m² dependant on area within the location	1. ≥680kg (1500lb) (6.67kN)	Optimum	
Unboxing/pre-staging/storage area floor uniform load	1. ≥1221kg/m2 (250lb/ft2) (11.97kN/m2)	Optimum		1. ≥1221kg/m2 (250lb/ft2) (11.97kN/m2)	Optimum	1500kg/m2	1. ≥1221kg/m2 (250lb/ft2)(11.97kn/m2)	Optimum	Floor type IV 1260 Jack load 23kN (safety factor 1,35) Divided load 18 kN/m2 default load.
Unboxing/pre-staging/storage area floor concentrated load	1. ≥680kg (1500lb) (6.67kN)	Optimum		1. ≥680kg (1500lb) (6.67kN)	Optimum	750kg	1. ≥680Kg (1500lb) (6.67kn)	Optimum	
RAMPS									
Gradient	1. Not Applicable - No Ramps Required	Optimum		2. 1:12 - 1:8	Acceptable	No Ramp option available for High Power Rack density area, racks directly on slab (build to suit)	1. Not Applicable - No Ramps Required	Optimum	
Width	1. Not Applicable - No Ramps Required	Optimum		2. ≥1.2m (48in)	Acceptable		1. Not Applicable - No Ramps Required	Optimum	
Landing area	1. Not Applicable - No Ramps Required	Optimum		1. ≥1.5m x 1.5m (60in x 60in)	Optimum		1. Not Applicable - No Ramps Required	Optimum	
Railings	1. Not Applicable - No Railings Required	Optimum		1. ≥900mm (36in) and <1000mm (40in)	Optimum		1. Not Applicable - No Railings Required	Optimum	
LIFTS / ELEVATORS									
Weight loading	2. ≥500kg (1250lbs)	Acceptable	DC on Ground floor. Lift for first floor personnel only	1. ≥1500kg (3300lbs)	Optimum	5000kg load capacity	1. ≥1500kg (3300lbs)	Optimum	
Door height	1. Not Applicable - No Lift/Elevator Required	Optimum		1. ≥2.4m (96in) Lift /Elevator door opening height (not internal cabin)	Optimum	2,6M	1. Not Applicable - No Lift/Elevator Required	Optimum	
Width	1. Not Applicable - No Lift/Elevator Required	Optimum		1. ≥1.5m (60in) Unobstructed door opening width	Optimum	2,4M	1. ≥1.5m (60in) Unobstructed door opening width	Optimum	
Depth	1. Not Applicable - No Lift/Elevator Required	Optimum		1. ≥1.5m (60in) Unobstructed cabin depth	Optimum	Lift (Inside measurements): Length = 3850 mm Width = 3700mm Height = 2990mm	1. ≥1.5m (60in) Unobstructed cabin depth	Optimum	
WHITE SPACE									
Floor rolling load	1. ≥680kg (1500lb) (6.67kN)	Optimum		1. ≥680kg (1500lb) (6.67kN)	Optimum	750kg	1. ≥680Kg (1500lb) (6.67kn)	Optimum	
Floor uniform load	1. ≥1221kg/m2 (250lb/ft2) (11.97kN/m2)	Optimum		1. ≥1221kg/m2 (250lb/ft2) (11.97kN/m2)	Optimum	1500kg/m2	1. ≥1221kg/m2 (250lb/ft2)(11.97kn/m2)	Optimum	
Floor concentrated load	1. ≥680kg (1500lb) (6.67kN)	Optimum		1. ≥680kg (1500lb) (6.67kN)	Optimum	750kg	1. ≥680kg (1500lb) (6.67kn)	Optimum	
Finished floor to ceiling height	1. ≥4.5m (180in)	Optimum		2. ≥3.1m (124in)	Acceptable	3,3M at lowest points due to cross beams	2. ≥3.1m (124in)	Acceptable	
Access floor clearance	1. ≥900mm (36in) (if used for cooling)	Optimum		1. ≥450mm (18in) (if not used for cooling)	Optimum	600mm	1. ≥900mm (36in) (if used for cooling)	Optimum	
ELECTRICAL									
Number of independent circuits to the rack	1. 2N (A+B)	Optimum	A+B	1. 2N (A+B)	Optimum	A+B	1. 2N (A+B)	Optimum	A+B
Maximum circuit capacity	1. 3ϕ 32A/230V	Optimum	400V TNS -> 3x 230V/32A	1. 3ϕ 32A/230V	Optimum	400V TNS -> 3x 230V/32A	1. 3ϕ 32A/230V	Optimum	400V TNS -> 3x 230V/32A
Circuit voltage	1. 400/230 VAC nominal	Optimum		1. 400/230 VAC nominal	Optimum		1. 400/230 VAC nominal	Optimum	
Circuit frequency	1. 47-63 Hz	Optimum	50Hz	1. 47-63 Hz	Optimum	50Hz	1. 47-63 Hz	Optimum	50Hz
Power receptacle / WIP Type	1. IEC60309 532R6W	Optimum		1. IEC60309 532R6W	Optimum		1. IEC60309 532R6W	Optimum	
Circuit receptacle location	1. Overhead	Optimum	Tap Off Box on Busbar	1. Overhead	Optimum	Tap Off Box on Busbar	2. Underfloor	Acceptable	Tap Off Box on Busbar
Upstream UPS options	2. UPS only feed available	Acceptable		2. UPS only feed available	Acceptable		2. UPS only feed available	Acceptable	
Rack-based batteries permitted	2. Not Allowed (Notes Required)	Acceptable	In a dedicated customer room then yes	2. Not Allowed (Notes Required)	Acceptable	In client dedicated hall then yes	2. Not Allowed (Notes Required)	Acceptable	Batteries are normally not permitted due to operating conditions in the WS. Some battery types requires ventilation and may be at risk in a common colocation environment. (In a shared colocation area batteries are not allowed, but in a dedicated client room they are)
Generator load acceptance time	1. <60 seconds	Optimum		1. <60 seconds	Optimum		1. <60 seconds	Optimum	
COOLING									
Rack airflow direction	1. Front to Back	Optimum		1. Front to Back	Optimum		1. Front to Back	Optimum	
Air containment methods	1. Hot aisle containment or rack chimney	Optimum	We have three DC Halls. Hall one is hot aisle containment with underfloor supply and ceiling void return to IEC Hall two is Hot Aisle Containment using inrow coolers Hall three is a combination of Hot aisle containment using inrow units and Rear Door heat exchangers	2. Hot/Cold aisle containment for all cabinets in white space	Acceptable	Multiple halls can be designed to accommodate client specific requirements	2. Hot/Cold aisle containment for all cabinets in white space	Acceptable	Cold aisle containment as standard. Underfloor supply and room return
Maximum rack density	1. ≥12kw	Optimum	Mixed Hall 1 - 10kW Hall 2 & 3 above 12kW (MAX 60kW)	2. ≥8kw	Acceptable	Option for dedicated higher density areas	1. ≥12kw	Optimum	
Minimum cold aisle width	2. ≥1200mm (48in)	Acceptable		2. ≥1200mm (48in)	Acceptable	Option for customer requirement available	2. ≥1200mm (48in)	Acceptable	
Minimum free width cold aisle (Inside cage)	1. ≥1200mm (48in)	Optimum		1. ≥1200mm (48in)	Optimum		1. ≥1200mm (48in)	Optimum	
Minimum hot aisle width	1. ≥1200mm (48in)	Optimum		1. ≥1200mm (48in)	Optimum		1. ≥1200mm (48in)	Optimum	
Inlet air conditions	1. ASHRAE Class A1 Allowable	Optimum		1. ASHRAE Class A1 Allowable	Optimum		1. ASHRAE Class A1 Allowable	Optimum	
Air quality	1. EN 779 G4 and F7 filtering & Gas particulate monitoring to the ANSI/ISA 74.04-1985 G severity levels	Optimum		1. EN 779 G4 and F7 filtering & Gas particulate monitoring to the ANSI/ISA 74.04-1985 G severity levels	Optimum		1. EN 779 G4 and F7 filtering & Gas particulate monitoring to the ANSI/ISA 74.04-1985 G severity levels	Optimum	
Temperature rise	1. ≥12 Deg C DeltaT	Optimum		1. ≥12 Deg C DeltaT	Optimum		1. ≥12 Deg C DeltaT	Optimum	
Cabinet blanking of open space	1. Mandatory	Optimum	Demand for maximum 3% air leakage outside 19" area	1. Mandatory	Optimum	Demand for maximum 3% air leakage outside 19" area	1. Mandatory	Optimum	Demand for maximum 3% air leakage outside 19" area
CABLING									
Cabling infrastructure pathways	1. Top and Front of rack fed	Optimum		2. Top and Rear of rack fed	Acceptable	Top and Front feeding possible in dedicated areas	2. Top and Rear of rack fed	Acceptable	
Overhead Network Infrastructure containment levels	2. 2 Levels (Intra-Pod cabling; Inter-Pod cabling)	Acceptable	Option for further dedicated cable raceways possible in dedicated areas	2. 2 Levels (Intra-Pod cabling; Inter-Pod cabling)	Acceptable	Option for further dedicated cable raceways possible in dedicated areas	2. 2 Levels (Intra-Pod cabling; Inter-Pod cabling)	Acceptable	Option for further dedicated cable raceways possible in dedicated areas
Fibre Type (if installed)	1. OS2 & OM4	Optimum		1. OS2 & OM4	Optimum		1. OS2 & OM4	Optimum	
Fibre connection presentation (if installed)	1. Interchangable LC Duplex and MPO	Optimum	High density fibre solution >=72pairs per U as standard	1. Interchangable LC Duplex and MPO	Optimum	High density fibre solution >=72pairs per U as standard	1. Interchangable LC Duplex and MPO	Optimum	High density fibre solution >=72pairs per U as standard
CONSIDERATIONS (For information only)	**Parameter**	**Result**	**Notes**	**Parameter**			**Parameter**		
SERVICE									
Replacement PSU Modules	2. Secure storage available	Acceptable	Replacement units/critical spares can be maintained on further agreement	2. Secure storage available	Acceptable	Replacement units/critical spares can be maintained on further agreement	2. Secure storage available	Acceptable	Replacement units/critical spares can be maintained on further agreement
Replacement BBU Modules	2. Secure storage available	Acceptable	Replacement units/critical spares can be maintained on further agreement	2. Secure storage available	Acceptable	Replacement units/critical spares can be held on further agreement	2. Secure storage available	Acceptable	Replacement units/critical spares can be maintained on further agreement
Option to monitor PSUs and BBUs	2. No	Acceptable	Service management available through partners	2. No	Acceptable	Service management available through partners	2. No	Acceptable	Service management available through partners
Remote hands for PSU and BBU replacement or expansion	1. Yes	Optimum	Onsite Remote/Smart hands services available	1. Yes	Optimum	Onsite Remote/Smart hands services available	1. Yes	Optimum	Onsite Remote/Smart hands services available
Remote hands for OCP IT hardware replacement or expansion	1. Yes	Optimum	Onsite Remote/Smart hands services available	1. Yes	Optimum	Onsite Remote/Smart hands services available	1. Yes	Optimum	Onsite Remote/Smart hands services available
EFFICIENCY									
Site Operations Standards	2. Other (Notes required)	Acceptable	EN50600-3.1 Operators certified according to CDCTP level	2. Other (Notes required)	Acceptable	EN50600-3.1 Operators certified according to CDCTP level	3. Other (Notes required)	Acceptable	EN50600-3.1. Operators certified according to CDCTP level
Site PUE Monitoring	1. Continuously monitored	Optimum	Data collection in high resolution captured on influx database	1. Continuously monitored	Optimum	Data collection in high resolution captured on influx database	2. Other (Notes required)	Acceptable	Data collection in high resolution captured on influx database
Site Design PUE	1. <1.2	Optimum	Design PuE @ 1,2	2. <1.5	Acceptable	Design PuE @ 1,3	1. <1.2	Optimum	Design PuE @ 1,2
Site Annualized PUE Current Achievement	2. Other (Notes required)	Acceptable		2. <1.5	Acceptable	1.27 in 2020	2. <1.5	Acceptable	Current measurement at 1,36
Site WUE Monitoring	2. Other (Notes required)	Acceptable	Currently not Monitored, but implementation is under consideration for datahall 1 currently utilizing IEC cooling approach	2. Other (Notes required)	Acceptable	Not Monitored	2. Other (Notes required)	Acceptable	Not Monitored
Site CUE Monitoring	2. Other (Notes required)	Acceptable	Not Monitored, but to be implemented	2. Other (Notes required)	Acceptable	Not Monitored, but to be implemented	2. Other (Notes required)	Acceptable	Not Monitored
OPENNESS									
PUE Published	2. Available upon request	Acceptable		2. Available upon request	Acceptable		2. Available upon request	Acceptable	
Facility Design Drawings & Files	2. Available to view upon request	Acceptable		2. Available to view upon request	Acceptable		2. Available to view upon request	Acceptable	