

# Find balancen i IKT kravene

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# Agenda

1. Mødet med en IKT-aftale
2. Drift og vedligehold både operationelt og strategisk
3. BIM-modellen er her – brug den!
4. Opsamling

# Mødet med en IKT aftale



bips' IKT specifikationer  
FRI/DANSKE ARKs Ydelsesbeskrivelser  
ABR89  
AB92  
Rådgiverkontrakt  
Entreprisekontrakt

*Formulering i kontrakt*

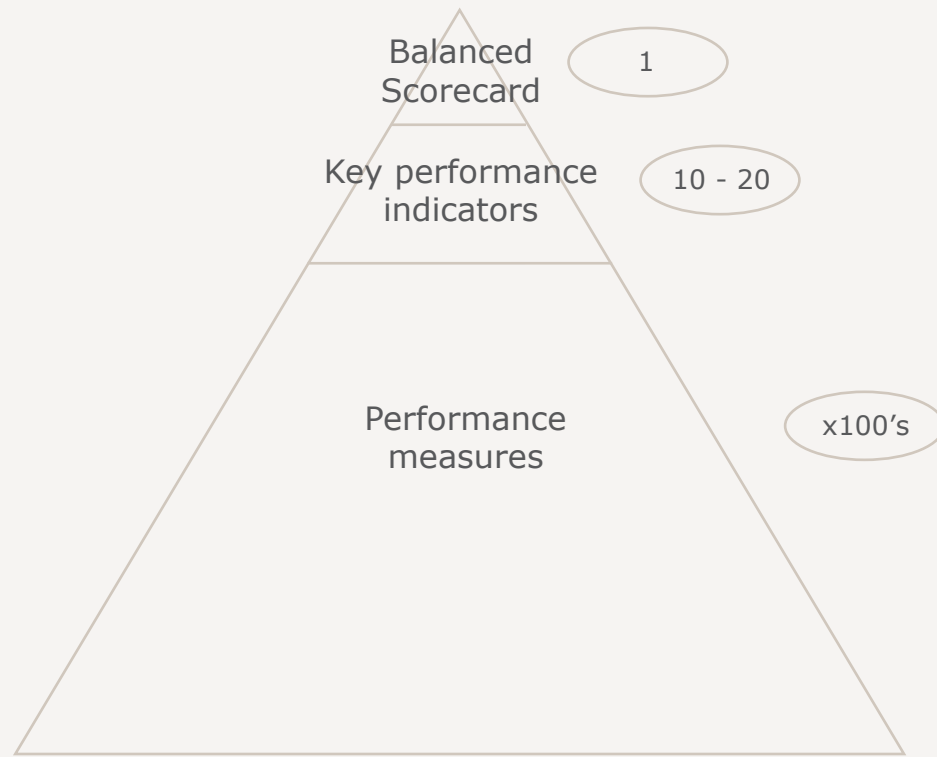
*Behovsanalyse*

*Nye muligheder  
Udnyttet potentiale*

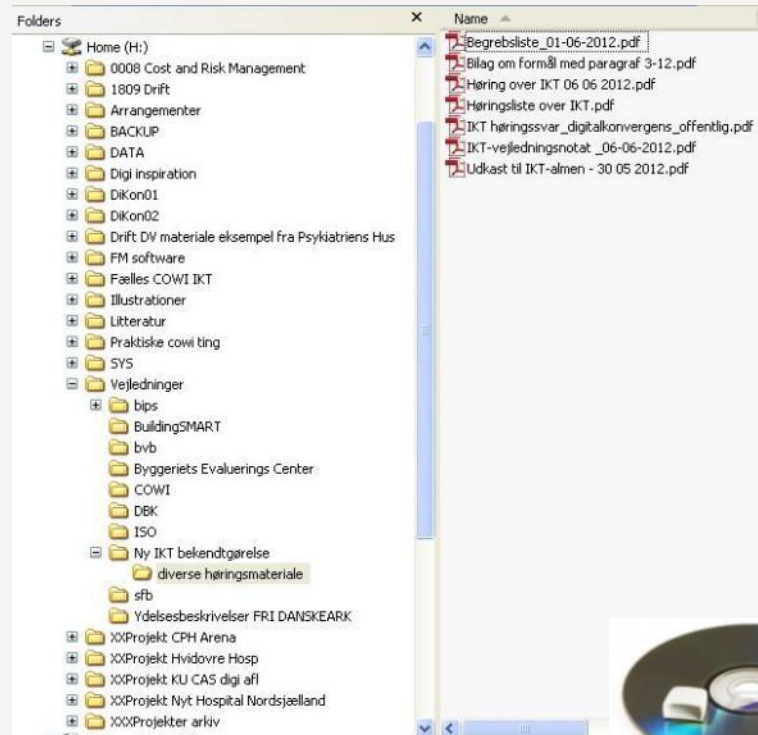
*Forbedrede arbejdsgange  
Forbedret datagrundlag og  
anvendelse heraf*

# Drift og vedligehold både operationelt og strategisk

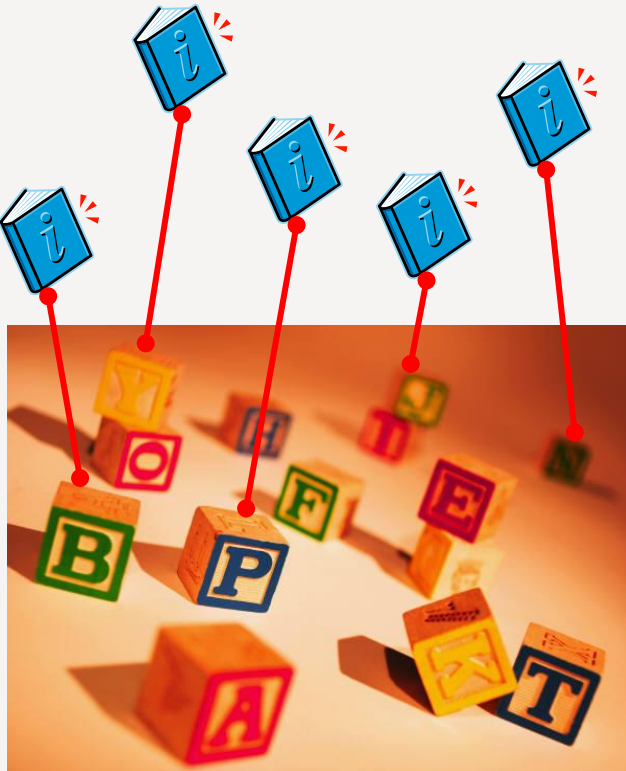
- > Operationelt:
  - > Bygningsdele, aktiviteter og en driftsplan
- > Strategisk:
  - > SLA, KPI, dashboard



# Drift og vedligehold både *operationelt* og strategisk



# Drift og vedligehold både *operationelt* og strategisk





# Drift og vedligehold både operationelt og *strategisk*

Service Level Schedules				
Service Area	Service Output	Service Level (Specific Service Levels will be agreed at each location)	Method of Monitoring	Comments
<b>Building Maintenance</b> <ul style="list-style-type: none"> <li>▪ Risk assessments</li> <li>▪ Condition surveys</li> <li>▪ Life cycle plans</li> <li>▪ Maintenance strategy</li> <li>▪ Operating procedures</li> <li>▪ Planned maintenance</li> <li>▪ Re-active maintenance</li> <li>▪ Condition monitoring</li> <li>▪ Plant and systems operation</li> <li>▪ Computerised maintenance system</li> <li>▪ Spares and consumables</li> <li>▪ Plant and equipment</li> <li>▪ Repairs and replacements</li> <li>▪ Records</li> <li>▪ Procurement support</li> <li>▪ Statutory and regulatory testing</li> </ul>	<p>The provision of a building maintenance management regime for the facility that ensures the integrity of the building fabric and structure, mechanical and electrical services, public health and utility systems, furniture and equipment. The maintenance regime will:-</p> <ul style="list-style-type: none"> <li>▪ minimise any disruption to the business caused by the building and its facilities</li> <li>▪ provide an efficient, responsive, comprehensive and effective maintenance service which is cost effective and is based on sound technical and operational requirements and standards;</li> <li>▪ ensures that all plant, equipment, systems, buildings and utility services do not cause or create any hazard to the environment and/or any person on the site or attending the property</li> </ul>	<ul style="list-style-type: none"> <li>▪ No unplanned interruptions to services during agreed operating periods for the Campus / Building</li> <li>▪ Compliance with agreed response times</li> <li>▪ Compliant with Statutory and Regulatory requirements</li> <li>▪ Compliant with X standards</li> </ul>	<p>Monthly inspection and performance reports</p> <ul style="list-style-type: none"> <li>• Up times. See Appendix x.x.</li> <li>• Actual costs of managing each facility compared to budgeted costs and number of services provided</li> <li>• Realised and documented optimization savings baselined against previous years actuals,</li> <li>• XX Tests</li> <li>• Measurable sustainability initiatives implemented and their effect relative to best practice targets</li> <li>• Customer Satisfaction score relative to previous year and best practice targets.</li> <li>• Other KPI 's in keeping with best practices and industry standards</li> </ul>	<p>See item x.x Drawings and y.y List of Equipment</p>

# Drift og vedligehold både operationelt og *strategisk*

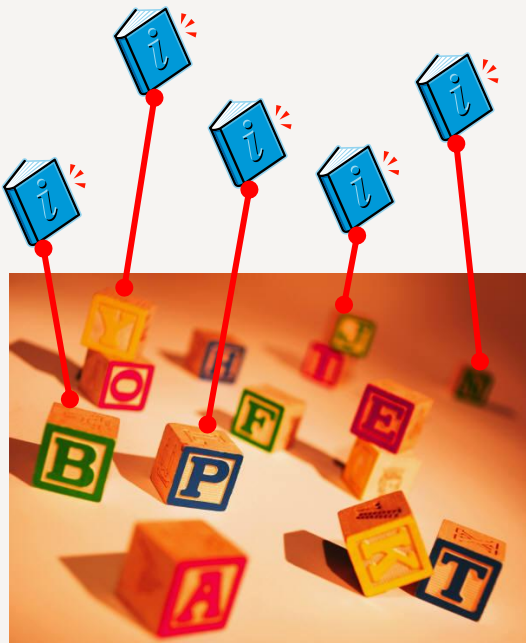




# BIM-modellen er her – brug den!

- > Statisk dokumentation
  - > as built
- > Et dynamisk værktøj
  - > Kobling til D&V aktiviteter
  - > Spacemanagement
  - > Simulering af FM scenarier
    - > Totaløkonomi
    - > Driftsvenlig design
  - > Renovering med 3D laserscanner

# BIM-modellen er her – brug den!

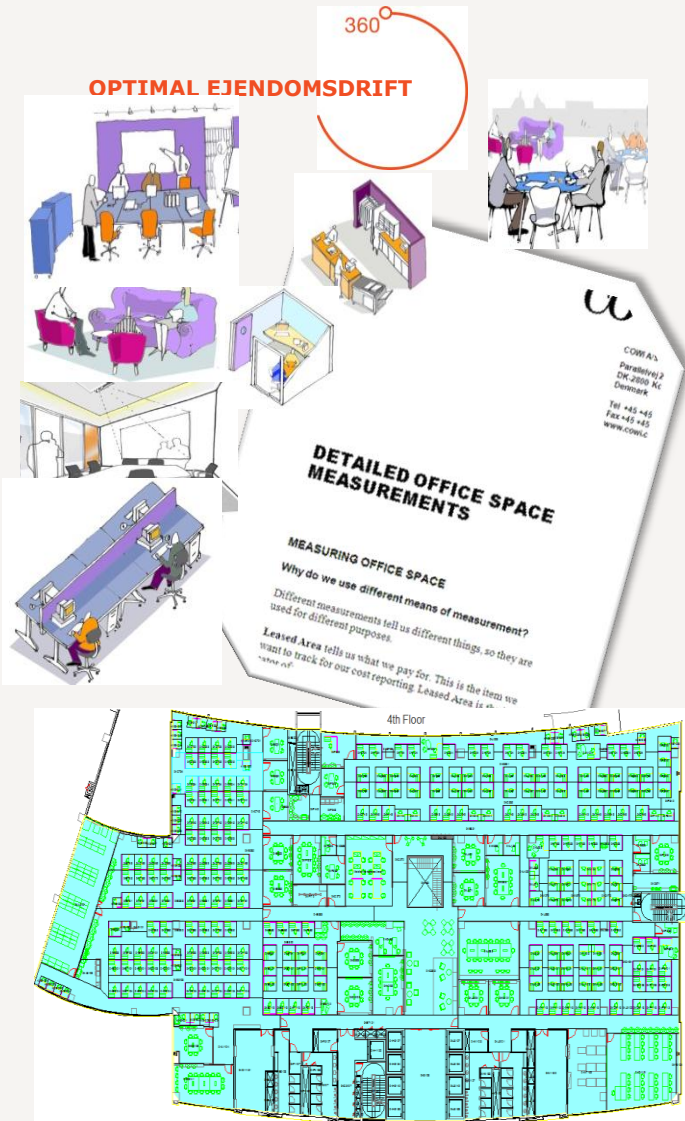


Kvæsthusprojektet



DTU Life Science & Bioengineering

# BIM-modellen er her – brug den!



TARGET: 10,6  
TARGET (MIN): 10,8

Country	BASELINE			P1			P2		
	HC	NIA (m2)	NIA/HC	HC	NIA (m2)		HC	NIA (m2)	
United Kingdom	999	8.085	8,09	548	8.085	14,8	542	8.085	14,9
United Kingdom	87	3.218	36,99	341	3.218	9,4	335	3.218	9,6
United Kingdom	898	4.003	4,46	187	4.003	21,4	185	4.003	21,6
United Kingdom	139	3.443	24,77	142	3.443	24,2	141	3.443	24,4
Germany	445	1.932	4,34	544	1.932	3,6	53	1.932	36,5
Germany	55	424	7,70	66	303	4,6	17	303	17,8
Germany	198	4.873	24,61	195	4.873	25,0	194	4.873	25,1
Germany	15	458	30,55	14	458	32,7	14	458	32,7
Hungary	788	5.553	7,05	788	5.241	6,7	430	5.241	12,2
Italy	26	438	16,85	32	438	13,7	32	438	13,7
Italy	87	1.227	14,10	86	1.227	14,3	90	1.227	13,6
Greece	77	40	0,52	8	40	5,0	8	40	5,0
Spain	135	3.225	23,89	134	2.293	17,1	133	2.293	17,2
Switzerland	22	731	33,23	22	731	33,2	22	731	33,2
Switzerland	77	297	3,86	11	297	27,0	11	297	27,0
Netherlands	13	342	26,33	13	342	26,3	13	342	26,3
Turkey	39	685	17,57	42	685	16,3	46	685	14,9
Belgium	77	1.245	16,17	46	1.245	27,1	46	1.245	27,1
Belgium	77	161	2,09	3	161	53,7	3	161	53,7
Austria	134	1.482	11,06	76	1.482	19,5	76	1.482	19,5
Czech Republic	4	145	36,25	33	570	17,3	33	571	17,3

# BIM-modellen er her – brug den!

1 Driftsomkostninger - overslag		
2	Hospital Nordsjælland	Driftsstart 2020
3		Benchmark
4	<b>VEDLIGEHOOLD</b>	PRIS PR. ÅR
5	<b>Vedligehold</b>	V & S Prisdata 2011/12 priser
6	Terræn, akut + planlagt	2.400.000
7	Udv, akut + planlagt	3.840.000
8	Indv, akut + planlagt	4.680.000
9	Installationer, akut + planlagt	16.440.000
10	I alt	<b>27.360.000</b>
11	<b>Opvarmning af bygninger og brugsvand</b>	
12	Varme	9.480.000
13	El	14.040.000
14	Brugsvand	4.440.000
15	<b>Afløb</b>	<b>16.680.000</b>
16	Renovation, stordrift høj belastning	1.440.000
17	I alt	<b>46.080.000</b>
18	<b>Renhold, terræn og udvendig bygning</b>	
19	Kontrol, rydning, grusning af sne	636.000
20	Renhold af bevoksning, parkpræg	360.000
21	Renhold af belægninger	3.120.000
22	Vinduespolering, indvendigt	1.800.000
23	Vinduespolering, udvendigt	1.598.400
24	I alt	<b>7.514.400</b>
25	<b>Renhold indvendig bygning</b>	
26	Rengøring, sygehuse 356 d/år, middel kvalitet	42.000.000
27	I alt	<b>42.000.000</b>
28	<b>Kommunikation</b>	
29	Telefon	15.000
30	Kabeltv	4.000

	ACT P1	ACT P2	ACT P	LE P4 20	LE P5	LE P6	LE P7 20	LE P8	LE P9	LE P10 2	LE P11
	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR
Rents & Leases											
Rents Premises Ext				9.000	9.000	9.000	9.000	9.000	9.000	9.000	9.000
Amortization & Depr				9.000	9.000	9.000	9.000	9.000	9.000	9.000	9.000
Depr. for Planning				700	700	700	700	700	700	700	700
External Admin. Serv				700	700	700	700	700	700	700	700
Consultants	-556	9.254	551	700	700	700	700	700	700	700	700
Other Services				700	700	700	700	700	700	700	700
Maintenance & Repair	-556	9.254	551	700	700	700	700	700	700	700	700
Real Estate Repair	-528	11.062	1.519	7.093	887	443	7.093	887	443	7.093	887
Park & Grds Main				6.472	1.419	443	7.093	887	443	7.093	887
Cleaning											
Security	-528	887	890	887	887	887	5.142	1.419	1.419	7.093	887
Electricity and Gas		1.877	517	887	887	887	887	887	887	887	887
Mach&Equip, Rep&Main		2.948	112	798	532	532	798	532	532	798	532
Rents & Leases		2.718		2.128			2.128			2.128	
Rents Premises Ext	26.409	26.543	24.269	21.190	21.190	21.190	1.330			2.128	532
Other Indirect Costs	26.409	26.543	24.269	21.190	21.190	21.190				1.773	
VAT Non Recov (tun)	545	177	0				21.190	21.190	29.170	21.190	21.190
Amortization & Depr	545	177	0				21.190	21.190	29.170	21.190	21.190
Depr. for Planning	2.575	2.012	689	1.057	898	850				21.190	21.190
Depr Oth Mach, Equip											
Rent Inc rent RE ext	2.575	2.012	689	266	266	995	850	850	995	850	850
Office Expenses				791	633	584	266	266	266	266	266
Postal Courier Serv			-1.466				730	584	584	730	584
External Admin. Serv											
Legal Counsel Fees		3.450	500								
Consultants		3.450	0	10.034							
Banking Services				3.004							
Other Services				5.049							
Maintenance & Repair			500								
Cleaning	77	77	388	1.981							
					639	639	639	639	639	639	639
					639	639	639	639	639	639	639



# BIM-modellen er her – brug den!



Horsens Statsfængsel

# Opsamling

## 1. Mødet med en IKT-aftale

- > Afklar dine behov
- > Kom tidligt på banen

## 2. Drift og vedligehold både operationelt og strategisk

- > Fokus på datastruktur og relevans af data
- > Need to have: bygningsdele, aktiviteter og en driftsplan
- > Mål performance

## 3. BIM-modellen er her – brug den!

- > Intuitiv repræsentation af sin ejendom
- > Pladsudnyttelse
- > Estimeret driftsbudget
- > Kommunikationsværktøj ifbm. driftsvenligt design
- > Også interessant ved til- og ombygninger