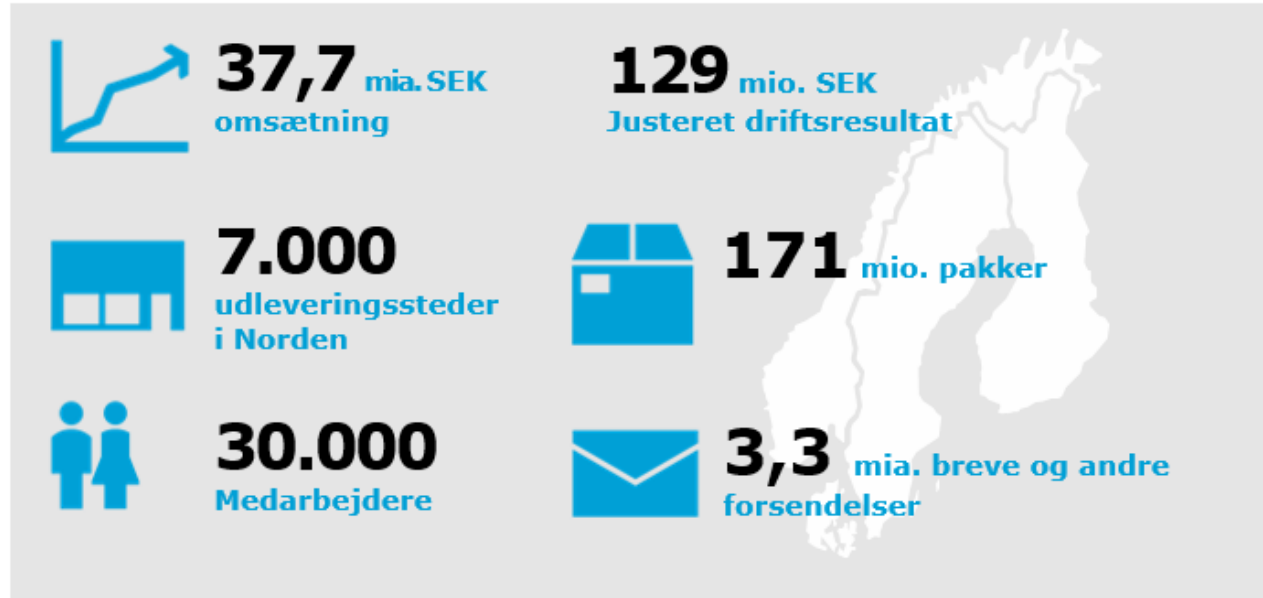


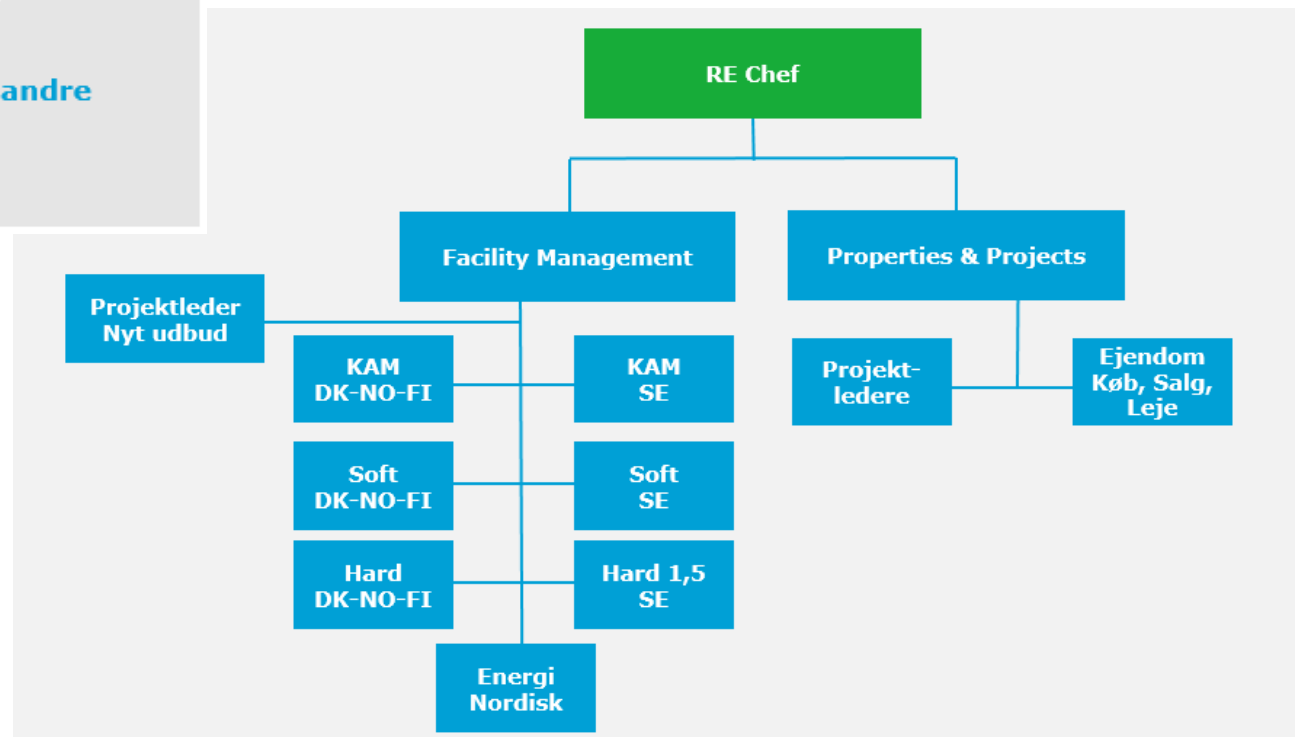


Fordele ved  
sensor teknologi  
i kontormiljø

# PostNord kort fortalt



- 30.000 ansatte
- 500 ejendomme
- 8 ansatte i FM's nordiske team
- 4 lande
- 1 Integreret Facility Management kontrakt





postnord

## ABOUT

- PostNord is the leading supplier of communication and logistics solutions to, from and within the Nordic region. Active in the Nordic countries and has more than 30.000 employees
- PostNord has within the last few years modernized and implemented activity based workplaces in their two main office buildings with a total of 18.000 m2
- 1500 employees and visitors are in the two buildings on an average day.

## CHALLENGE

- Staff in specific home bases complains about work space availability.
- Estimation of workplace needs based on calculated ratios is insufficient.
- Lack of project rooms and meeting rooms are booked and misused as workplaces.
- Detailed occupancy data is needed to make informed decisions on work space allocation and to provide the right mix of space types for the future

## SOLUTION

- Installation of 624 wireless sensors in H.88 - under every desk, in meeting rooms and 36 door sensors for toilet rooms.
- Capture real time occupancy data and getting insights into space usage trends. Data analysis and consultancy by supplier experts on adhoc level
- Change of the clean desk rule from two to one hour.
- Experiences from the H.88 installations are used to evaluate if a Arken roll out is beneficial.

## RESULT (EXPECTED)

- Identification of home bases where the ABW concept needs repetition
- Reliable insights into space usage trends and evaluate / optimize the space mix.
- More efficient use of the office facilities available i.e. by moving more people to H.88 and resign unnecessary m2 . Approx. 20% of office space has been resigned including significant saving.
- Valuable insights into IoT tool usage, which can be used to optimize existing and new PostNords HQ.

# Traditional tilgang

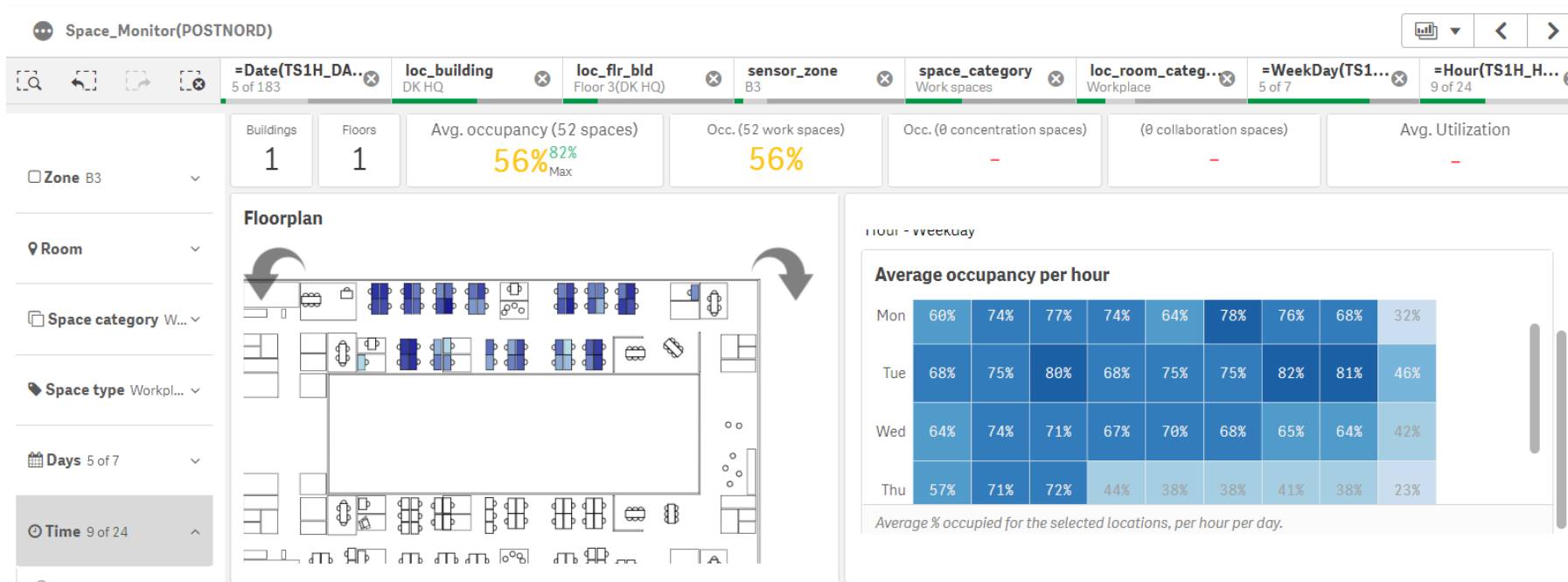
- Manuelle optællinger / opgørelser af arbejdsplads belastninger 2 gange om året (10 optællinger, 2 gange om dagen over en arbejdsuge)
- August – arbejdspladsbehov defineres for efterfølgende år – behov indgår som omkostningsfordeling i budgetterne
- Arbejdspladserne fordeles efter det forventede behov

Homebase	Stuen		1. sal		2. sal				3. sal				Total
	CO	CO Bib	A1	C1	A2	B2	C2	D2	A3	B3	C3	D3	
Tidspunkt \ Antal arbejdspladser	22	8	46	51	53	50	42	56	50	48	48	50	524
DD.MM.2019 FM													0
21.01 10.00	13	7	12	12	16	ANTAL MEDARBEJDERE I HOMEBASE / AFD.							
21.01 13.30	11	6	14	14	22	A3 48 Antal arbejdspladser i homebase							
xx													
22.01 10.00	12	9	14	8	21	Fix	1	10	7	11	7		7
22.01 13.30	12	5	17	8	20	Mix	2	1	1	1	1		1
xx						Flex	0	0	0	0	0		0
23.01 10.00	16	7	17	10	21	Sum u ratio	3	11	8	12	8		8
23.01 13.30	16	12	15	9	23	sum med ratio	2,4	10,7	7,7	11,7	7,7		7,7
xx						A2 53 Antal arbejdspladser i homebase							
24.01 10.00	10	9	14	12	18	Fix	29	4	14				
24.01 13.30	13	8	12	16	19	Mix	7	0	5				
xx						Flex	4	0	4				
25.01 10.00	15	11	16	14	21	Sum u ratio	40	4	23				
25.01 13.30	14	12	17	16	21	sum med ratio	35,9	4	19,5				
xx						6	16	13	15	31	4	12	
xx													0
Gennemsnit 30 målinger	13,2	8,6	14,8	11,9	20,2	6,1	16	14,1	12,3	28,6	5,4	15,5	166,7

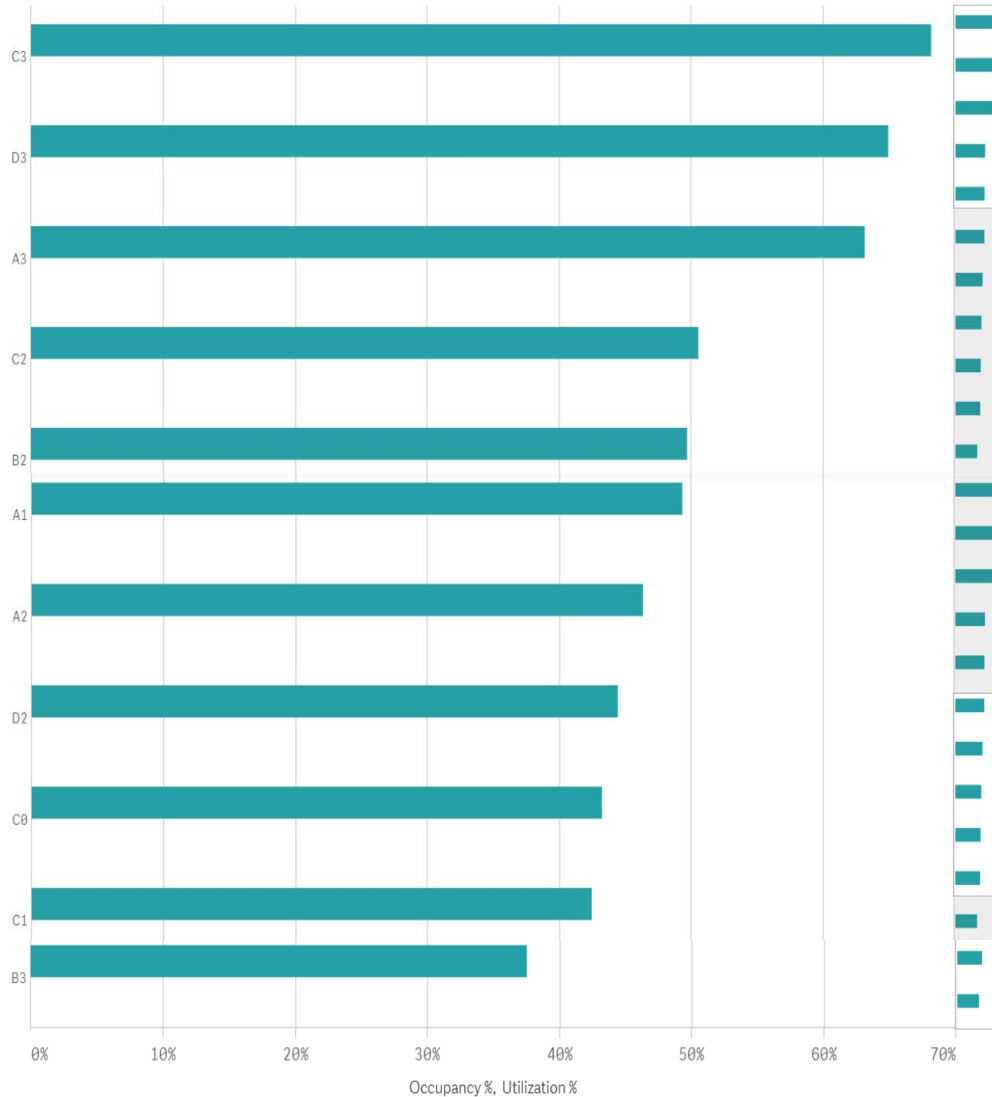
- Juli 2018:
  - Site visit hos en sensor leverandørs kunde
- September 2018
  - Installation af sensorer under 51 skriveborde, 3 mødelokaler og 3 toiletrum (i HQ Arken, Solna)
- Test periode:
  - Fra september 2018- Januar 2019



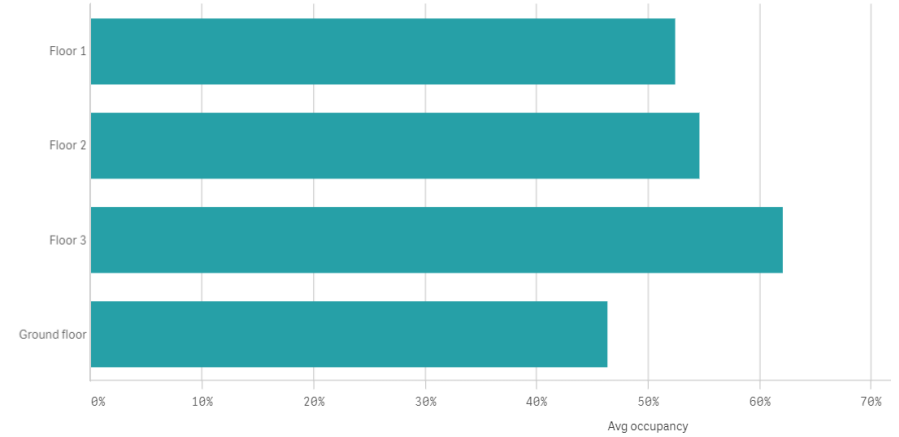
- Juli – August 2019:
  - Installation af 624 sensorer under alle skriveborde, mødelokaler og toiletrum (Kontor i København)



# Fakta: Belastning pr homebas / etage



**Data for H.88:**  
9/9 2019 – 11/10 2019  
Mandag-fredag 08:00-17:00  
Arbejdspladser i alle homebases

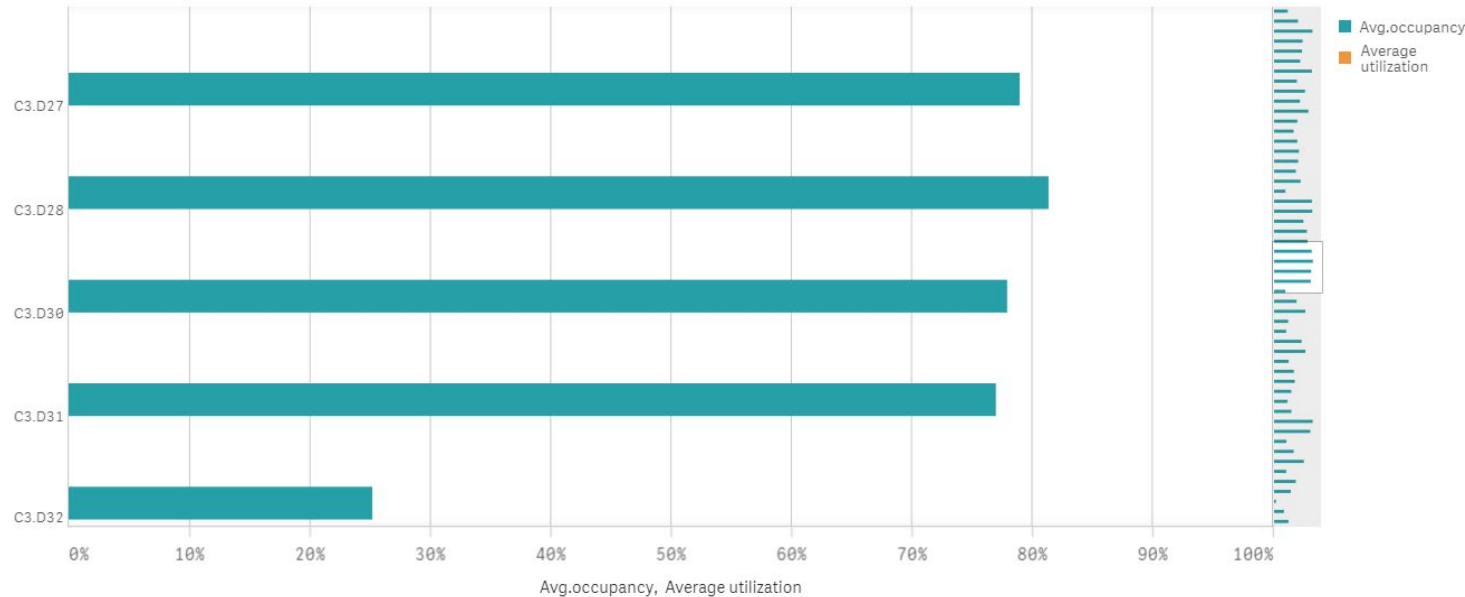
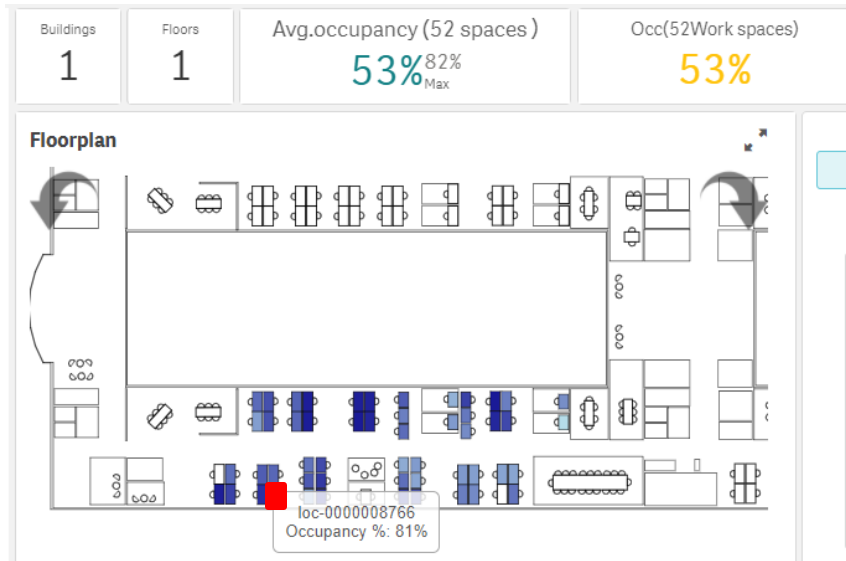


# Data - skriveborde

## Average occupancy per hour

	08 AM	09 AM	10 AM	11 AM	12 PM	01 PM	02 PM	03 PM
Mon	92%	100%	96%	92%	96%	75%	92%	79%
Tue	88%	92%	96%	75%	96%	75%	79%	75%
Wed	79%	88%	83%	83%	71%	38%	79%	71%

Average % occupied for the selected locations, per hour per day.



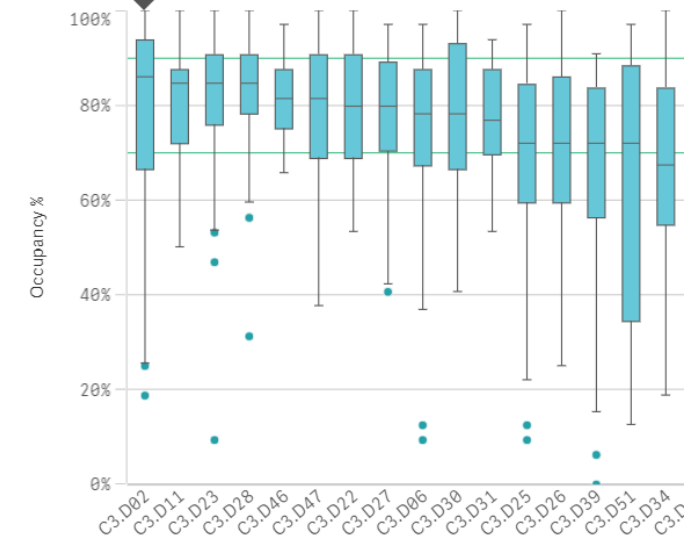
space\_Monitor(POSTNORD)

Filters: =WeekDay(TS1... 5 of 7, =Hour(TS1H\_H... 8 of 24, Language english

C3.D02 - Occupancy %

- Location: Zone
- Third quartile: 94%
- Median: 86%
- First quartile: 66%
- Box start - 1.5 IQR: 25%

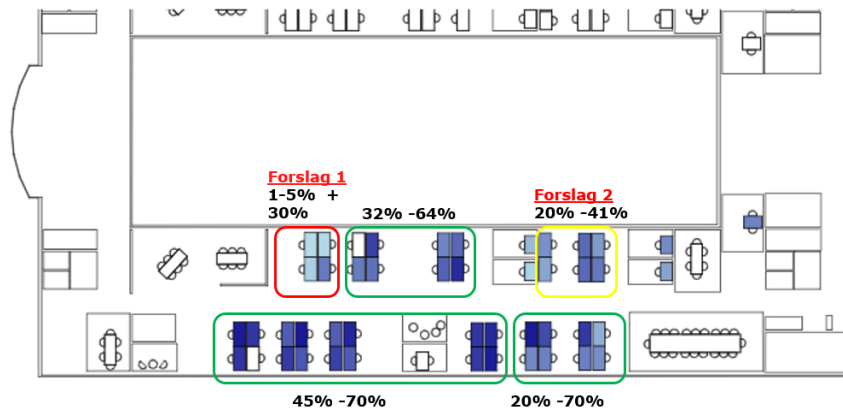
Buttons: Individual spaces, Weekday





# C2 Anvendelse af skriveborde

(på enkeltbord niveau)

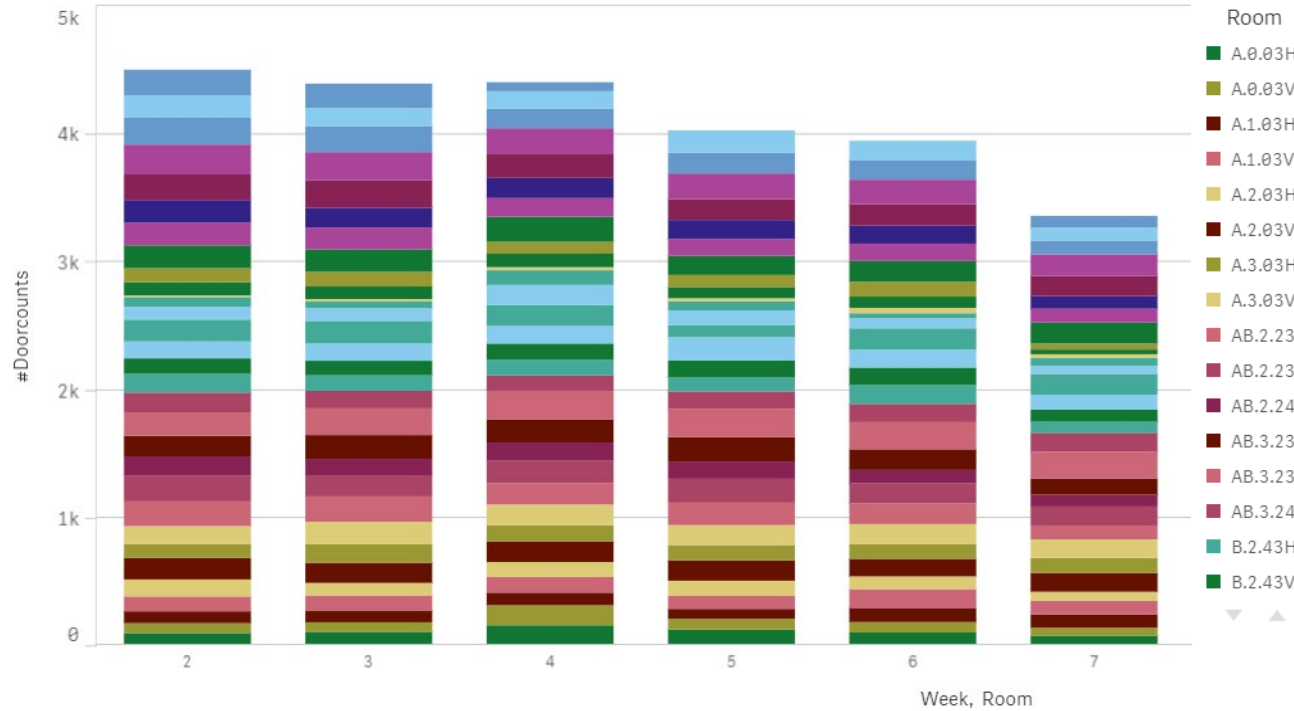


Kilde: Data fra censorer  
9/9 2019 - 18/10 2019  
Mandag-fredag 08:00-17:00  
Arbejdspladser i homebase D2



# Data - toiletter

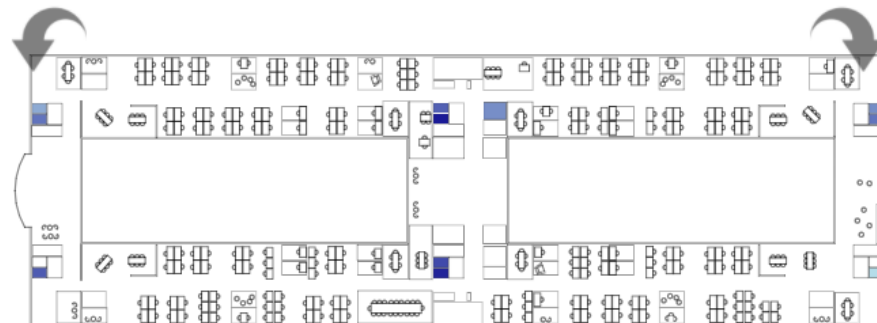
Week & room



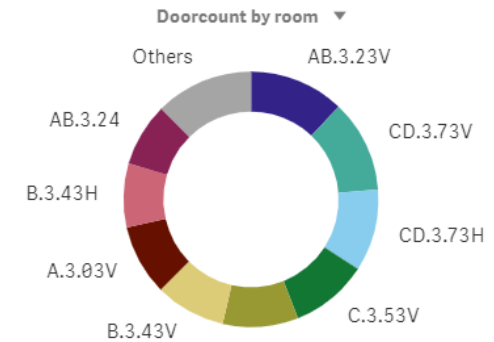
Doorcount by hour/weekday

	8	9	10	11	12	13	14	15	16
Mon	380	534	645	702	697	612	660	619	394
Tue	389	517	611	676	659	627	617	621	419
Wed	339	493	619	659	691	595	582	591	385
Thu	366	449	612	660	640	573	612	604	407
Fri	344	420	555	526	599	545	613	473	227

Floorplan



By room



- Økonomi: Delopsigelse af lejekontrakt (Okt. 2019)  
Kort tilbagebetalingstid (husleje, drift, møbler)
- Værktøj: Space management opgaven bliver faktuel baseret  
Adgang til historiske og on-line data  
Nemt at skabe space management løsningsforslag
- Diskussioner: Fra følelser / opfattelser til fakta
- Beslutninger: Kombinationen af ledelsesviden og belastningsfakta  
skaber stærkt fundament for beslutninger  
Risici i beslutninger minimeres pga. data

- Hvorfor skulle i arbejde med sensorer
  - Hvilke benefits forventer i at opnå
  - Hvem skal arbejde med data fra systemet
  - Kan i løse jeres udfordringer uden sensorer
- 
- Uden activity based workplaces / flexible seating, kan ansatte og andre interessenter med rette opfatte sensorer som et overvågningsværktøj.
- 
- Sensorer løser ikke alle jeres space management problemer
    - De angiver ikke årsager
    - De kender ikke fremtiden
    - De tager ingen beslutninger
- 
- Hvornår er de brugbare
    - I en eksisterende ejendom
    - Inden i skal flytte til en ny ejendom
- 
- Vil jeg anbefale jer at arbejde med sensor-teknologi i kontormiljø?

