



herningvand
Nye veje for vandet

KOMMENTAR TIL OPLÆG FRA JONS 29-05-2019

Den vigtigste pointe er, at du har 20 minutter og du får ikke lov til at gå over tid – der bliver sagt tak for nu, når tiden er gået, også selvom du ikke er færdig. Jeg er bange for, at du får meget travlt, hvis du skal nå igennem 28 slides. Jeg vil sige, at halvdelen er tilstrækkeligt. Jeg kommer med nogle forslag til de slides, der bedst kan udelades for at forkorte dit indlæg.

- Der er mange gode historier at fortælle fra Herning. Det overordnede indtryk af din præsentation er, at der kan skæres et par væk – sådan du giver dig selv mulighed for at formidle få udvalgte historier helt skarpt.
- Det er altid godt med fakta, og der er en god mængde tal fra resultater, som giver et godt indtryk.
- SWOT-analysen er god – et godt råd fra en med praktisk erfaring er at samle de fire slides om SWOT til ét for at spare tid.
- Slide 10 er meget fint med billede, men publikum er ikke målgruppe for info om hardware – de sidder ikke med den slags beslutninger til daglig, så den del bør måske tages ud.
- Slide 11-14 – hvis du vil slanke oplægget, så du er sikker på at nå igennem uden hastværk, ville et forslag herfra være, at tage disse fire slides ud.
- Slide 16-18 er super gode, men måske slide 18 er nok? Det der virker bedst på præsentationer er fakta. Det er svært at læse en graf uden megen kontekst, hvilket tager tid at skabe.
- Slide 19-21 er også super gode og vigtige, men der er også mange historier at fortælle. Du skal måske overveje at tynde ud i fakta og tal, så du ikke overvælder publikum med information.
- Slide 23 er rigtig godt og vigtigt!
- Slide 24 skal du bruge meget tid på at forklare for at det bliver forståeligt, tag det evt. ud.
- Det kunne være en super måde at afslutte din præsentation på, hvis du som det sidste giver publikum 3 enkle og nemt forklarlige pointer, de kan tage med sig fra dit oplæg.

Til sidst også et forslag – start et minutur og øv dig foran spejlet, se hvor lang tid du tager om oplægget og om der er tid til spørgsmål.



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SMART WATER METERS

**OUR JOURNEY FROM PAPER TO
HOURLY DATA FROM 18.000
SMART METERS**

DEN 18. JUNI 2019

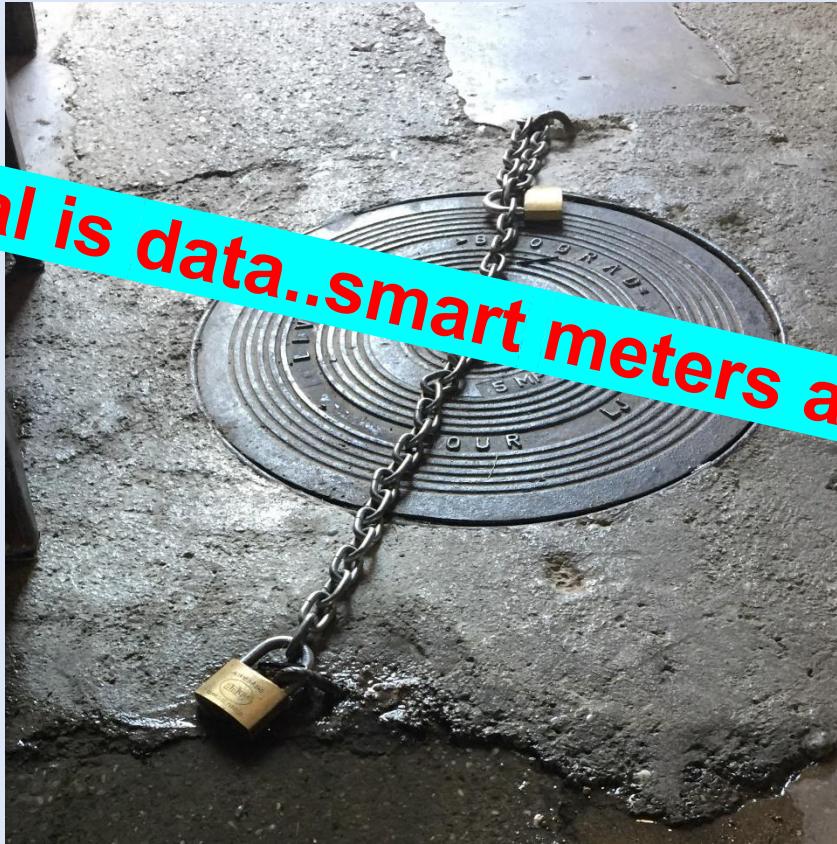
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DATA IS REALLY WORTH A LOT

- THATS WHY WE NEEDED SMART METERS



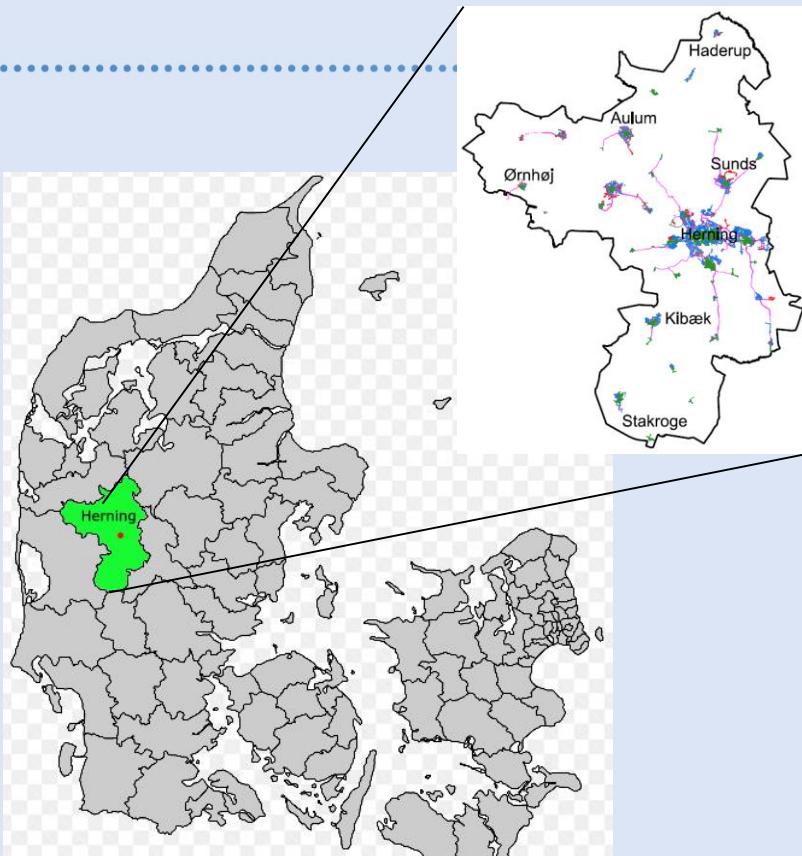
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When the goal is data..smart meters are the means..

HERNING WATER

- WHO IS THAT ?



Approx 90.000 people 1.320 km²



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- **Waste water:**
 - 15. million m³ / year (90.000 people)
 - 1.500 km sewer network
- **Water supply:**
 - 3 mio. m³/year (66.000 people)
 - 800 km network
 - 18.000 consumers / meters
- **Strategic effort:**
 - *Digitalisation*
 - *Asset Management*
 - *Proactive Customer Service*

OUR JOURNEY

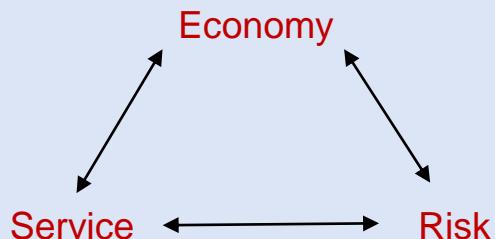
- THAT'S WHY WE NEEDED SMART METERS



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We needed a much better:

- Survey of the operation (energy and water loss)
- Input to the risk control (pipe rupture and water loss)
- Input for the investment planning
- And more exact settlement basis (scrutinize the consumer base)



"The Captain on the bridge"

OUR JOURNEY

- THAT'S WHY WE NEEDED SMART METERS



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We also wanted to:

- Increase our costumer service significantly
- Reduce losses on debtors/-customers
- Reduce costs for “shot down” and “follow up” cases

We had:

- Great series of mechanical meters not complying
- A positive business case



“The Captain on the bridge”

SMART WATER METERS

- SWOT / CONSIDERATIONS



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S

Strengths

- Correct readings
- Improvement of billing
- Lower starting flow = greater earnings
- Pollution localization
- Fewer mistakes

W

Weaknesses

O

Opportunities

T

Threats

SMART WATER METERS

- SWOT / CONSIDERATIONS



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Weaknesses

- It is not free
- Some meters will not be written off

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SMART WATER METERS

- SWOT / CONSIDERATIONS



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Opportunities

- Better customer service
- Better consumption monitoring
 - Less distribution loss
- Leakage surveillance incl. discount
- More earning opportunities

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Threats

SMART WATER METERS

- SWOT / CONSIDERATIONS



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Threats

- Increased costs due to "hardware" - network
- Infrastructure larger than expected
- The technology outpaces the lifetime of the project

THE SYSTEM/THE NETWORK

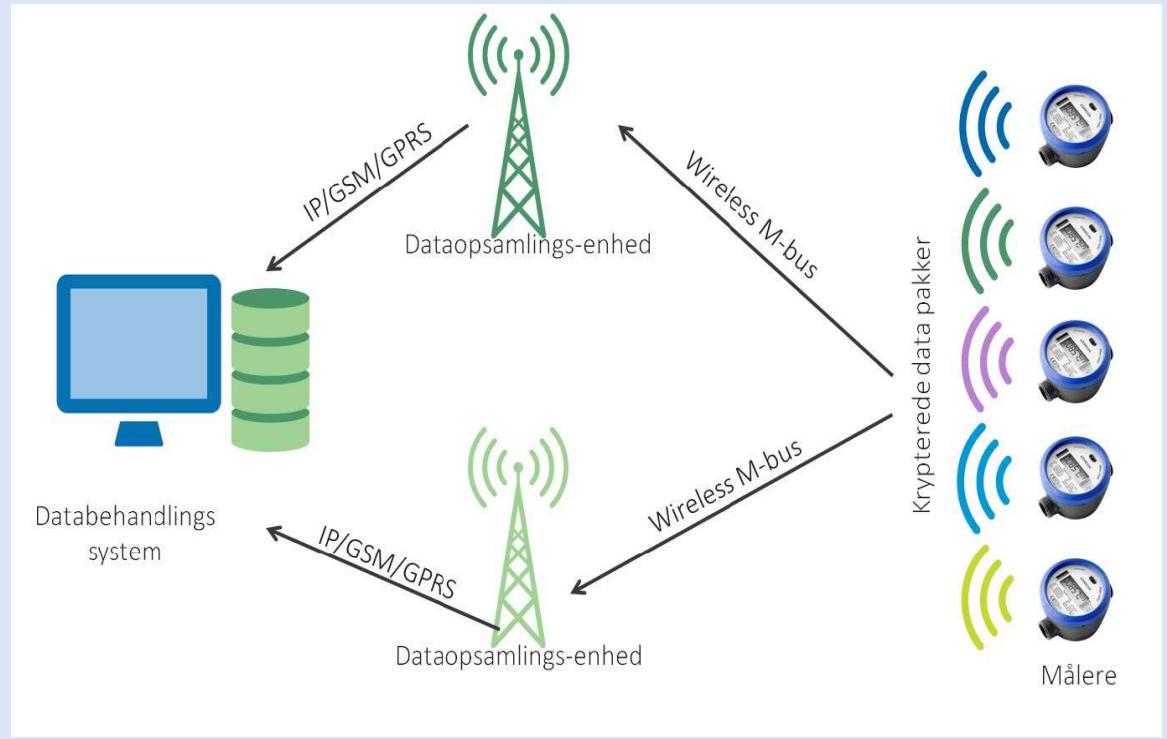
- THE DATA TRANSMISSION



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Hard ware and data:

- Antenna masts
- 106 Flagpoles
- 70 Concentrators
- 380 Repeaters
- Hosting at Kamstrup
- Data processing in Kamstrup's READY
- HV's billing system
- Customer interface



SMART WATER METERS

- THE ROLL OUT PARTNERS



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Project Management

- Herning Water

P & P

- Consultant, tender and contract

SMART WATER METERS

- THE ROLL OUT PARTNERS



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Project Management

- Herning Water

P & P

- Consultant, tender and contract

Kamstrup

- Meters
- Antennes and network
- Hosting of data (READY)

SMART WATER METERS

- THE ROLL OUT PARTNERS



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Project Management

- Herning Water

P & P

- Consultant, tender and contract

Kamstrup

- Meters
- Antennes and network
- Hosting of data (READY)

Booking Company

- Route planning and Costumer contact

Plumbing Company

- Replace Meters

SMART WATER METERS

- THE ROLL OUT PARTNERS



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Project Management

- Herning Water

P & P

- Consultant, tender and contract

Kamstrup

- Meters
- Antennes and network
- Hosting of data (READY)

Booking Company

- Route planning and Costumer contact

Plumbing Company

- Replace Meters

Communication Company

- Folder, Web, Facebook etc.



E & V

- Eksport og import of data to billing system

SMART WATER METERS

- THE ROLL OUT SCHEDULE



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Implementation

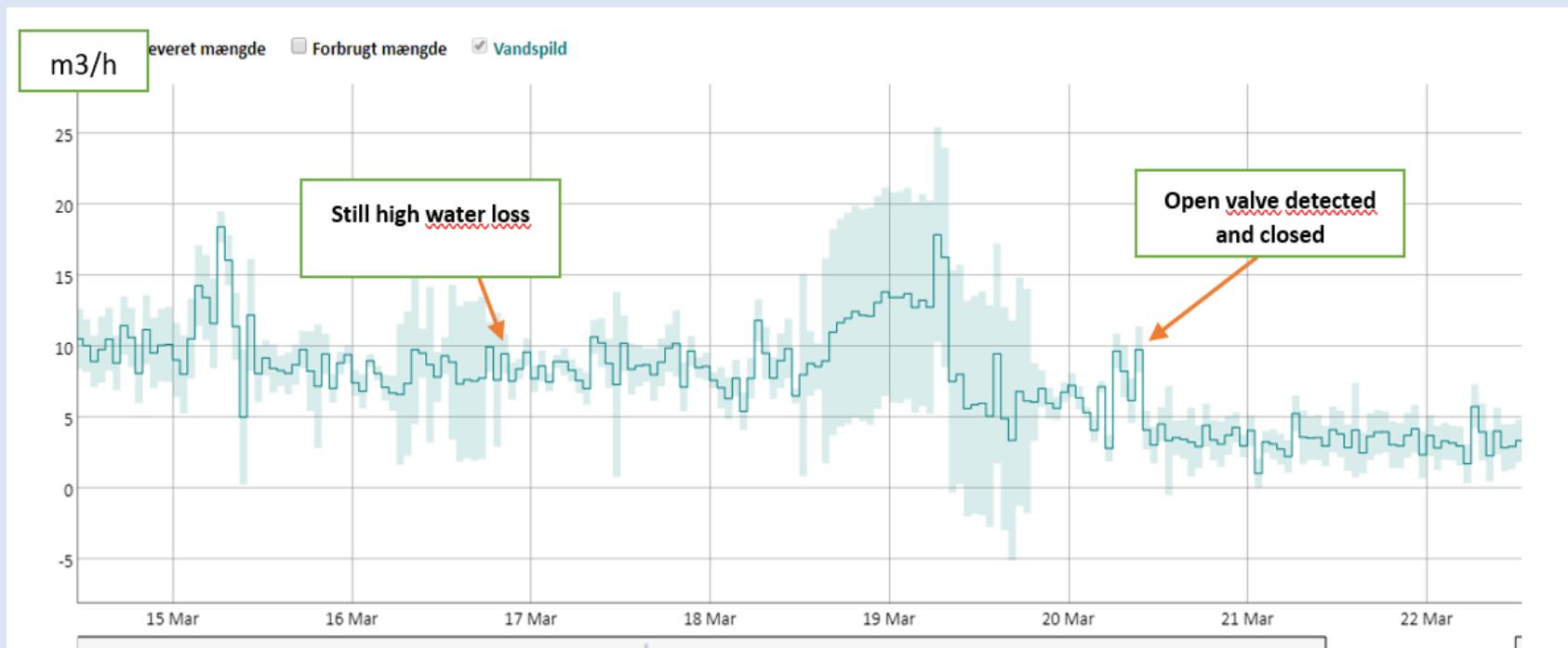
- **Hvor langt tid:**
- **installation...**
- **Optimering....**

SMART WATER METERS

- THE RESULTS



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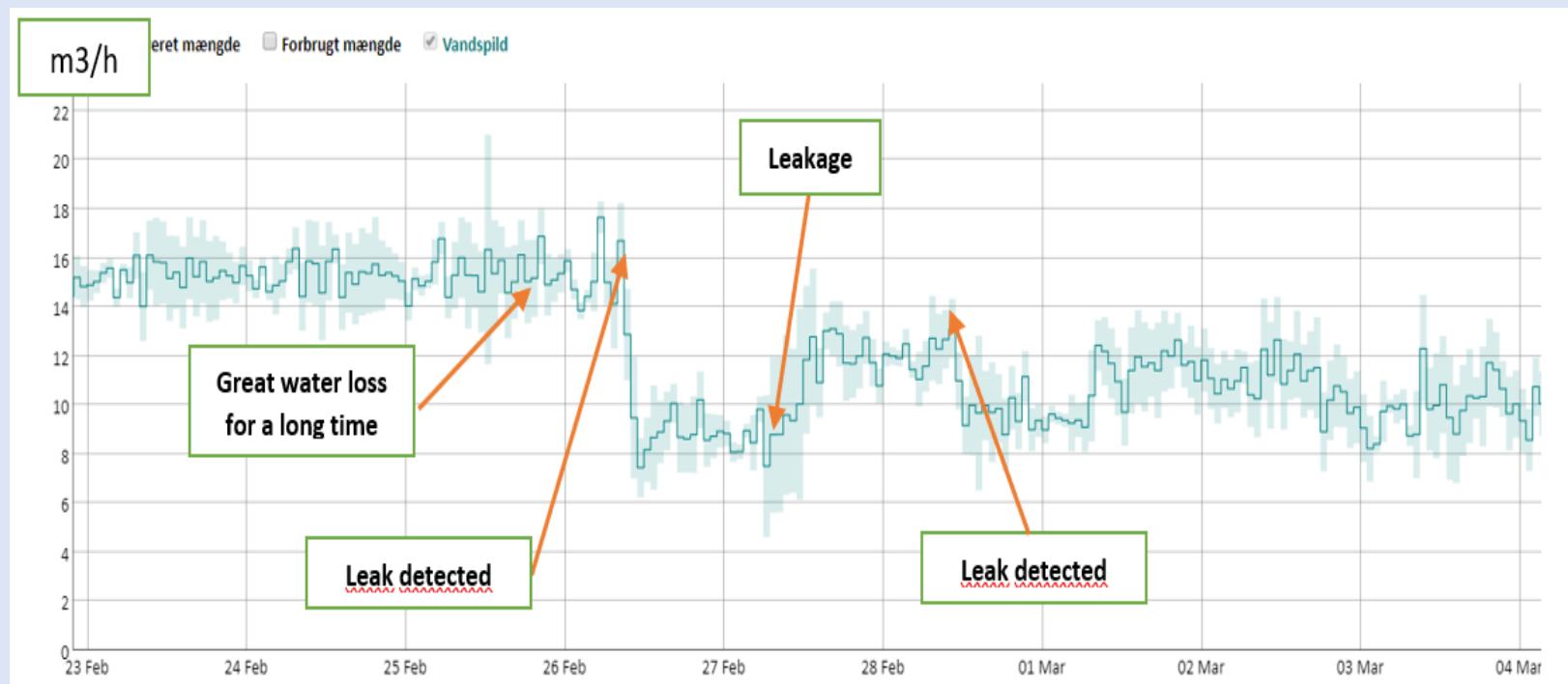


SMART WATER METERS

- THE RESULTS



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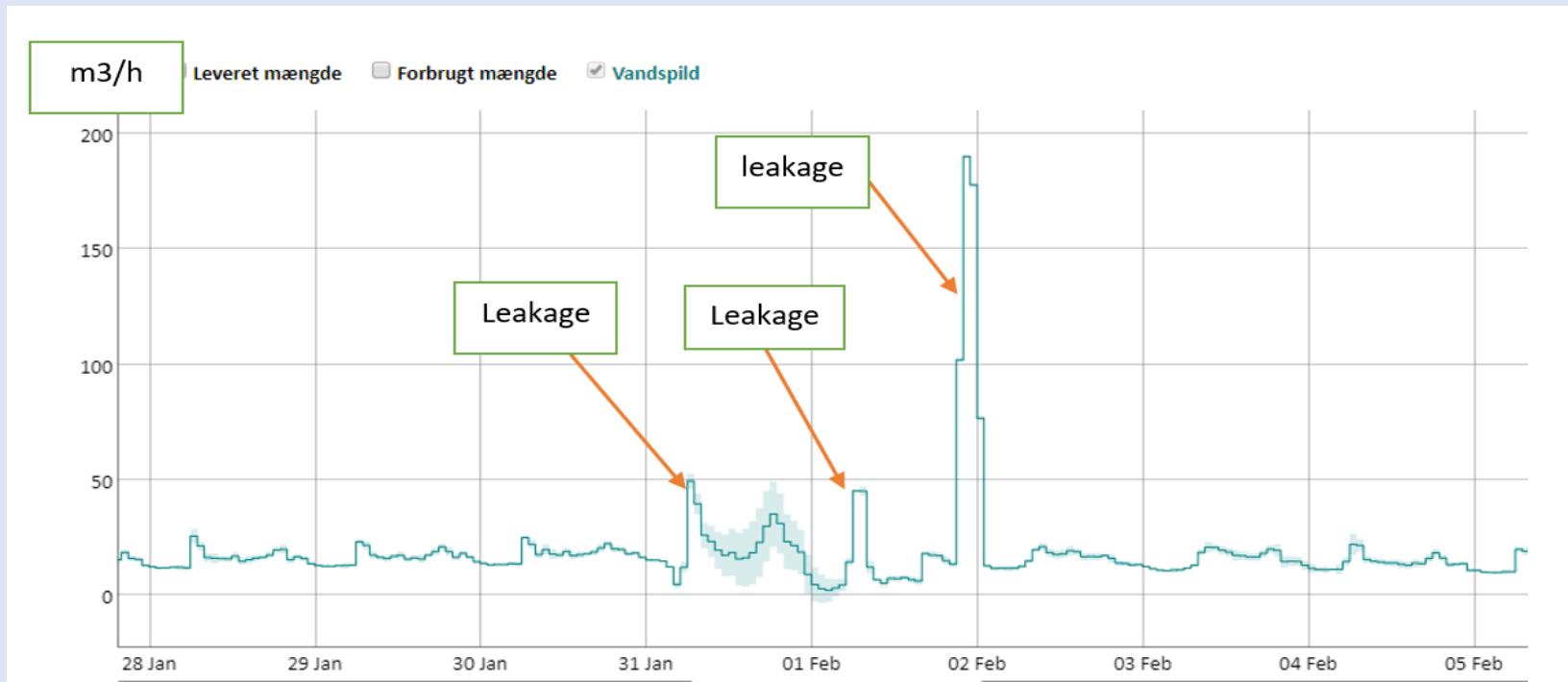


SMART WATER METERS

- THE RESULTS



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Leakage has been reduced by 12,5 % the first year.....

SMART WATER METERS

- THE RESULTS



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Technical: After just 12 month of operation

- Monitoring of our water balance by software has increased significantly
- The leakage verified (data now trustworthy)
- Leaking areas (two) identified within the first year (two areas with a 40 leakage %)
- Leakage effort can be optimized (*"We take the pile and leave the dust"*)

SMART WATER METERS

- THE RESULTS



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Technical: After just 12 month of operation

- Two one-way valve failure identified, approx. 20 %
- Tamper is revealed immediately
- Energy loss of x percentage identified KRY??
- Alarms for back flow, tamper, dry and temperature: 5 – 10 a day

SMART WATER METERS

- THE RESULTS



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Administrative: After just 12 month og operation

- Cleaning up our customer database
- Bad payers: Cut off valves approx. 1.800 sites (1 %)
- Owners / renters clean up approx. 2 % of sites

Billings streamlined significantly:

- No manual reading of meters = significantly savings
- Yearly settlements and settlements at customer moving's

Annual administrative savings: 4,7 % of the investment

SMART WATER METERS

- THE RESULTS



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Costumer service: *After just 12 month of operation*

- Sending daily/monthly consumer reports (with right data) to signed up companies (40 % of customers measured by consumption, m³)
- Daily, monthly billing now an option
- On line customer access to hourly correct readings
- Signing in and off to self defined alarms
- Approx. 25 alarms every day (burst, leakage)
- Temperature alarms: Indicate risk of frost damage

SMART WATER METERS

- THE RESULTS



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The business case:

Investment (18.000 smart meters) 3,94 million EUR

One time savings 143,000 EUR

Yearly administrative + technical savings 315,000 EUR

Payback time (16 year lifetime): 8.1 year

Plus: Lifetime costumer savings 458,000 EUR

An alternative investment: (mechanical meters) 2,64 million EUR

SMART WATER METERS

- THE FUTURE AND THE PERSPECTIVES



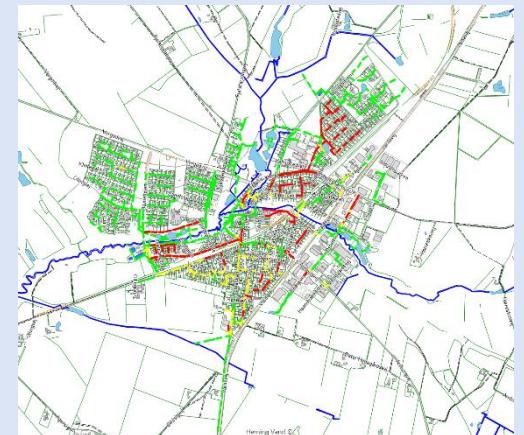
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Energy optimisation

- Optimize of the operation of plant and network (SRO)
(Flow / pressure and consumption pattern)

Operation and design

- Leakage, monitoring and tracking (temperature and flow)
- Support renovation planning, significantly
- Future network structure (planning)
- Pollution (spreading -> action)



SMART WATER METERS

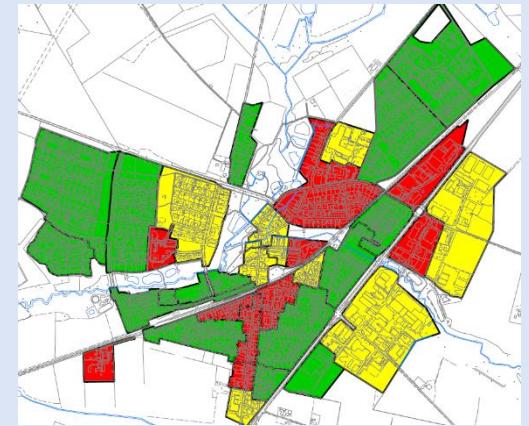
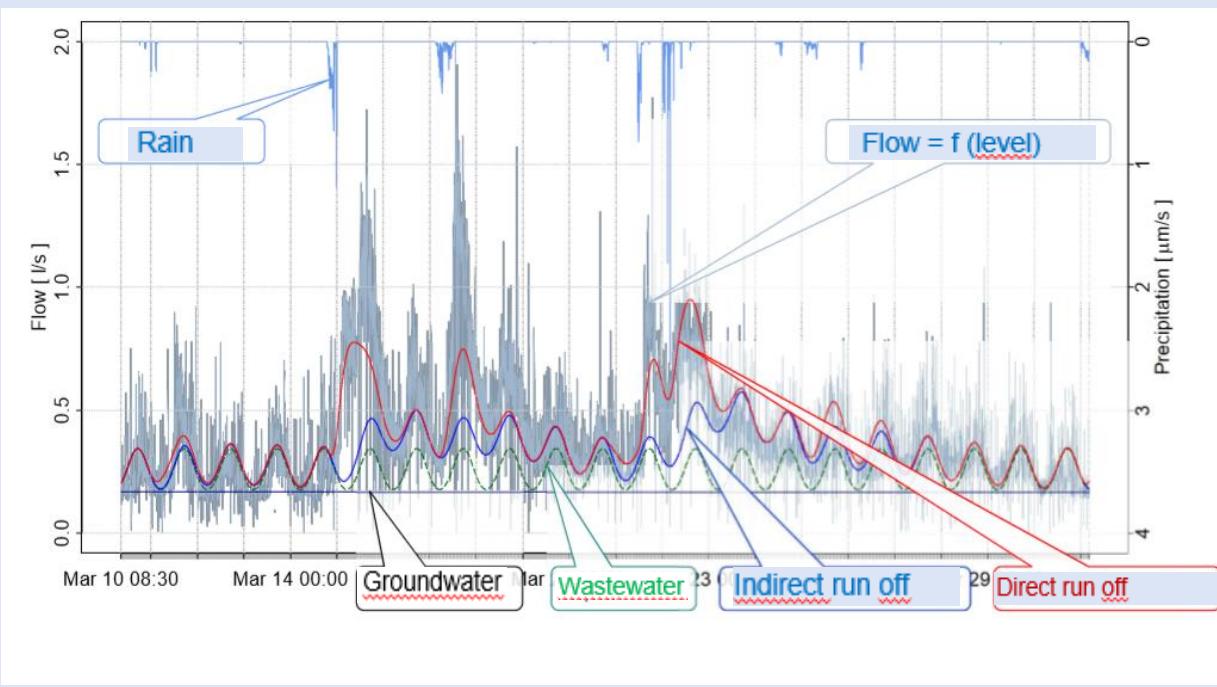
- THE FUTURE AND THE PERSPECTIVES



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Water balance:

The sewer system: Waste water, stormwater and infiltration



SMART WATER METERS

- THE FUTURE AND THE PERSPECTIVES

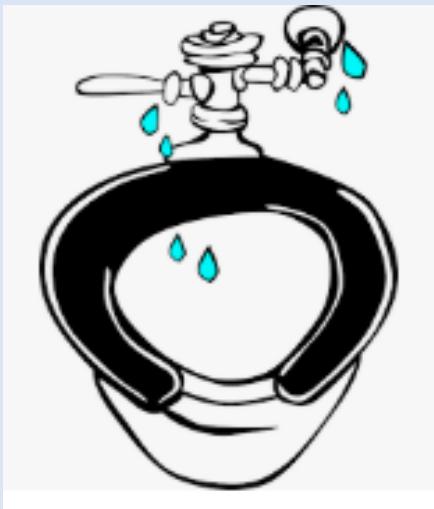


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Leak warning:

- The DK Insurance Companies gives up to 25 % reduction (house Insurance)



SMART WATER METERS

- THE FUTURE AND THE PERSPECTIVES



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Did your old grandma drink water today ?

- If not, we could have told you by SMS.....*if she will let us....*



Only your imagination is the limit.....

SMART WATER METERS

- THE FUTURE AND THE PERSPECTIVES



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Who is using water at home, when you are in Thailand ?

- We don't know, but we can by SMS tell you someone is....*if you will let us....*



Only your imagination is the limit.....

QUESTIONS / COMMENTS

