



WEBINAR

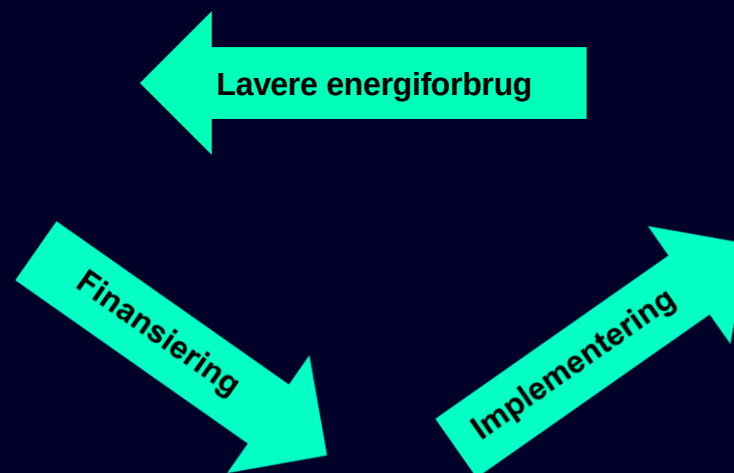
Energieeffektiviser din virksomhed cashflow-neutralt



Cashflow-neutral energirenovering

www.siemens.dk/energirenovering

ESCO energirenoveringskonceptet

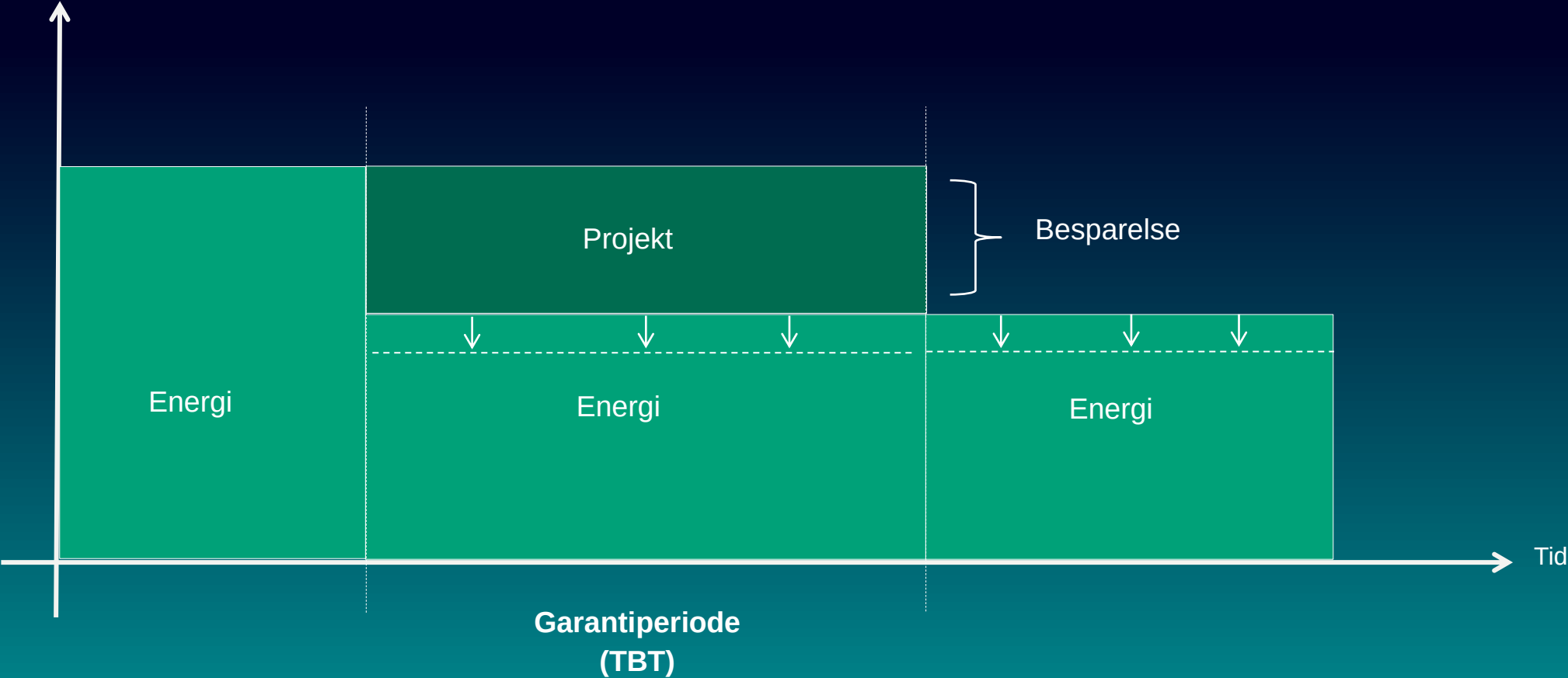


Eksempler på forbedringsmuligheder:

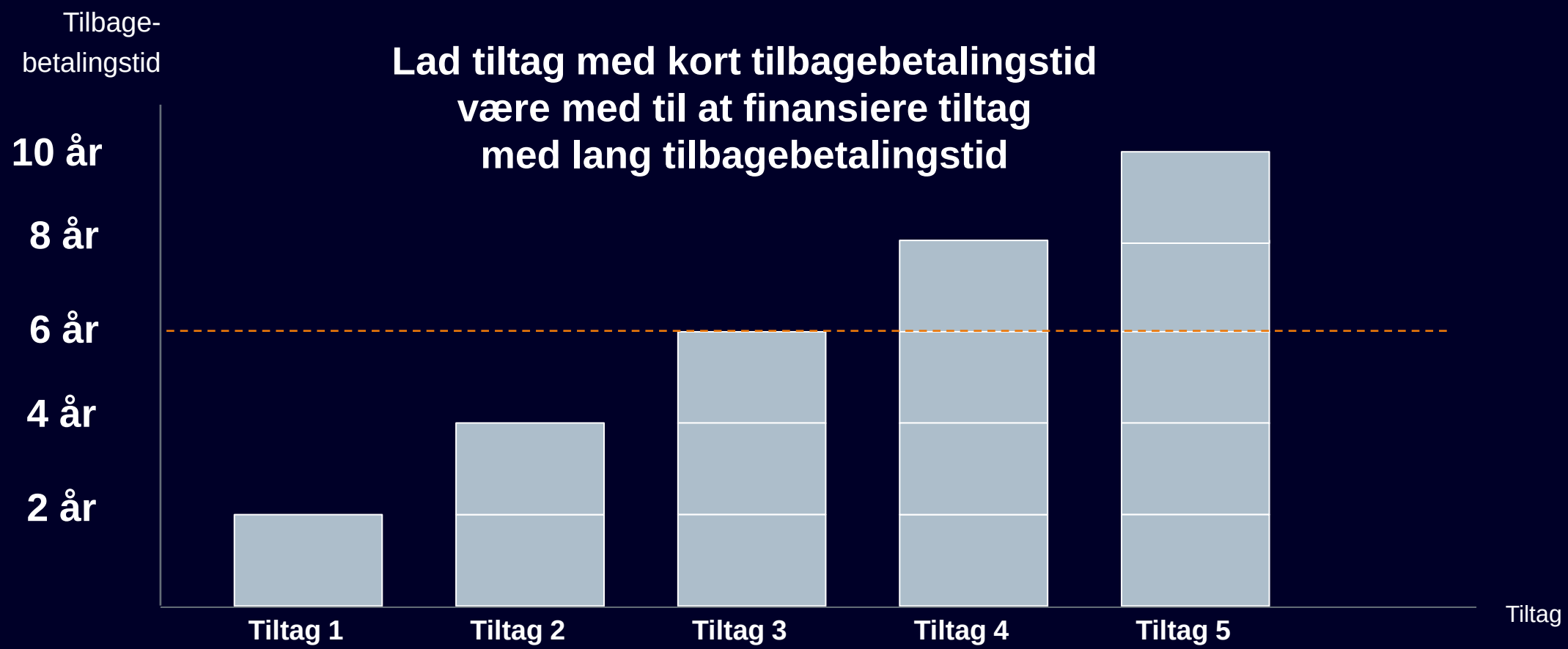
- Belysning
- Ventilationsanlæg
- Bygningsautomatik
- Varmeanlæg
- Klimaskærm
- Solceller
- Isolering
- Køleanlæg

Energirenovering, som ikke koster noget

Udgifter til energi



Modellens fordele



Typiske energi- renoveringstiltag

- Balanceret HVAC
- Reducerede luftmængder, natkøling
- Ny indeklimastrategi
- Nye axial-ventilatorer + frekvensomformere
- Nye køleanlæg
- Sektionering af varmeanlæg
- Motorventiler på radiatorer
- Nye pumper
- Solafskærmning
- LED
- Optimering af CTS
- Teknisk isolering
- Klimaskærm
- Solceller
- Køle/varmepumper
- *Cloud@analytics*
- Ladestandere til elbiler, charge management, forsyning, energiindkøb, mulighed for at levere fleksibilitet til elnettet mv.

**Rentable
økonomiske
besparelser**

~ 20-30%

Ballerup Centret

- ✓ 37% energibesparelse
- ✓ 1,3 mio. kr./år sparet på energiregningen
- ✓ Intelligent drift og vedligehold via 1.600+ målepunkter og Cloud@analytics



Frederiksberg Centret

- ✓ 33% energibesparelse
- ✓ 1 mio. kr./år sparet på energiregningen
- ✓ Intelligent indeklimastrategi

Hvidovre Hospital

- ✓ 1,5 MW solceller på tagareal
- ✓ Genanvendelse af varme fra nye køleanlæg øger effektiviteten med en COP-faktor fra 3 til 10-12
- ✓ 15.000 nye lysamaturer
- ✓ 33% samlet energibesparelse



Processen ved et ESCO energirenovierungsprojekt



1 Garanterede
besparelser

2 Udbud og
faste priser

3 Eksekvering
(ABT93)

4 Opfølgning
(garanti-fasen)



Balancering af elnettet



Aggregering af fleksibilitet (virtuelt kraftværk)





Fordele ved ESCO energirenovringsmodellen

- Garanteret business-case
(Ingen risk på energibesparelse og investering)
- Professionelt udbud på underentrepriser
(konkurrenceudsættelse)
- Energistyring og transparens på energiforbrug
- Fremtidssikring af tekniske installationer
via omfattende digitalisering
- Værdiforøgelse af bygninger, mindre risk,
bedre indeklima
- Understøtter CSR / Klimastrategi / CO2-
reduktionsmål
- Én kontraktuel partner i hele processen
- Ingen effekt på Capex eller balancen med
'ESCO as a service'
(Off-balance-løsning skal godkendes af kundens revisor)

| Kontakt

Thomas Brændgaard Nielsen

Sales Executive & Business Development
Siemens Smart Infrastructure

Siemens A/S

Borupvang 9

DK-2750 Ballerup

Mobil: +45 60 135 245

E-mail: thomas.braendgaard@siemens.com

 thomasbraendgaardnielsen

 @tbraendgaard



Building Efficiency as a Service

Cash-flow neutral energy saving measures



The most expensive cost saving measures are the ones that never happen

National Halmstad

Customer case



National Halmstad's energy consumption increased steadily without them really knowing why. They decided to tackle the problem...

”It turned out that it was our properties that were the big energy thieves, not the production as we had thought.

- Daniel Cervin, Environmental & Sustainability Manager, National Halmstad

Complete energy saving measures

- ✓ Digitization and technical real estate integration
- ✓ LED lighting
- ✓ Heat recovery
- ✓ Property automation
- ✓ Optimization of ventilation
- ✓ Control and regulation technology
- ✓ Siemens Navigator and Service Center
- ✓ Revision of investment plan



National Halmstad

Customer case



Energy Savings

Heat: 868 MWh / year = **26%**

Electricity: 363 MWh / year = **7.5%**

Water: expected consumption 5,500 m³ / year = **61%**



Agreed efficiency goals exceeded



Enabled further investment in personnel, machinery and projects linked to their core business



Improved environmental profile

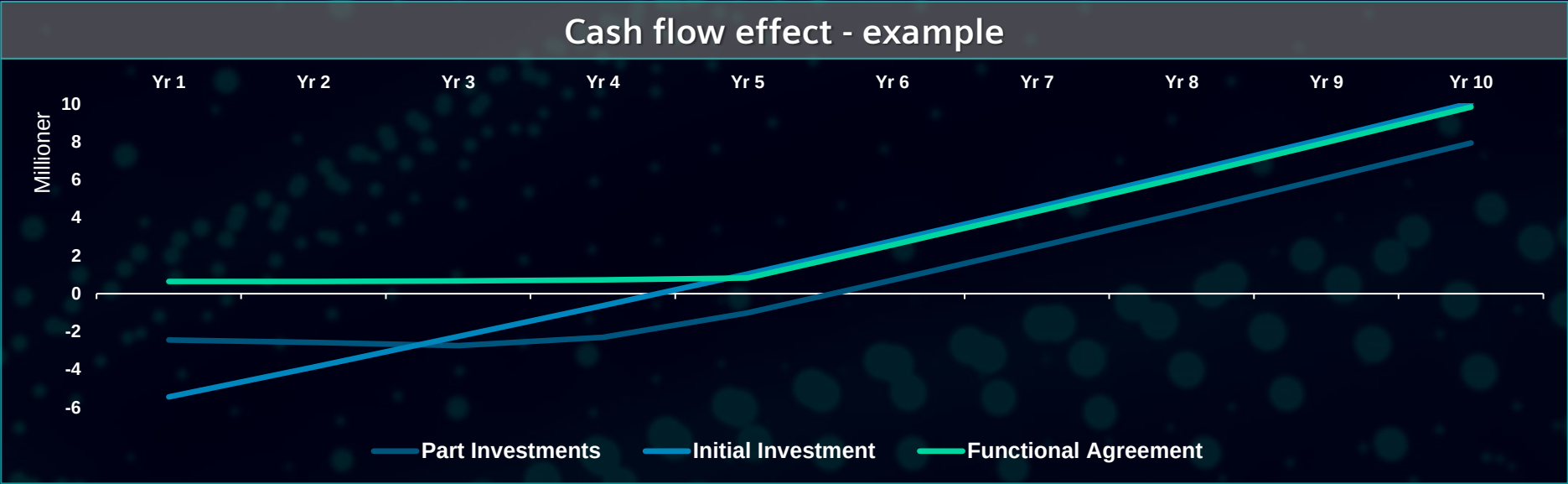


“Without Siemens functional agreement, we would never have made the investment, or received the energy savings

- Claes Rössel, Part-owner & Head of Finance, National Halmstad

Different options when investing in energy saving measures

Initial Investment	Part Investments	Functional Agreement
✓ Direct benefit from energy saving measures ✓ High liquidity impact due to initial cash purchase ✓ Requires budget	✓ Distribute investments over time ✓ Requires recurring budgeting measures ✓ Full potential of energy savings not met	✓ Benefit of complete energy saving measures with low liquidity impact ✓ Fixed monthly service payments ✓ Possible cost- and cashflow neutral/positive



Building Efficiency as a Service

Functional agreement – How does it work?



A functional agreement can include:

- **Products**
- **Analysis costs**
- **Project costs**
- **Installation**
- **Insurance**
- **Maintenance and service**



The agreement consists of the savings and service delivered



Upgrades and service operations



Customized agreement term and monthly cost



Free cost savings during installation



Siemens monitor, verify and optimize the installations



Insurance included

What can you expect from Siemens with this solution?

**Guaranteed energy
cost savings**



**More savings through
a holistic approach**



**One contractual
partner**



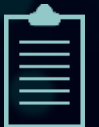
No budget is required



**Improvement of
financial KPI's**



**Potential off-balance*
solution for customer
(auditor check)**



*Siemens does not consult or advise the customer on the effect on the balance sheet nor does Siemens give any financial advice. We therefore recommend that the customer verifies the determination of the contract with its financial auditors.

| Kontakt

Oscar Hallberg

Sales & Product Manager

Siemens Financial Services AB

Evenemangsgatan 21

169 79 Solna, Sverige

Mobil: +46 (72) 74 62 016

E-mail: oscar.hallberg@siemens.com

 Oscar Hallberg