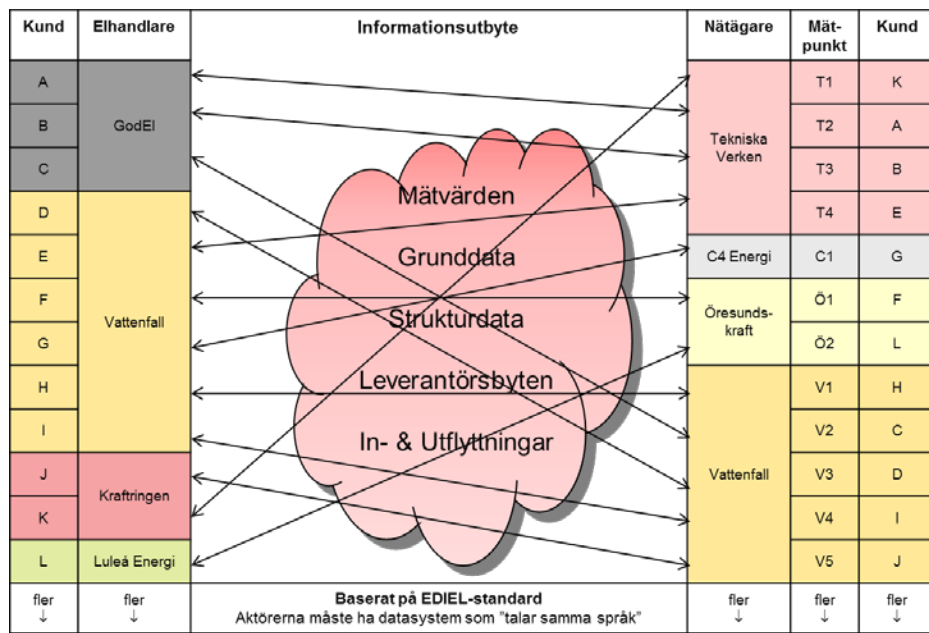


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Figure 1. An information model based on all-to-all communication



Source: Sweco

Kund = Customer

Elhandlare = Electricity supplier

Informationsutbyte = Information exchange

Nätägare = Grid owner

Mät-punkt = Metering point

Kund = Customer

fler = more

Baserat på EDIEL-standard = Based on the EDIEL standard

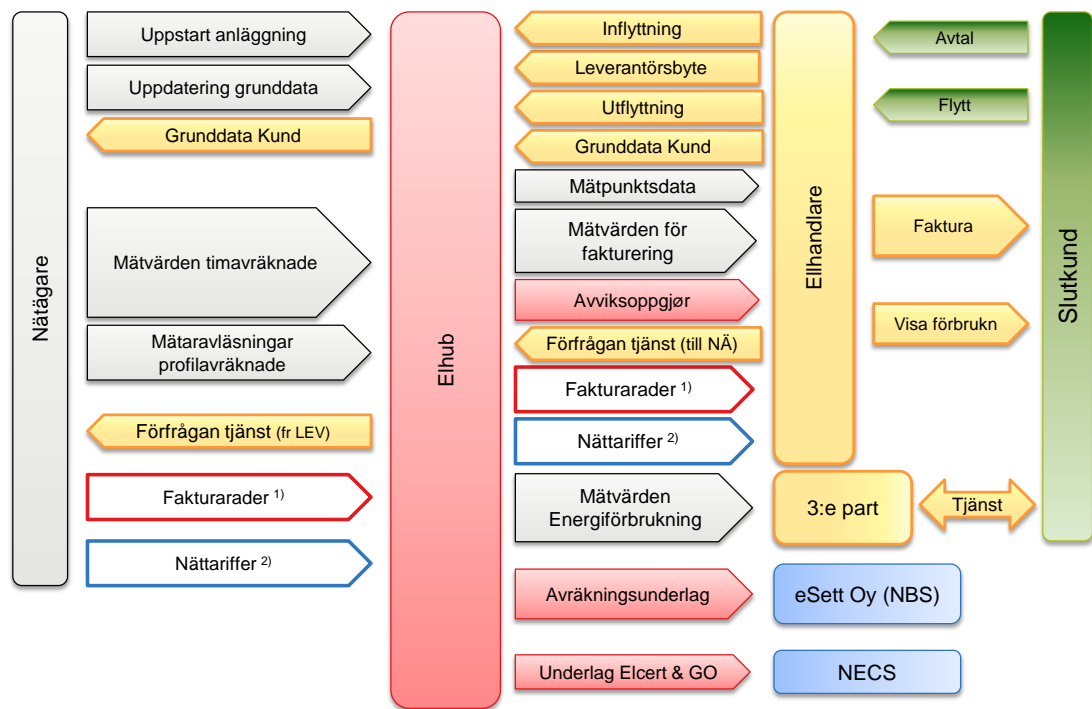
Aktörerna måste ha datasystem som "talar samma språk" = The actors must have data systems that "speak the same language"

Table 1: Comparison of case studies

Proposal	Present situation	Denmark / Norway / Netherlands / Logica	Tieto	Rejlers	Communication hub
Control	1	4	2	4	4
Neutrality	1	5	3	4	4
Accessibility	2	5	3	3	4
Efficiency	2	3	3	3	3
Flexibility	3	2	5	3	2
Nordic market	1	4	3	3	3
Subtotal	11	22	19	19	20
Regulation	5	4	3	1	4
<i>Total</i>	16	26	22	20	24

Source: Sweco

Figure 7. Overview of the process flow for Elhub.no



Alternativa lösningar i v 2.0

¹⁾ Genomfakturering

²⁾ Engrosmodellen

Source: Sweco

Nätägare = Grid owner

Uppstart anläggning = Installation start-up

Uppdatering grunddata = Updating basic data

Grunddata kund = Basic data customer

Mätvärden timavräknade = Meter values hourly settled

Mätaravläsningar profilavräknade = Meter readings profile-settled

Förfrågan tjänst (fr LEV) = Service request (fr SUPP)

Fakturarader = Bill lines

Nättariffer = Grid tariffs

Elhub = Elhub

Inflyttning = Moving in

Leverantörsbyte = Supplier switch

Utflyttning = Moving out

Grunddata kund = Basic data customer

Mätpunktsdata = Metering point data

Mätvärden för fakturering = Meter values for billing

Avviksoppgjør = Deviation settlement

Förfrågan tjänst (till N Ä) = Service request (to Gr O)

Fakturarader = Bill lines

Nättariffer = Grid tariffs

Mätvärden Energiförbrukning = Meter values Energy consumption

Avräkningsunderlag = Settlement data

Underlag Elcert & GO = Basis El cert & GO

Elhandlare = Electricity supplier

3:e part = 3rd party

eSett Oy (NBS) = eSett Oy (NBS)

NECS = NECS

Avtal = Contract

Flytt = Move

Faktura = Bill

Visa förbrukn = Show consump

Tjänst = Service

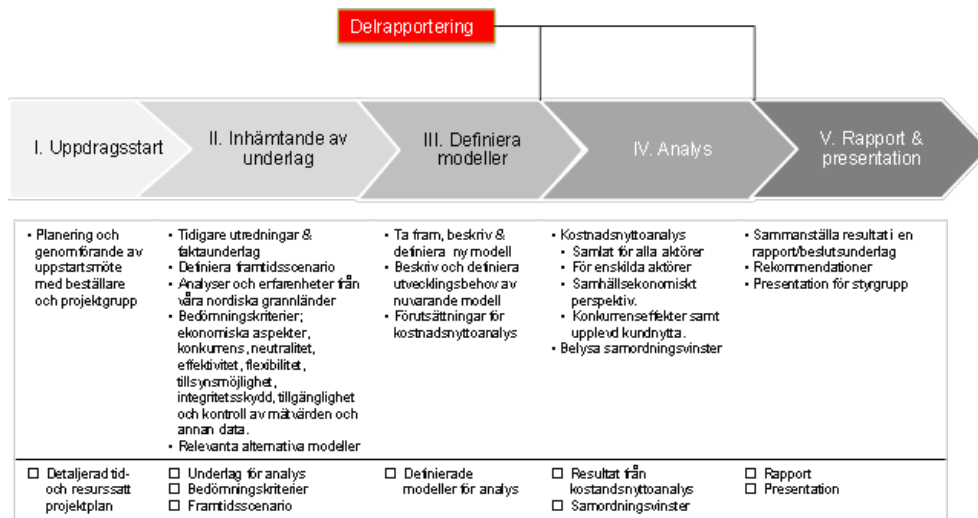
Slutkund = End user

Alternativa lösningar i v 2.0 = Alternative solutions in v 2.0

Genomfakturering = Through-billing

Engrosmodellen = The wholesale model

Figure 8. Analysis implementation



Source: Sweco

Delrapportering = Interim reporting

I. Uppdragsstart = Commission start

Planning and implementation of start-up meeting with clients and project group

Detailed project plan with time and resources

II. Inhämtande av underlag = Obtaining of data

Previous investigations and facts

Define future scenario

Analysis and experience from our neighbouring Nordic countries

Assessment criteria; economic aspects, competition, neutrality, efficiency, flexibility, supervision

opportunity, privacy protection, accessibility and control of meter values and other data.

Relevant alternative models

Data for analysis

Assessment criteria

Future scenario

III. Definiera modeller = Define models

Draft, describe & define new model

Describe and define development needs of the present model

Assumptions for cost-benefit analysis

Defined models for analysis

IV. Analys = Analysis

Cost-benefit analysis

Integrated for all actors

For individual actors

Economic perspective

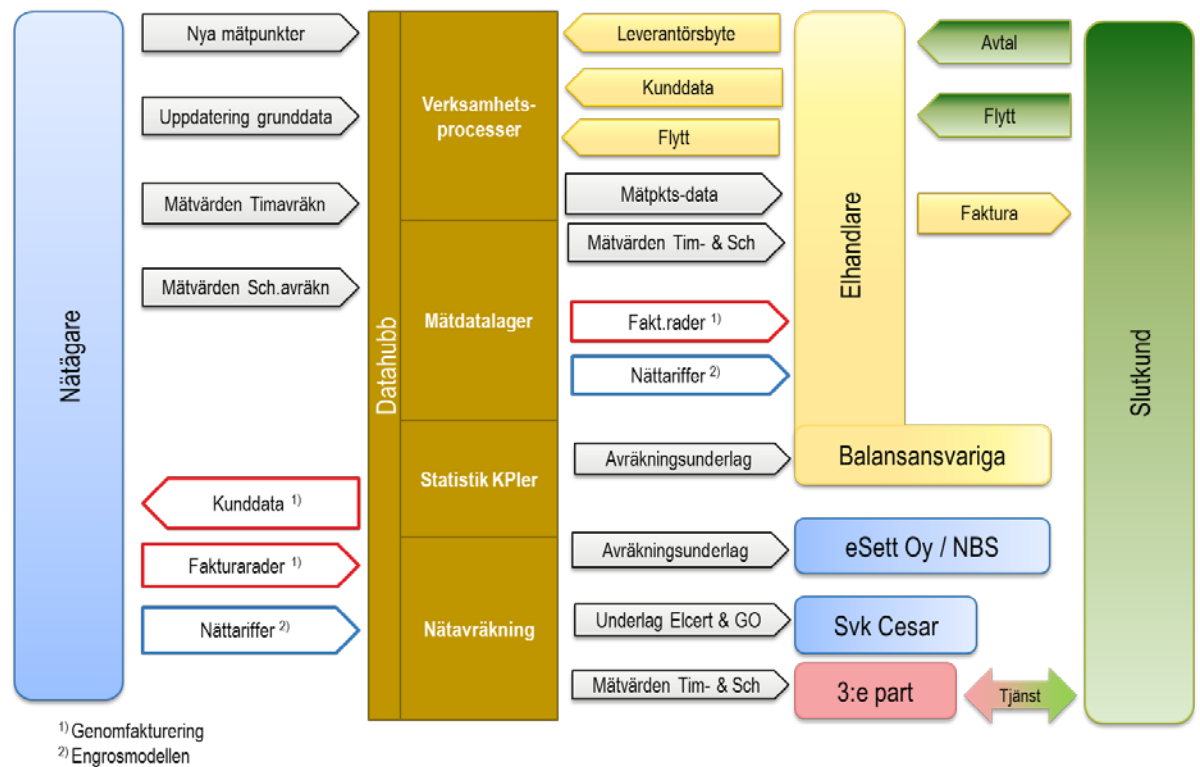
Competition effects and perceived customer benefit
Shed light on coordination gains

Results from cost-benefit analysis
Coordination gains

V. Rapport och presentation = Report and presentation
Compile results in a report/decision-making document
Recommendations
Presentation for steering group

Report
Presentation

Figure 9. Process flow for service hub with central storage



Source: Sweco

Nätägare = Grid owner

Nya mätpunkter = New metering points

Uppdatering grunddata = Updating basic data

Mätvärden Timavräkn = M values hourly settled

Mätvärden Sch.avräkn = M values profile-based settled

Kunddata = Customer data

Fakturarader = Bill lines

Nättariffer = Grid tariffs

Datahubb = Data hub

Verksamhetsprocesser = Operational processes

Mätdatalager = Meter data warehouse

Statistik KPIer = Statistics KPIs

Nätavräkning = Grid settlement

Leverantörsbyte = Supplier switch

Kunddata = Customer data

Flytt = Move

Mätpkts-data = M point data

Mätvärden Tim- & Sch = M values H & P-based

Fakt.rader = Bill lines

Nättariffer = Grid tariffs

Avräkningsunderlag = Settlement data

Avräkningsunderlag = Settlement data

Underlag Elcert & GO = Basis EI cert & GO

Mätvärden Tim- & Sch = M values H & P-based

Elhandlare = Electricity supplier
Balansansvariga = Balance responsible parties
eSett Oy / NBS = eSett Oy / NBS
Svk Cesar = SvK Cesar
3:e part = 3rd party

Avtal = Contract
Flytt = Move
Faktura = Bill
Tjänst = Service

Slutkund = End user

Genomfakturering = Through-billing
Engrosmodellen = The wholesale model