

Digitalisation of the forest sector

Today and tomorrow

Magnus Hell

tieto

Tieto, the leading Nordic software and services company



3000 Projects annually



Serving Nordic clients since

1968



Around

1500 clients



Turnover of approximately

€1.5 billion



Employing

13000

experts globally,
in close to

20 countries



Serving customers in over

85

countries
worldwide



Investments in technology and services more than

€100 million* per year

*incl. capital expenditure and operational costs

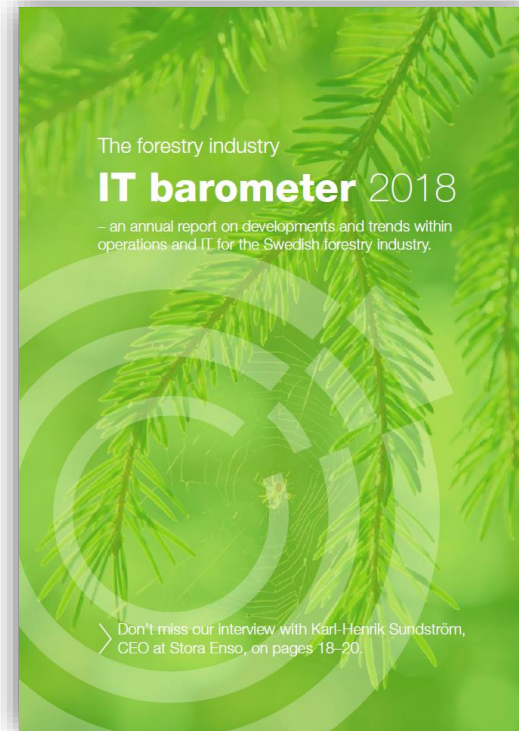
Tieto Forest consulting

Forest companies first choice in business renewal!

- **Business consulting, development and maintenance** of smart solutions boosting the forest companies business processes
- **70** Business & IT consultants in Sweden & Finland

The IT-barometer

- Annual report on digital trends within the forest industry
- > 60 companies responding
- Swe/Fin versions
- Forest industry segments
 - Wood supply, pulp & paper, biofuel, wood products
- CIO, CEO, decision makers & key individuals responding



NORDENS STÖRSTA AFFÄRSTIDNING - NU 328 000 LÄSARE

TISDAG 29 MAJ 2012

"Dags att lära av grannarna"
ANALYTISKT UTSLÄTT

"Be en bön att AI-folket vet vad de gör"
NORDISKA CORPORA

"Tetra Pak bör ligga i frontlinjen"
SOMMER LÖTTA LÖNNER LÄSARE

Dagens industri

BRUKSÄLLER • KONFERENS • PRISER • BEHOV • VERKSÄM • 2012

12 SIDOR SPECIAL 38-49

"SKOG HAR ALDRIG VARIT MER RÄTT"

EXPERTEN OM HÖGTRYCKET I MARKERNA:

GULD LÄGE FÖR MASSAN
Produktionen ökar – priserna på rekordnivå

SÅGEN GÅR PÅ MAXFART
Brist på bräddor hotar i sommar

"KAN BLI HUR STORT SOM HELST"
Stora Ensos forskare tar fram nya material

Upplagt för stökig stämma

På tisdagen samlas FingerPrint Cards aktieägare i Göteborg. Ett hemsökt, med D Carnegie tidigare vd Ronald Bengtsson i spetsen, har som mål att kugga bort den Renslagna styrelsen.

Stor skenomgång

Sparare missade Indien-uppgång
Svenska fondparter valde bort Indien för Ryssland – som har gått betydligt sämre sedan över fem år.

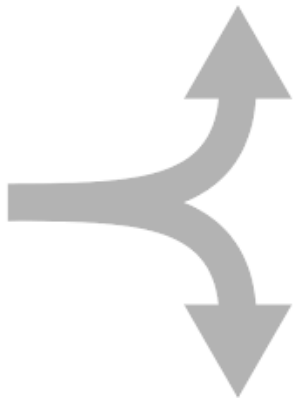
Välfärdsvinster ska lyfta Löfven

S danskar glada vinster i valkampen till en av investeringsmarknads, uppger Lofven för EU.

Di tv
FIFTA TIDEN FÖR TIDNINGEN
Experimentera med en ny typ av presentation för tv-tittare.

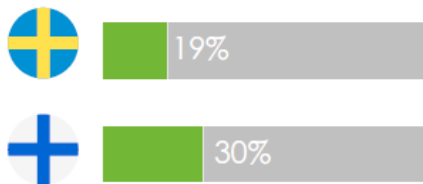
What is the primary focus of the IT activities?

Productivity & efficiency?

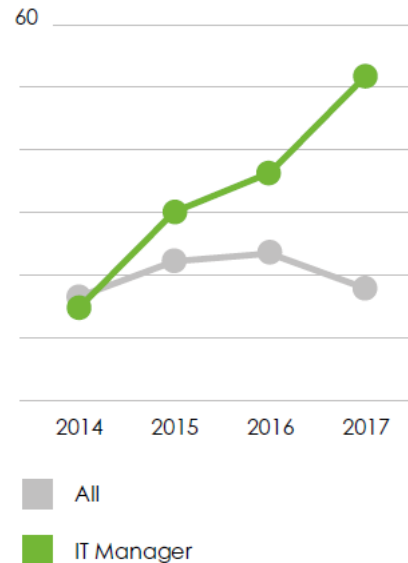


Innovation & commercial development?

3.3 Per country: The proportion focusing primarily on Innovation and commercial development

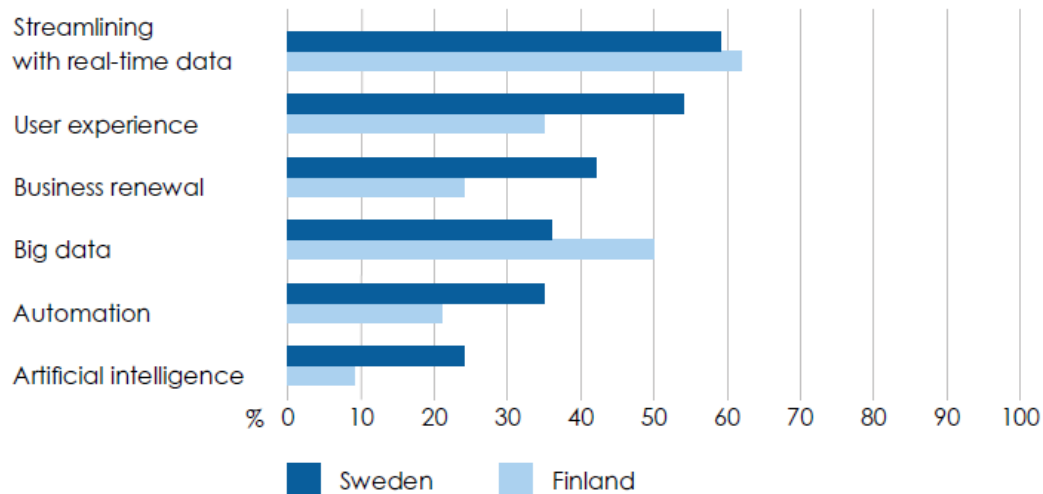


3.2 IT Manager: The percentage focusing primarily on Innovation and commercial development



Commercial benefits of digitalisation

5.1 By country: The proportion which see substantial commercial benefits in the following areas



Strategy for digitalisation

"Despite that the company managements are aware of digitalisation as an enabler of competitive advantage, more than 50% of the companies lack a digital strategy"

- Mikael Zachrisson, Senior business consultant, Tieto



Digital innovation, how?

6.2 The proportion who said they do not have a specific structure for digital innovation



Karl-Henrik Sundström, CEO Stora Enso



"...we need to identify models whereby a major global company such as ours can collaborate with smaller start-ups."

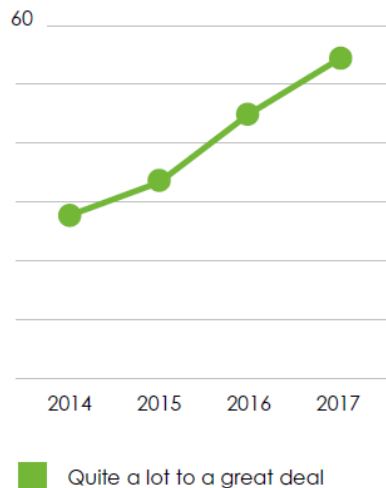
"At Stora Enso we mobilise innovation within our accelerator programme"

"I think the field of Virtual and Augmented reality will throw up really interesting opportunities and applications"



Collaboration in IT

10.1 To what extent do you share/collaborate with other companies in the industry in terms of IT development?

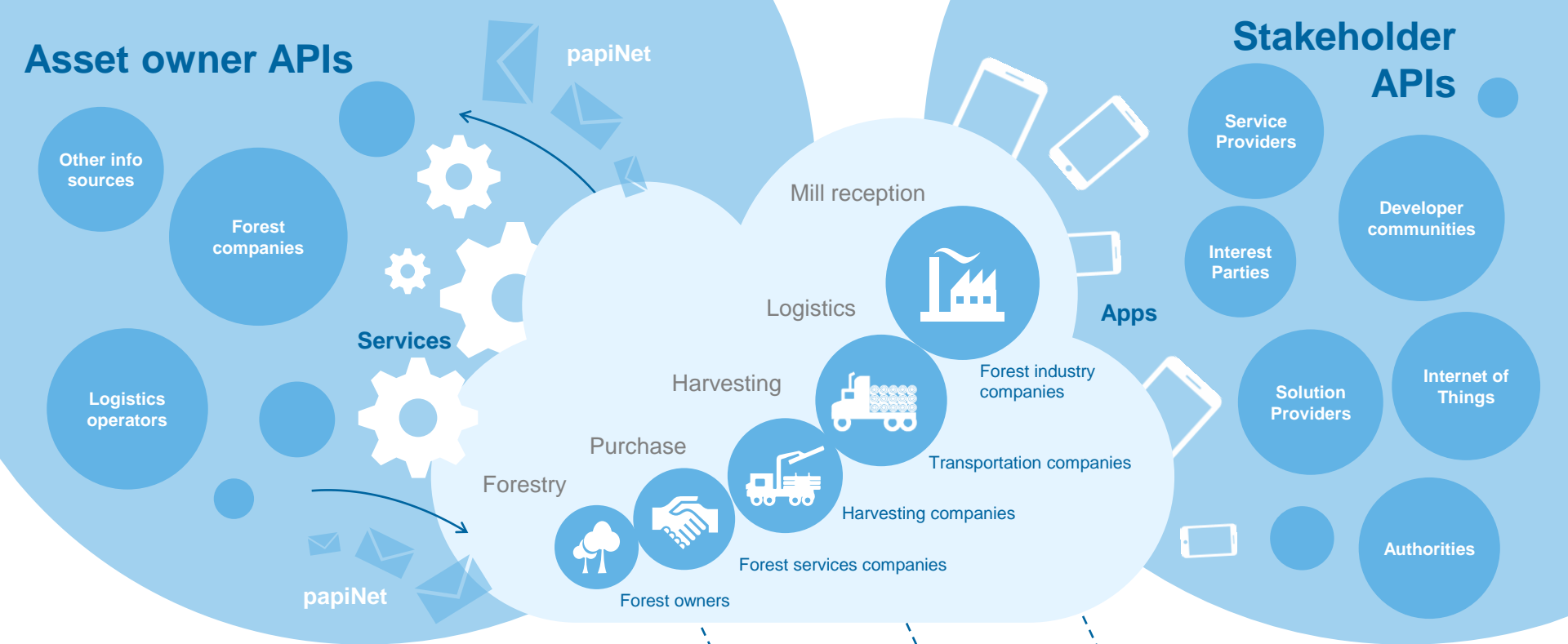


10.2 How do you intend this to be in the future? The proportion who said collaboration had increased



Asset owner APIs

Stakeholder APIs



Forest Hub

Future roadmap

B2B Exchange

Financial Clearinghouse
Web Apps for Small Companies
Exchange of B2B information

Real time sharing

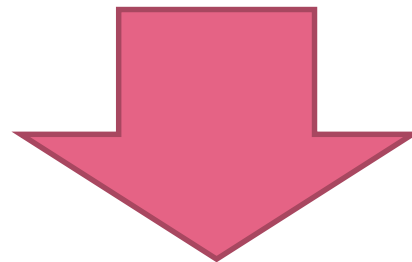
Information Sharing
(API Gateway & Management)
Data Storage / Big Data

Information Processing

Data Analytics
Business Activity Monitoring

Increasing competition for raw material

Increasing demand for raw material in the bioeconomy



Forest owners less naturally motivated to harvest

Virtual forest

<https://www.youtube.com/watch?v=oBC9FzmGKKE>

Dive into the digital twin - Virtual Forest



Digital representation of the physical world and its dynamics

Visualization, simulation, planning,
optimization, decision making



source: Metsä Group

Conclusions

- The future is bright!
- There is a high demand for forest related data

Get your copy of the barometer!

Sweden: http://pages.tieto.com/DigiBarometer_2018_SE.html

Finland: http://pages.tieto.com/DigiBarometer_2018_FI.html