

IT development for timber flow support in Latvia

Let's enter in a digital transformation!

MĀRTIŅŠ GAIGALS

Table of Contents

An overview

Business environment, challenges, development trends

Baltic timber market region

Latvian forest sector

Latvia's experience of openness

Strategic decisions

Timber measurement

VMF LATVIA

Data standard

IT solutions

DATA CENTER

Conclusions

A business environment: more complex and fast-moving than ever

globalization

resource scarcity

digital connectivity

disparate prosperity



accelerated consumption

ecological decline

Megaforce	Indicator	% Change	Source
CLIMATE CHANGE	Energy-related CO ₂ emissions	+20	IEA
	Mean temperature rise	0.5-1.0 °C	IPCC & Others
ENERGY & FUEL	Primary energy demand	+33	IEA
	Net electricity generation	+84	EIA
MATERIAL RESOURCES	Raw materials extraction (excluding fossil carriers)	+55	SERI
WATER	Demand for water withdrawals	+53	2030 Water Resources Group
	% Population under water stress	+39	WEF
POPULATION	Total population	+20	UN
	% Population 65 and older	+50	UN

WEALTH	Middle-class purchasing power	+172	OECD
	Real gross domestic product	+130	Standard Chartered
URBANIZATION	Urban population	+44	UN
	Urban land cover km ²	+110	Seto, et. al. (2011)
FOOD SECURITY	Aggregate food demand	+50	FAO
	Key staples food prices	+70 to +90	Oxfam
ECOSYSTEMS	Terrestrial mean species abundance	-9 to -17	CBD GLOBIO
	Human ecological footprint	+33	GFN
DEFORESTATION	Net forest cover	-13	OECD
	Amazon forest loss	+55	WWF

Main development trends

BIOECONOMICS

CIRCLE-ECONOMY

SHARING ECONOMY

Key development technologies

Advances that will transform life, business, and the global economy

12 (5) →



Mobile Internet

Increasingly inexpensive and capable mobile computing devices and Internet connectivity



Automation of knowledge work

Intelligent software systems that can perform knowledge work tasks involving unstructured commands and subtle judgments



The Internet of Things

Networks of low-cost sensors and actuators for data collection, monitoring, decision making, and process optimization



Cloud technology

Use of computer hardware and software resources delivered over a network or the Internet, often as a service



Advanced robotics

Increasingly capable robots with enhanced senses, dexterity, and intelligence used to automate tasks or augment humans

Major information technological developments



*WORKER MOBILITY
AND THE DIGITAL
WORKPLACE*



MOBILE DEVICES



*SOCIAL MEDIA
USER EXPERIENCE*



DIGITAL SECURITY



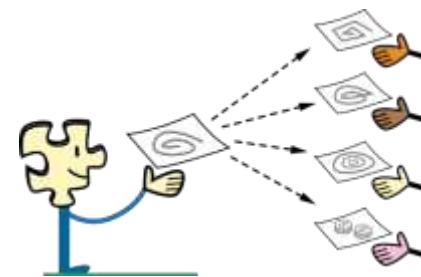
BIG DATA



USER EXPERIENCE



*BUSINESS PROCESS
ORIENTED SOLUTIONS*



*SHARING AND
IS ARCHITECTURE*

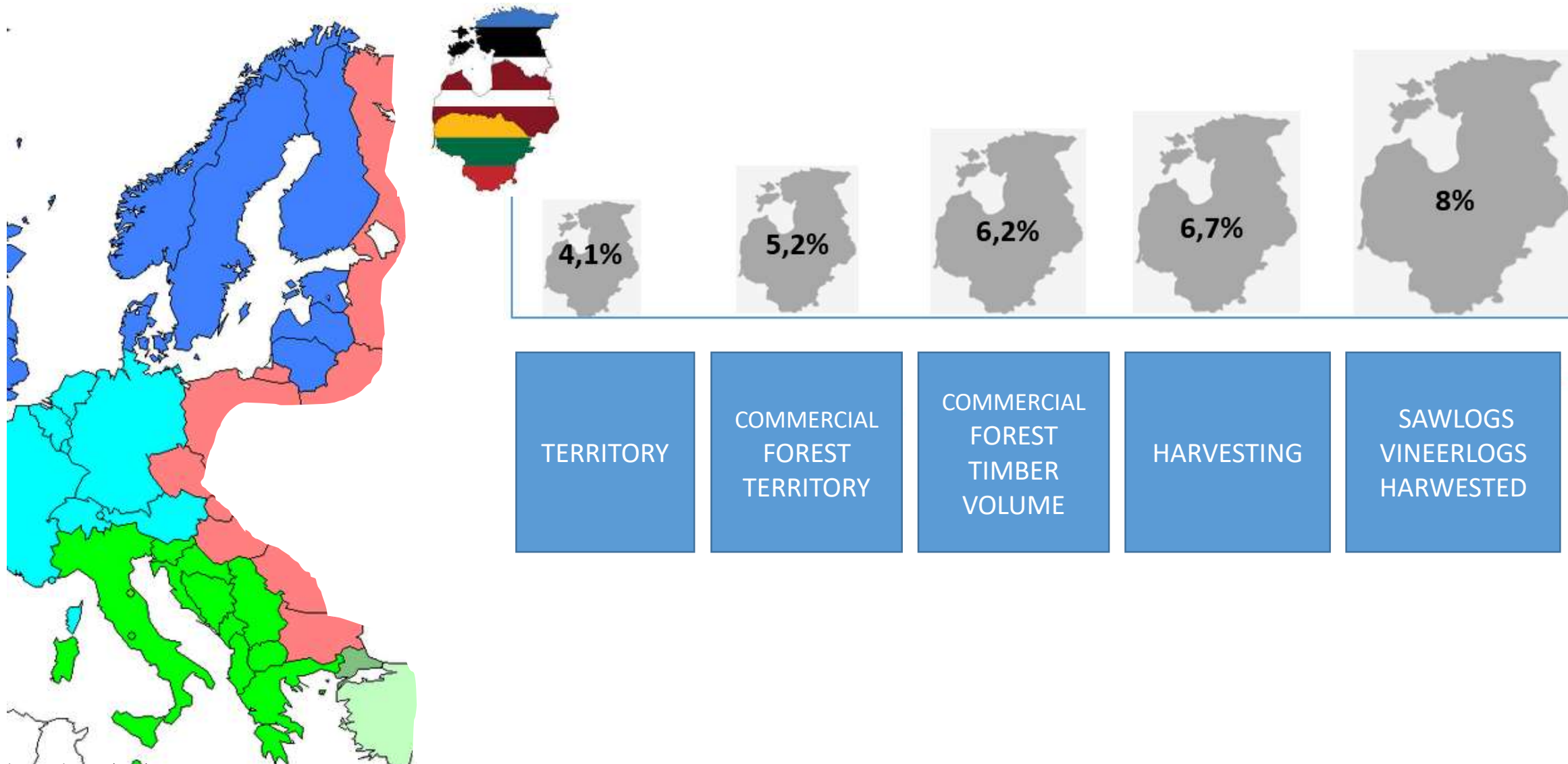
Traps of technological accessibility

«I can do it»

vs

« I have to do it »

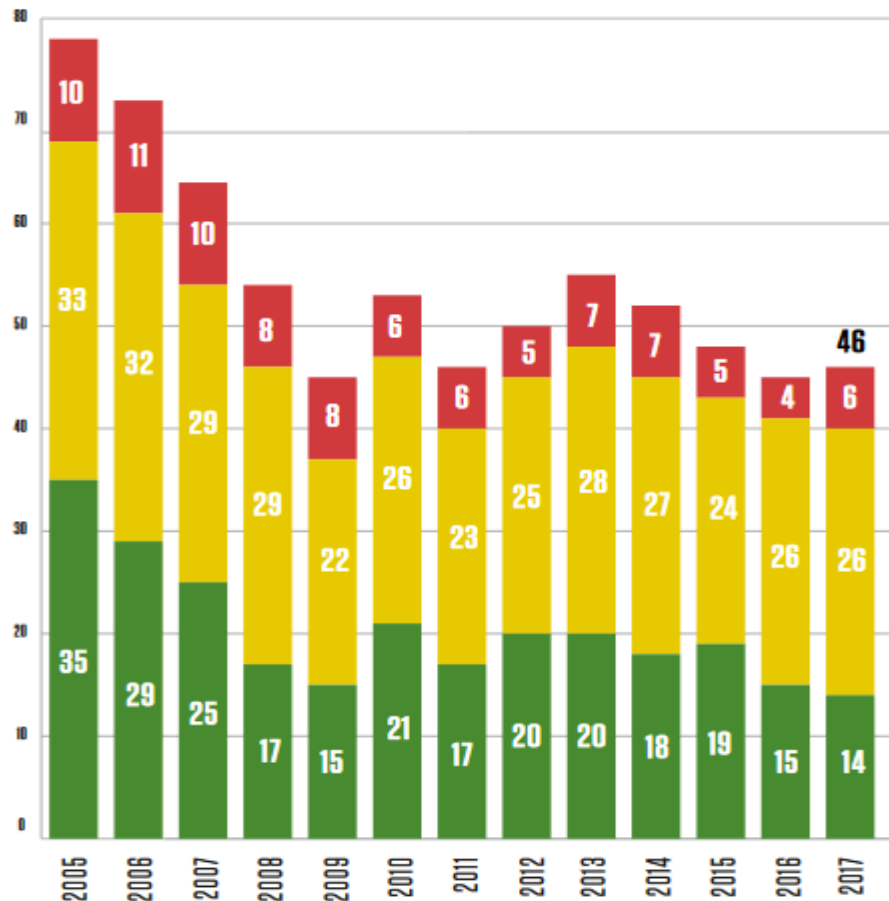
Baltics: how significant ?



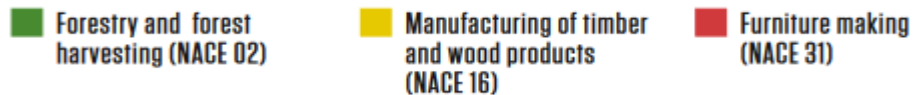
COMMON CHALLENGES



Employment in the forest sector (Thousand people)

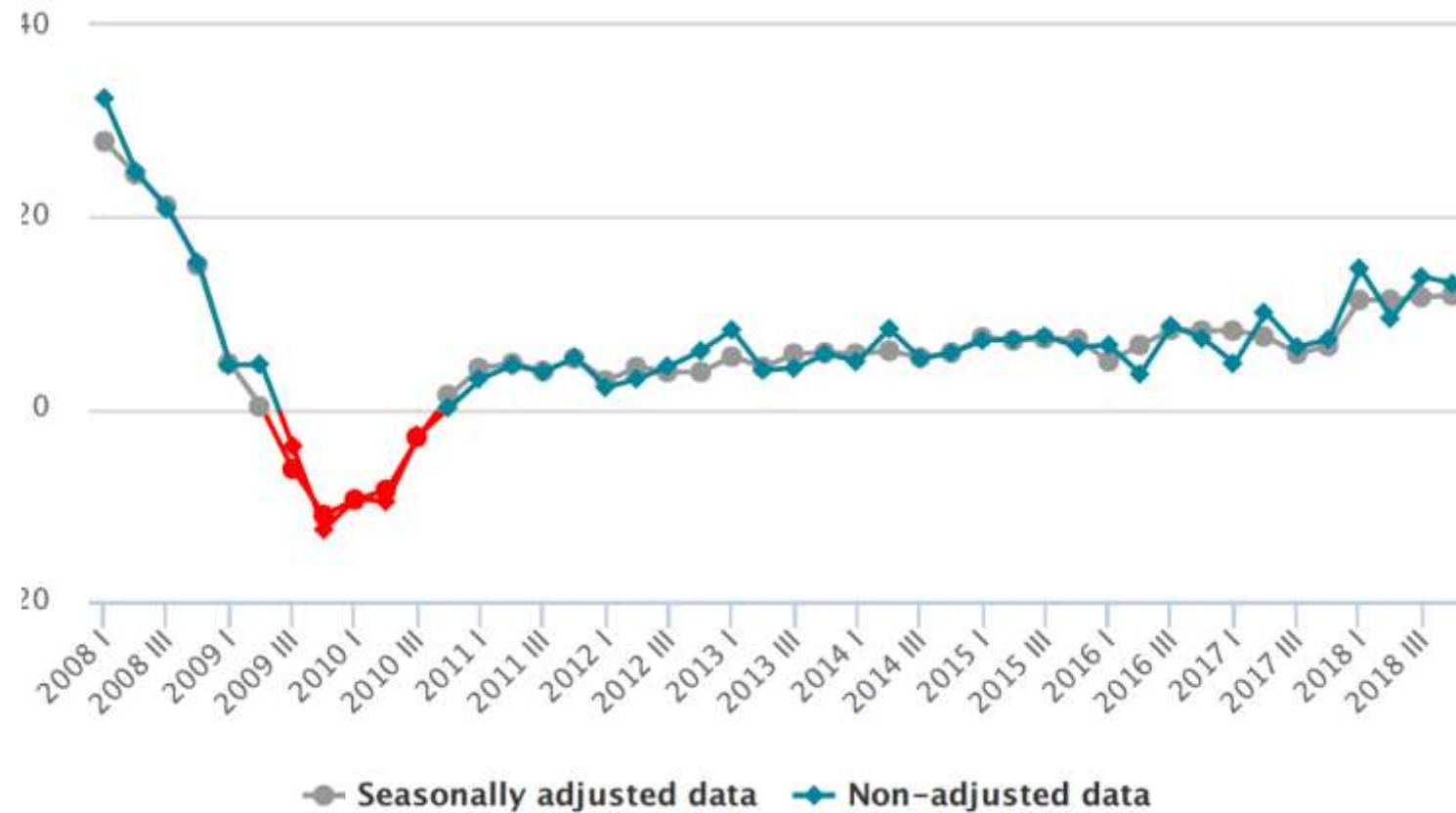


Source: Latvian Wood Industry Federation (2017)



Changes in hourly labour costs

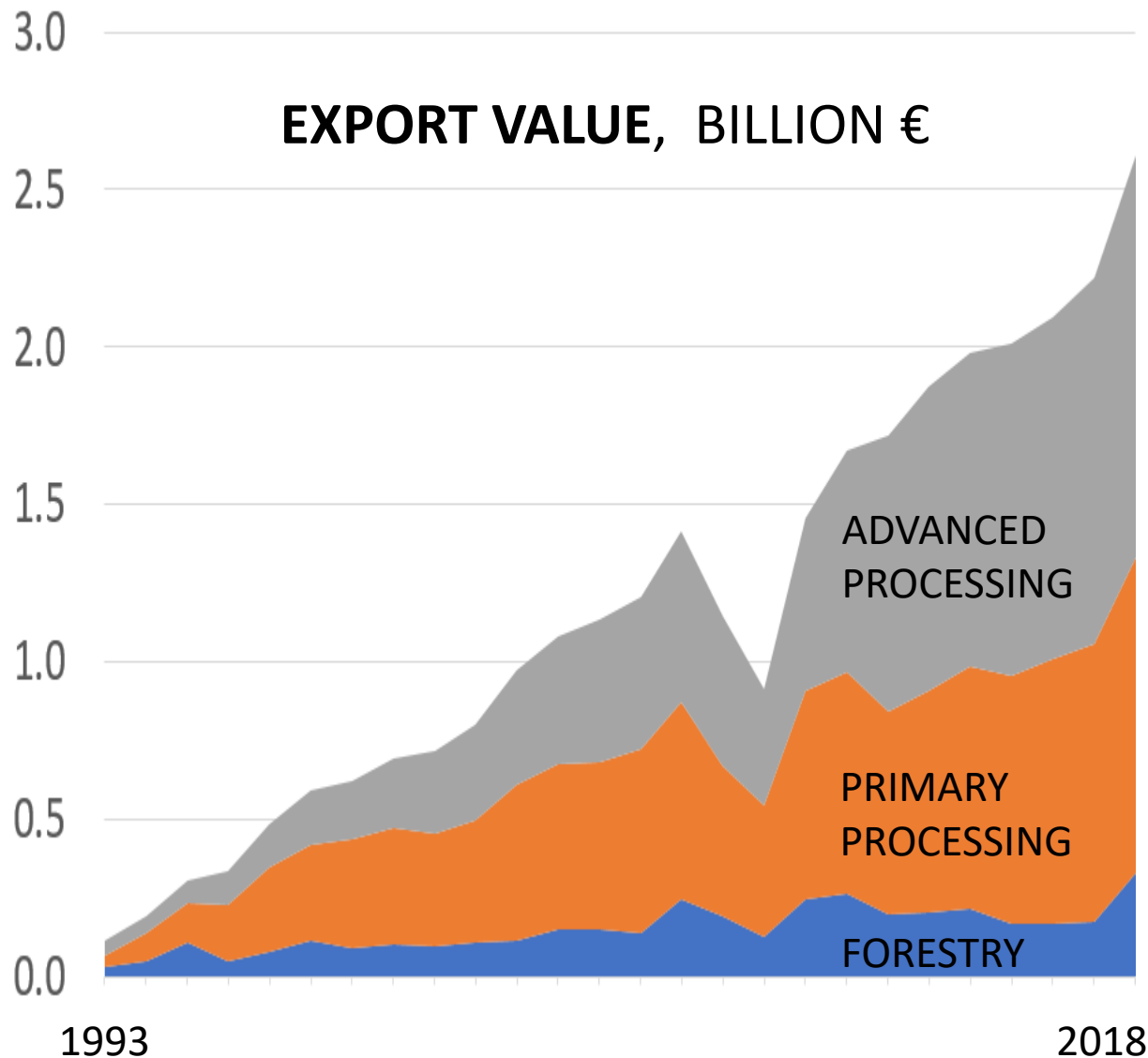
(as per cent, compared to the corresponding quarter of the previous year)



Refer to CSB database: DI030c

Latvia's forest sector at glance

EXPORT VALUE, BILLION €



- The forest sector is one of the cornerstones of the national economy at this time
- Forestry, wood processing and furniture manufacturing represented 4,8% of GDP in 2017
- Forests in Latvia take up 3.383 million hectares of land, or 52% of the country's territory
- One half of the forests belongs to apx 135.000 private forest owners
- An awerage of approximately 11 million cbm of timber have been harvested each year in Latvia's forests
- each Euro derived by the owner from the forest felling sales, Latvian forest sector multiplies six times



**MĒS VEIDOJAM
SAKOPTU, NEATKARĪGU
UN PĀRTIKUŠU
LATVIJU**



Strategic decisions: Latvian experience of openness

COOPERATION

Voluntarily arrangement in which two or more entities engage in a mutually beneficial exchange instead of competing. Cooperation can happen where resources adequate for both parties exist or are created by their interaction.

Read more: <http://www.businessdictionary.com/definition/cooperation.html>

BERGVIK SKOG



BILLERUDKORSNAS
LATVIA



LATVIJAS FINIERIS



PATA SALDUS



MV Tara



ACA
Timber



BSW Latvia



Domse Latvija



LATVIJAS FINIERIS
ARCIJU RAKSTOŠANA



Metsä



STIGA RM



Strategic decisions: Latvian experience of openness

- ☐ Do not compete with timber measurement
- ☐ Develop common classifiers and codes
- ☐ Use international data standard papiNet for business communication
- ☐ Analyze and develop business processes beyond the boundaries of a single company or supply chain
- ☐ Use shared IT support for high quality data processing and business communication

Strategic decisions: Latvian experience of openness

TIMBER MEASUREMENT

Do not compete with timber measurement:

- Ensure **parity** between timber buyers and sellers **50/50**
- **Define** measurements (cbm, quality etc) and accuracy
- Measure timber **at the industry** or transport terminal
- Run jointly a service giving **company**: VMF LATVIA

Timber Buyers' association of Latvia

Timber Sellers' association of Latvia

The Joint Advisory Council and Working Groups

Management of Latvian timber measurement and accounting, Ltd

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Address: Skaistkalnes iela 1, Riga, LV-1004, Latvia

www.lkuuv.lv

What is a data standart?



SOAP



BEER



DATA STANDART



The intelligent choice:

- MORE VALUE
 - SAVE TIME AND MONEY THROUGH PROCESS IMPROVEMENTS
 - MORE THEN 500 WORLD CLASS COMPANIES WITHIN FORESTRY AND INDUSTRY
- EFFICIENCY
 - TAKE COST OUT OF THE SUPPLY CHAIN BY USING STANDARTIZED E – DOCUMENTS
- GET INVOLVED
 - COMPANIES BOTH BIG AND SMALL CAN BENEFIT THROUGH PARTICIPATION

N.B.! OWN CLASSIFYERS AND CODES OF LATVIAN TIMBER SELLERS AND BAYERS

www.papinet.org

Latvia's representative at papiNet Forest Wood Supply

Mr. Ivars Kalmuks

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IT SOLUTIONS

DACE: Information solution for intelligence of business documents' flow

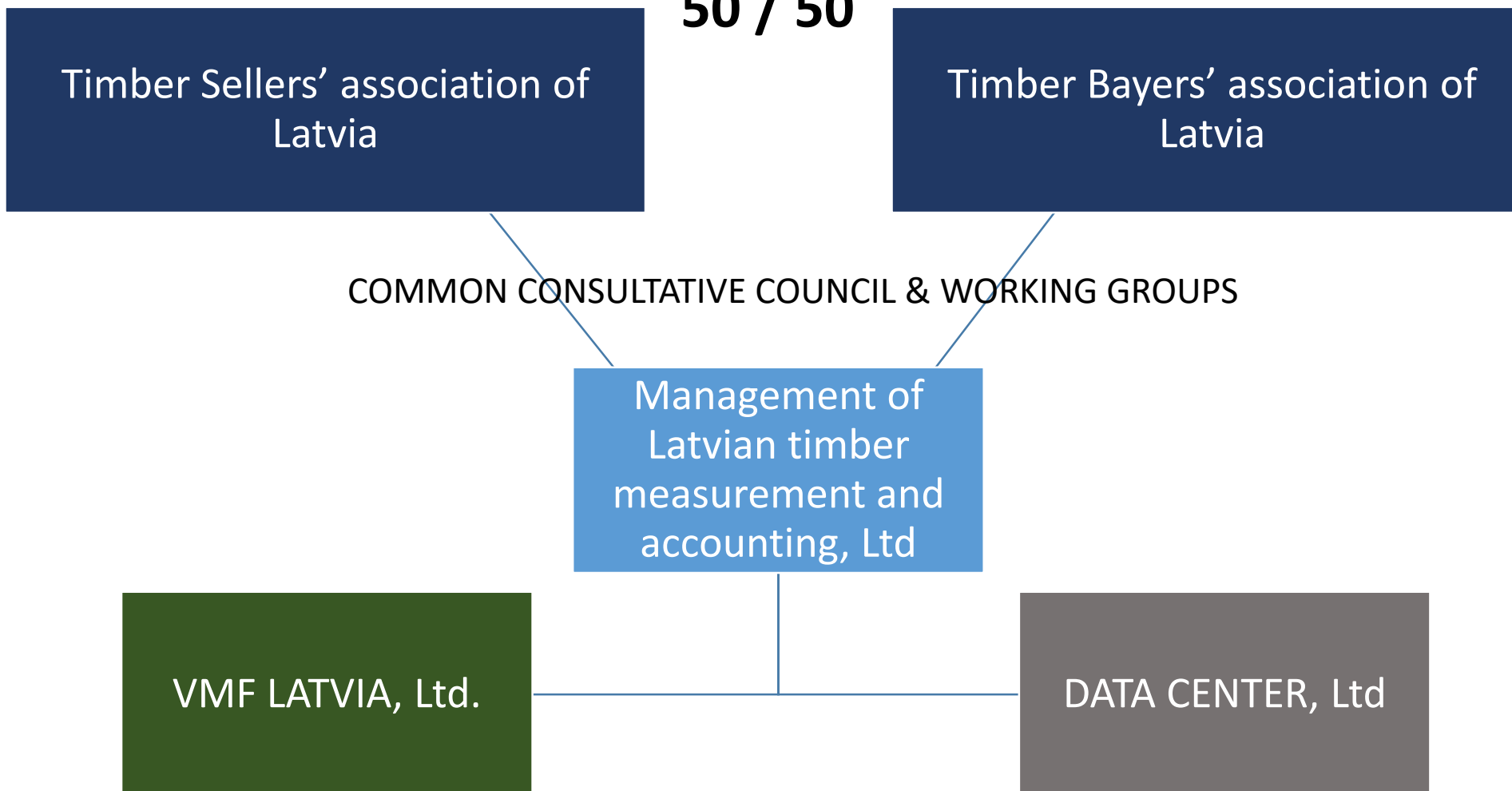
Investor: Timber Bayers' association of Latvia

Timber Sellers' association of Latvia

Operator: Data Center



50 / 50



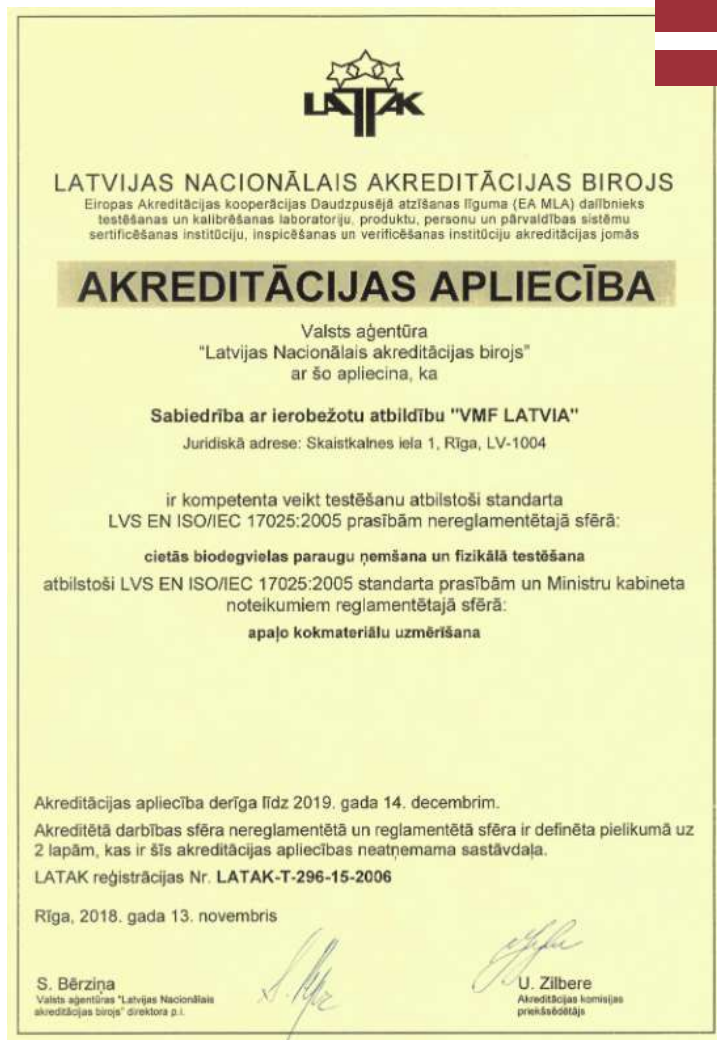
VMF LATVIA

DEVELOPMENT ROUTE, CHALLENGES, SOLUTIONS

THE LAB ACCREDITED BY LATVIA'S STATE AND SWEDISH BUSINESS

LVS EN ISO/IEC
17025:2005

LVS 82:20030

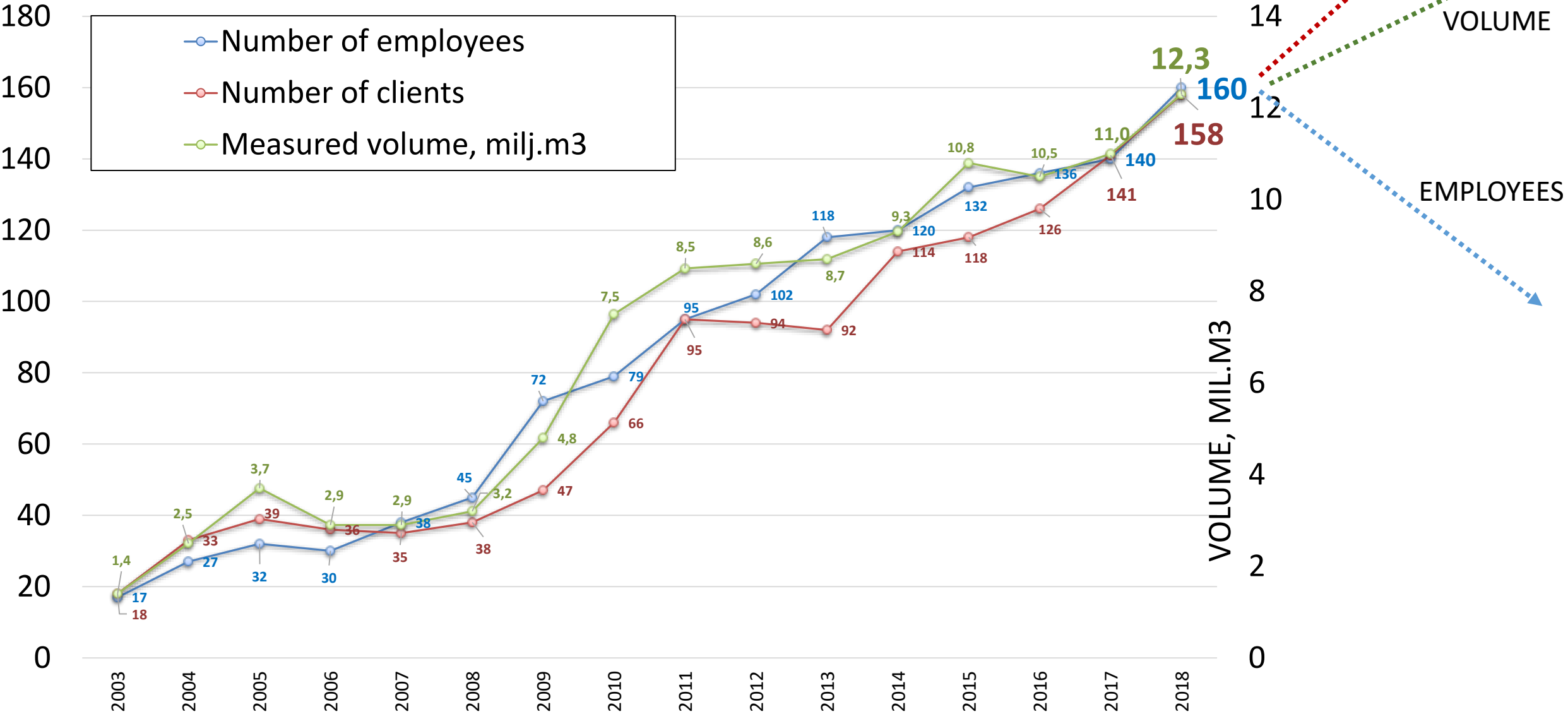


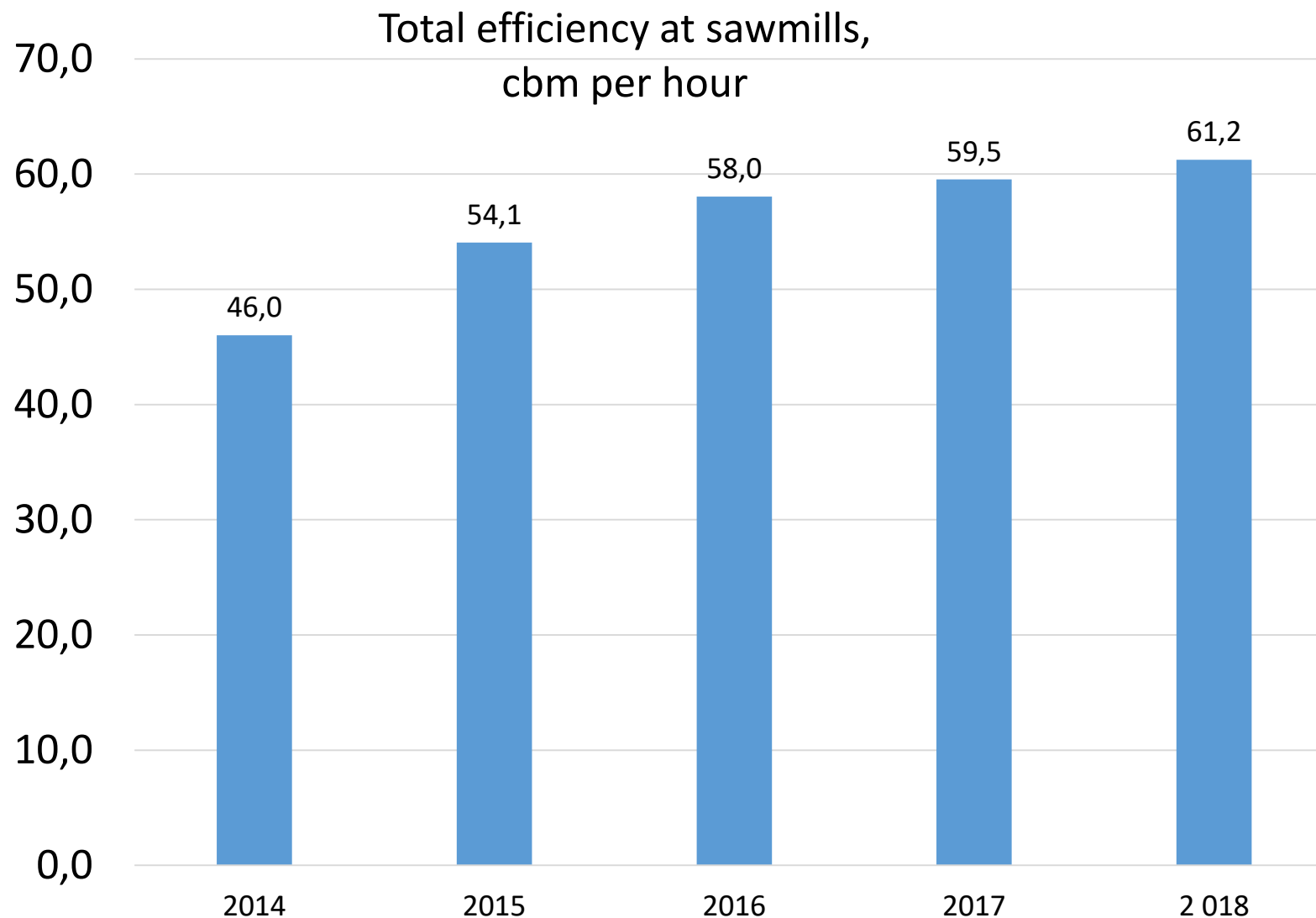
Swedish Timber
Measurement Council

VMR

VMFLATMA

DEVELOPMENT ROUTE, CHALLENGES, SOLUTIONS





REPORT

2 DAYS → **2 MINUTES**



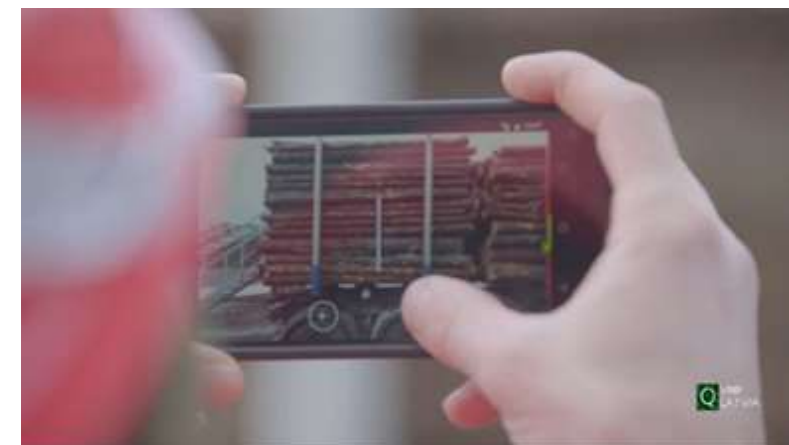
.XML DIGITAL FILES



TRANSPORT COSTS OF VMF LATVIA ARE FULLY REDUCED DOWN **TO ZERO**

1. Mobile Phone with

- Android OS (5.1 +)
- Camera (5 MP+)
- Gyroscope
- GPS
- 4G connection

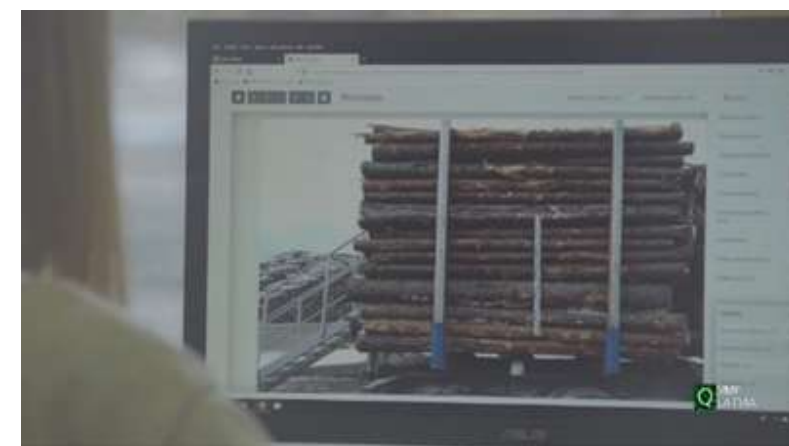


2. **VMF Mobile Photo app**



3. Reference measurement scale

- 1 m length
- Scale pattern for visibility



2019 COSTS OF VMF LATVIA SERVICE ARE REDUCED DOWN **5,3 TIMES**

grānulu invest



THE FUTURE BELONGS TO AUTOMATION:

- Automation of quality assessment of timber
- Automation of stack measurement
- Reduction of human factor in timber measurement and quality evaluation

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Rīga, LV-1004, Latvia

DATA CENTER

TO MAKE BUSINESS MORE TRANSPARENT, UNDERSTANDABLE AND EFFECTIVE



digital circulation of business documents (2019)

DELIVERY INSTRUCTION *transport order*

DELIVERY MESSAGE *e waybill*

SHIPMENT STATUS *also ownership*

MEASURING TICKET *measuring report*



DATA CENTER

TO MAKE BUSINESS MORE TRANSPARENT, UNDERSTANDABLE AND EFFECTIVE

DACE



papiNet

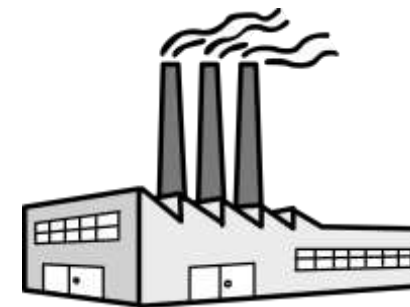


KOKSNES
PLŪSMAS
DATU CENTRS

digital circulation of business documents:

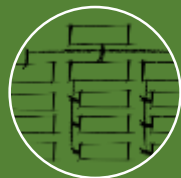


Q VMF LATVIA 20
UZTICAMI · ĀTRI · ĒRTI



MONEY

TIMBER



PLANNING
CONTROL



ACCOUNTING
INVOICING



STOCK
MANAGEMENT

ARE YOU READY?

DATA CENTER
Koksnes plūsmas Datu Centrs Ltd.
www.kpdc.lv
Skaistkalnes iela 1, Rīga, LV-1004

CONCLUSIONS

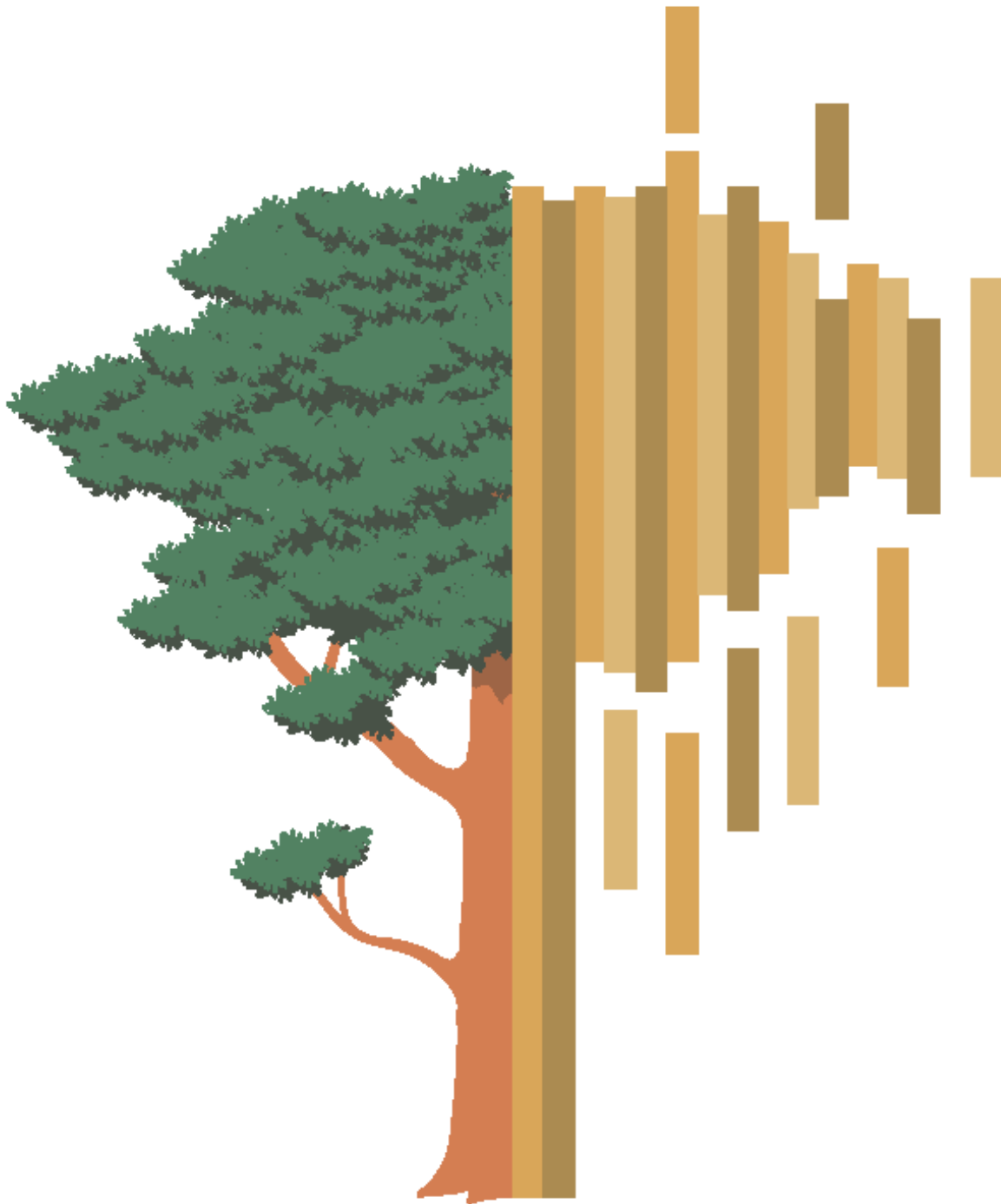
- ✓ REGIONAL COOPERATION AND INTEGRATION IN DIGITAL TRANSFORMATION MAY BE USEFUL IN GLOBAL COMPETITION
- ✓ A SIMPLIFIED NATIONAL REGULATORY ENVIRONMENT CAN INCREASE BUSINESS RESPONSIBILITY AND MOTIVATION
- ✓ STANDARDIZATION, HIGH QUALITY OF DATA AND MASTER DATA ARE NEEDED FOR THE EFFICIENT USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES

*«The present is rapidly moving
past and it is a continuous process»*



Foto: Aisla Dublāns

Vilnis Auziņš,
photographer



KOKSNES
PLUSMAS
DATU CENTRS