

SAVE THE DATE

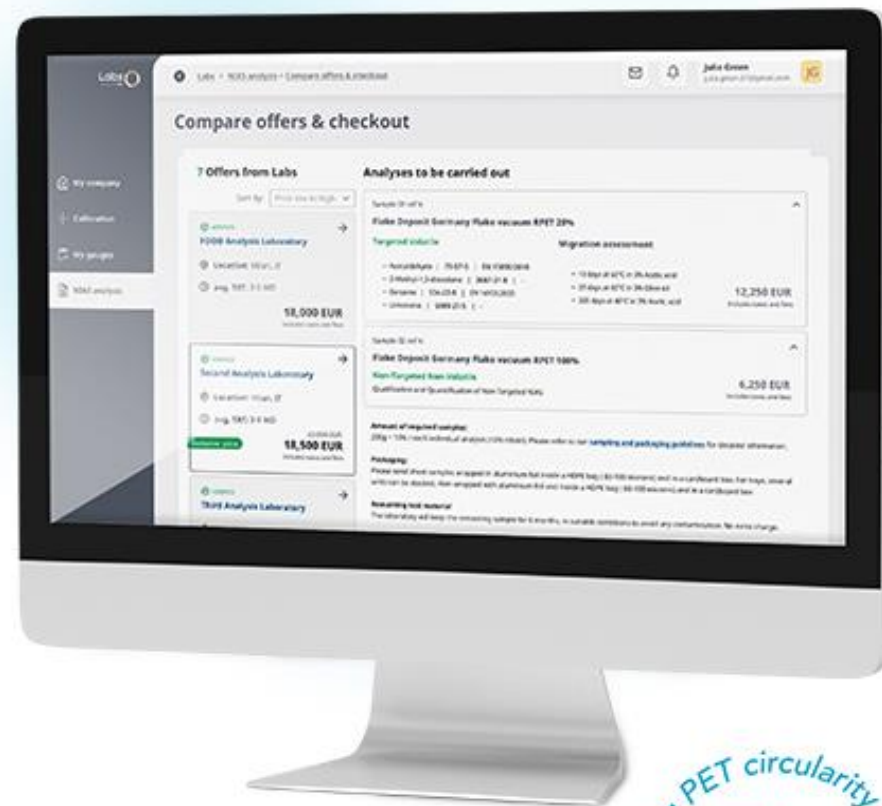
Petcore Europe - KÖR 4th Webinar **NIAS testing via Labs** & an outlook to migration tests

27 March 2024, 2.00-3:30PM CET

Register



Creating
Industrial Intelligence



Agenda



2:00 – 2:10 PM CET Introduction and disclaimer by Petcore Europe

SLIDO INTRODUCTION POLL

2:10 – 2:30 PM CET NIAS testing via Labs & outlook to migration tests by [Casper van den Dungen](#) (Petcore Europe)

- Status of development
- Next steps

2:30 – 3:10 PM CET NIAS testing via Labs & outlook to migration tests by [Bernd Schwarz](#) (KÖR)

- KÖR within the PET value chain (place & scope)
- 2023-2024 timeline
- New features
- Outlook on migration testing
- Outlook on Proficiency tests
- Wrap-up

Q&A

POLL-ABC Questions

Open Questions

3:10 – 3:30 PM CET Questions and Answers

PROHIBITED DISCUSSION TOPICS



General NI

•PRICES

- agreements on prices, costs, discounts...
- discussion on industry prices, price changes
- exchange information on price trends

•PRODUCTION:

- information on production capacity
- fixing of production quotas

•MARKET SHARES:

- agreements on market shares
- boycott suppliers
- division of the market
- allocation of sales territories, distribution or marketing

•CUSTOMERS:

- blacklist customers
- agree to classify or select potential customers

Petcore Europe staff can and will stop the meeting when “forbidden” items are being discussed!

Petcore Europe Mission



GEneral NIas



- Represent the PET value chain within the EU Institutions and all other stakeholders.



- Ensure that PET is positioned as an outstanding packaging material and recognized as circular.



- Support and validate innovative solutions to improve circularity.



- Work with all interested parties to ensure a continuous increase of PET post-consumer collection/sorting/recycling.

Introduction

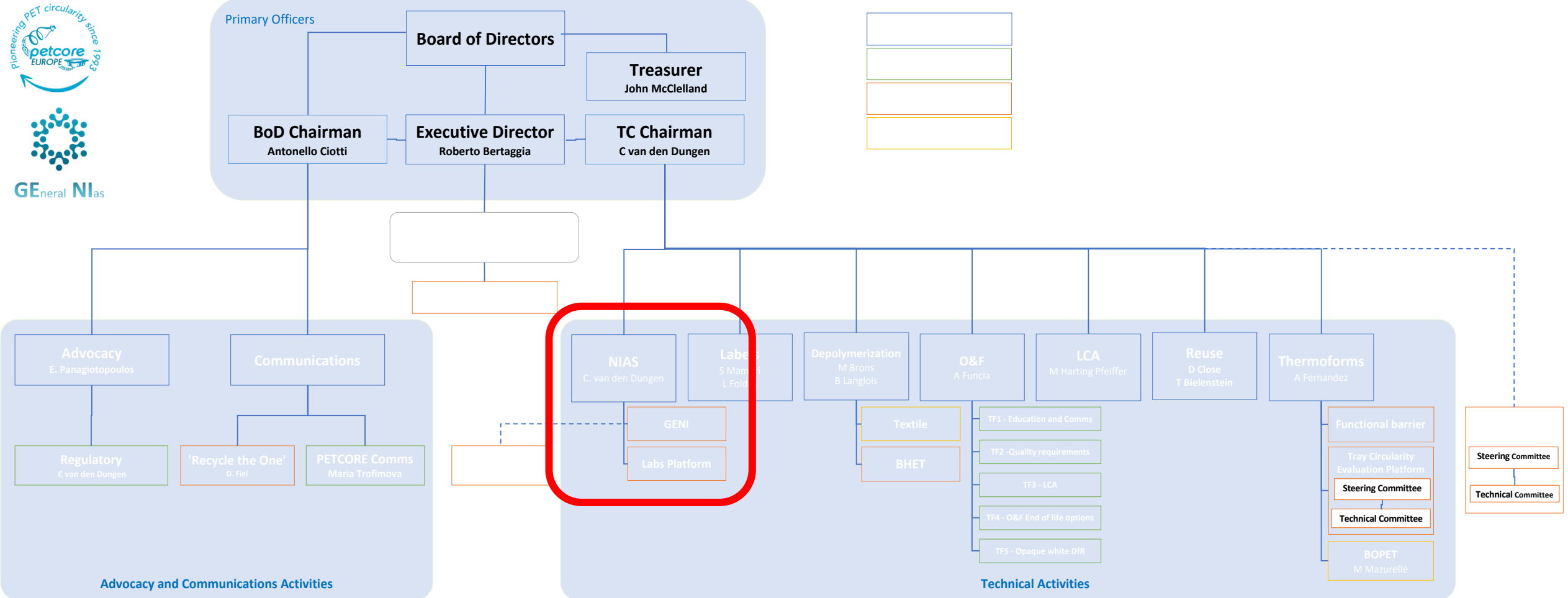


- Introduction PETcore Europe, Nias WG
- 2022/1616 snapshot
- Nias WG Status of development
- Wrap up

Petcore Europe: the whole EU PET Value Chain



NIAS WG in the Org Chart





Type of technologies

Suitable vs. novel technologies

Suitable technology

Two technologies are already listed as suitable:

- Post-consumer mechanical PET recycling.
- Recycling from product loops which are in a closed and controlled chain.

Novel technology

These are any technologies not listed as suitable.

The scope of the Regulation

What is included?



- The [Regulation \(EU\) 2022/1616](#) covers **all recycling processes** that produces a material or article **intended to come into contact with foods**.



- The Regulation has entered into force on **October 10th 2022**.



- It also includes **all types of waste** (e.g. pre-consumer waste).



- Therefore, the following is included:
 - *Functional barriers*
 - *Chemical recycling processes (excl. manufacture of substances incl. in Union list 10/2011)*
 - *Physical recycling processes (e.g. dissolution)*
 - *Mechanical recycling*
 - *Closed loop recycling ...*



- The goal is to cover **all polymers**.

Type of technologies

Suitable vs. novel technologies

Suitable technology

Two technologies are already listed as suitable:

- Post-consumer mechanical PET recycling.
- Recycling from product loops which are in a closed and controlled chain.

Novel technology

These are any technologies not listed as suitable.

Requirement on collection

Article 6 – collection and pre-processing

Article 6

Requirements for
Collection and
Pre-processing
activities
intended to be
recycled into
food contact
plastics

*Plastic waste originates from
municipal waste;*

*Plastic waste originates from
materials and articles manufactured
in line with Reg. 10/2011;*

- *Plastic waste is subject to separate
collection;*
- *The plastic waste shall be controlled
throughout collection and pre-
processing by means of quality
assurance systems.*



Not possible to recycled
plastics coming from
residual waste into food
contact applications.

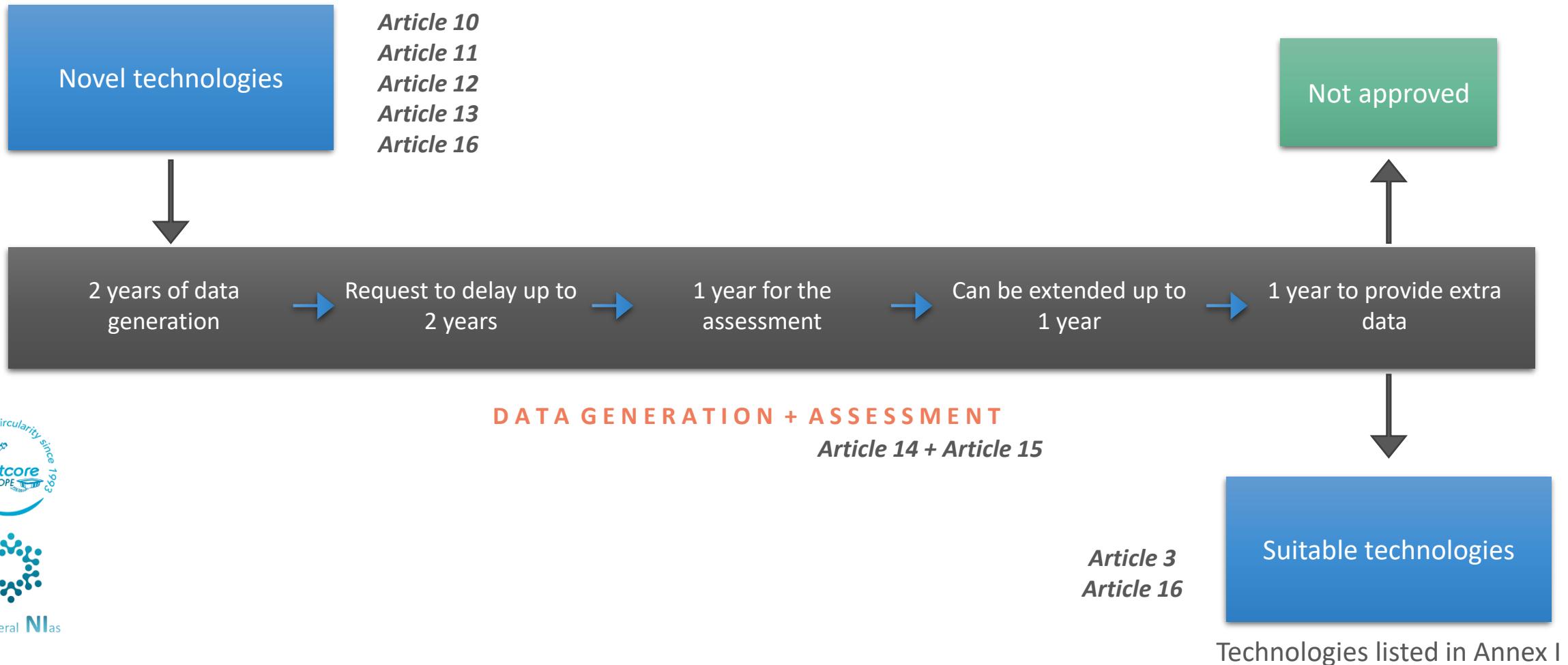


The plastics are separately
collected with others
packaging fractions or with
metal, paper or glass. It is
collected separately from
residual waste.

The article 6 can be derogated if an application under
the **novel technologies** is submitted.

Structure of the Regulation

How to become a suitable technology?



Novel technologies

Some examples



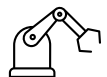
- More than 30 processes have already applied.



- Grocery store bags due to the clarification of the interpretation of “food contact materials”.



- Functional barriers (for PS, PET, LDPE).



- Decontamination technologies for polyolefins.

PET materials and articles in which the recycled plastic is used behind a **Functional Barrier**.

Detailed information required by Article 32 of Regulation (EU) 2022/1616.

5 April 2023.

Figure 1: trays produced by thermoforming A/B/A sheets containing rPET in the B layer



What are the benefits of GEneral NIAS ?



• Objectives

- Safeguard the FCM standards for PET
- Use the Obligatory Nias testing as input to collected data
- **Centralise data on NIAS studies**
- **Monitor its development**
- Track the trends on impact of RPET
- Identify potential specifics
- Risk assess the NIAS identified
- Give recommendation to the value chain to control NIAS development

• Scope

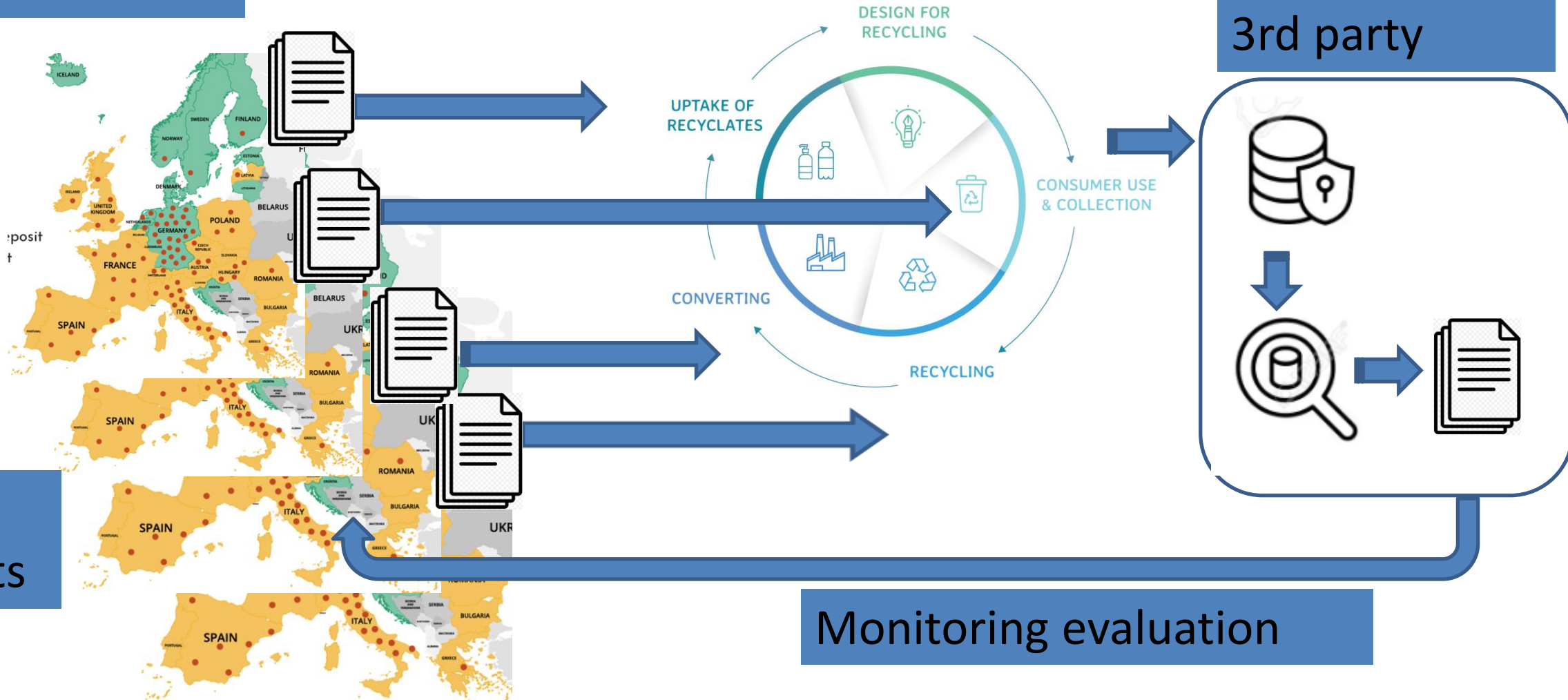
- The whole value chain
 - Virgin Resin Producers
 - Converters, Bottles & trays
 - Brand owners
 - Additives manufacturers
 - Machine manufacturers
 - Recyclers
 - Retailers

How does the monitoring look like?

Eu representation

Value chain contribution

NDA based
3rd party



Nias
reports

Monitoring evaluation

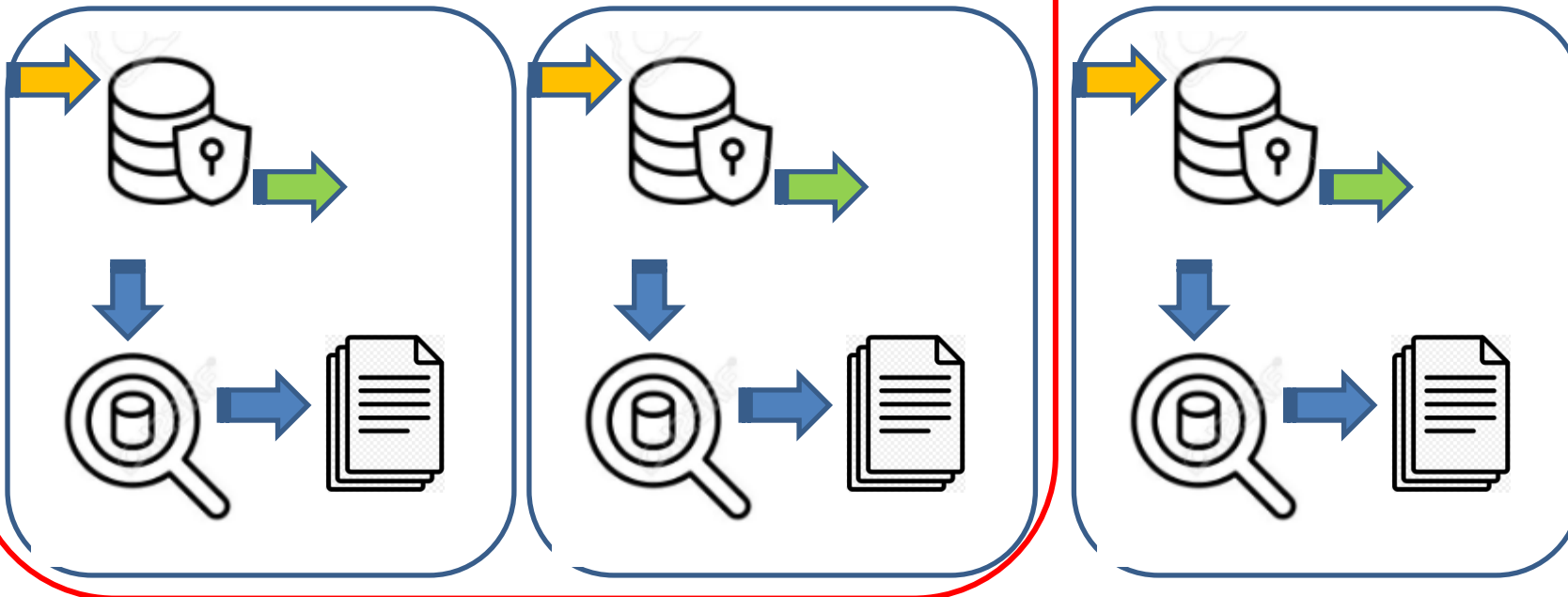
How does Labs platform look like?

PETCORE Labs for 3 identical usersgroups

Functional
barrier group

BHET group

Geni group



Monitoring reporting and evaluation according own requirements

How does Labs platform look like?

PETCORE Labs for 3 identical usersgroups

Functional
barrier group

BHET group

Geni group

Started
in 2023

Start
in
2024,
TBC

Start
in
2024,
TBC



GEneral NIas

Status of development

• 2023

- Define scope of work
- Work flow structure is created
- 3rd party work package is defined
- Select 3rd based on offers
- Run trials data collection of Nias reports
- Create reference list of preferred laboratories

• 2024

- Evaluate and adapt workpackage, Functional barrier
- Secure governance of operation
- Launch active data collection
- Monitor developments
- Evaluate, assess & report as needed
- Introduce BHET and Geni Group



GEneral Nias

Next steps

- Today
 - Present Functional Barrier experience
- 2024
 - Improve awareness, increase value chain interaction
 - Organise webinar to update Nias Guidelines methods
 - Complete the Nias analysis program for value chain
 - VoC, S- & N-VoC, as screening and targeted option
 - Migration options, OM & SM
 - Communicate the introductions date new usergroups
 - Organise webinar to facilitate onboard Platform use

Wrap up



- 2022/1616 has clear guidelines to monitor Nias in the value chain
- Novel technologies require Nias measurements to proof the Food safety.
- Nias WG is creating databank to monitor the development of RPET
- Nias WG & Kör developed the Labs platform for RPET Nias measurements
- Currently Functional barrier consortio is actively using the platform screening



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THANK YOU !



Creating
Industrial Intelligence

NIAS testing via Labs & an outlook to migration tests

Petcore KÖR Webinar

27th March, 2024.

Agenda

1. Who we are?
2. KÖR within PET value chain
3. 2023-2024 timeline
4. New features
5. Outlook on migration test
6. Proficiency test
7. Wrap up
8. Q&A

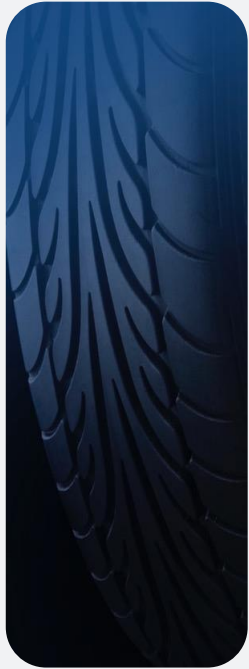


Who we are?

KÖR, more than your testing integrator.

Labs, built to satisfy quality assurance testing needs.

KÖR



Automotive



Heavy & other
transportation



Electronics



Chemical
Petrochemical



Plastics
Polymers



2020
KÖR Group
Foundation



2021
KÖR
Innovations
Germany
GmbH
established



2022
KÖR acquires
TPM (TRIGO
Precision
Measurement)

KÖR within the PET value chain

Involvement of KÖR within Petcore Europe

Joint efforts with Petcore to partner to support members in:

- **Functional Barrier /BHET Consortio**
 - To facilitate novel technology reporting to DG Sante and its monitoring
 - For members to be filing to DG Santé to comply with article 32 on functional barrier of EU 2022/1616.
- **GeNi (General NIAS)**
 - Facilitate the NIAS reports and monitoring of bottles and trays throughout the PET value chain
- **Proficiency tests:**
 - Proof for Laboratory quality results
 - Enabler to create a wider laboratory pool
 - Opens the possibility to develop industry standard methods



Introduction of Labs platform for Monitoring PET NIAS Accompany Letter

Working group NIAS of Petcore; Harmonized NIAS measurements - Offering Labs, KÖR's online platform for the PET value chain to harmonize compulsory measurements.

As Petcore Europe is representing already more than 170 members of the PET value chain, it has decided to create an online platform that offers supply and demand for harmonized NIAS measurements. The basis of the measurements was already set by the published guidelines for NIAS measurements* back in 2020. Trails of these measurements have been performed by taskforce which was presented on the Petcore Europe conference in 2023. The NIAS Working Group is responsible for organizing the introduction of this platform.

By the introduction of the new regulation for direct food contact applications EN 2022/1616, extra NIAS data are requested for the development of the novel technology but also for the monitoring of the suitable technology. The target of the platform is to create a harmonized concept which enables all members of the value chain to order PET NIAS measurements. The reports will be in a standard digital format which will facilitate the monitoring function of the various results in time. A special database function will be integrated which can be used to manage the monitoring function. As different reports and monitoring will be required 3 different Databases will be created individually have secured and limited access. These sub-platforms are the following:

- **Functional Barrier Group** (to facilitate the novel technology reporting to DG Sante and it's monitoring)
- **Depolymerization Working Group** (to facilitate the BHET reporting to DG Sante and it's monitoring)
- **Geni Group** (to facilitate the NIAS reports and monitoring of bottles and trays throughout the PET value chain)

For the demand of NIAS measurements all Petcore Europe members of these groups will be offered to contribute to use the Labs online platform.

For the supply of NIAS measurements, many laboratories are targeted to contribute to this platform as the required capacity and the today presented ones will require this. As the harmonization requires a validated level playing field, it is required that the different laboratories need to comply to base the monitoring of the results on a repeatable quality level. A proficiency test is required for the laboratories to secure the contribution of the results to this platform. We do understand that PET NIAS measurements can consist of targeted and non-targeted substances. The proficiency test will need to address both options to assure consistency in the results.

The Labs online platform is provided by KÖR (www.kor-group.com), a company that has been selected to tailor-made their existing and proven, cloud-based supply and demand solution to all Petcore Europe Members. They need to be able to order NIAS measurements at various laboratories. As KÖR is working in a 17065 ISO and in a 27001 ISO environment, specific requests are needed to build the functionality of the platform. As Petcore Europe we seek the support and cooperation of facilitating information and opportunities to help building this harmonized concept of supply and demand for NIAS measurements.

Casper van den Dungen
Chairman - NIAS Working Group

Martin Stephan
Secretary General - Petcore Europe

Gyula Tóth
CEO - KÖR

Scope

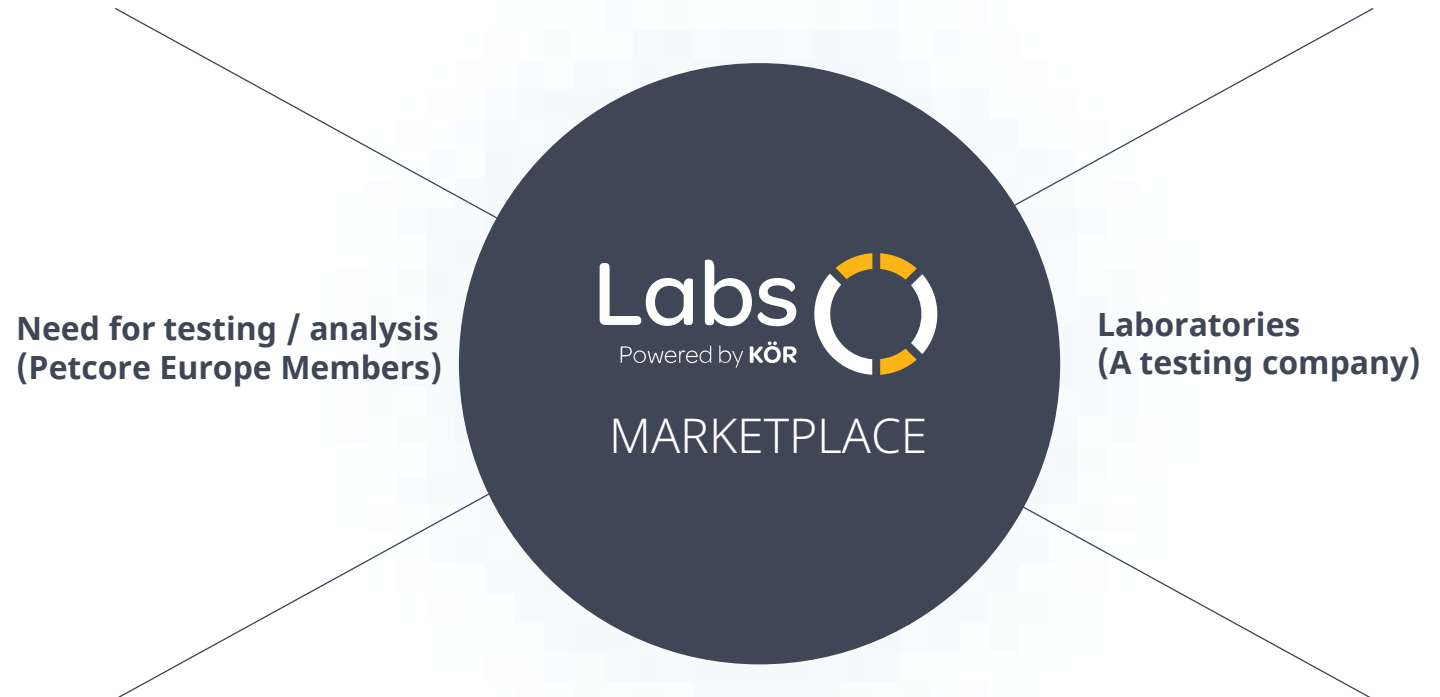
Digital marketplace for lab requests.

Labs, a two-sided managed marketplace. Integrated bubble especially tailored for **Petcore Europe members**

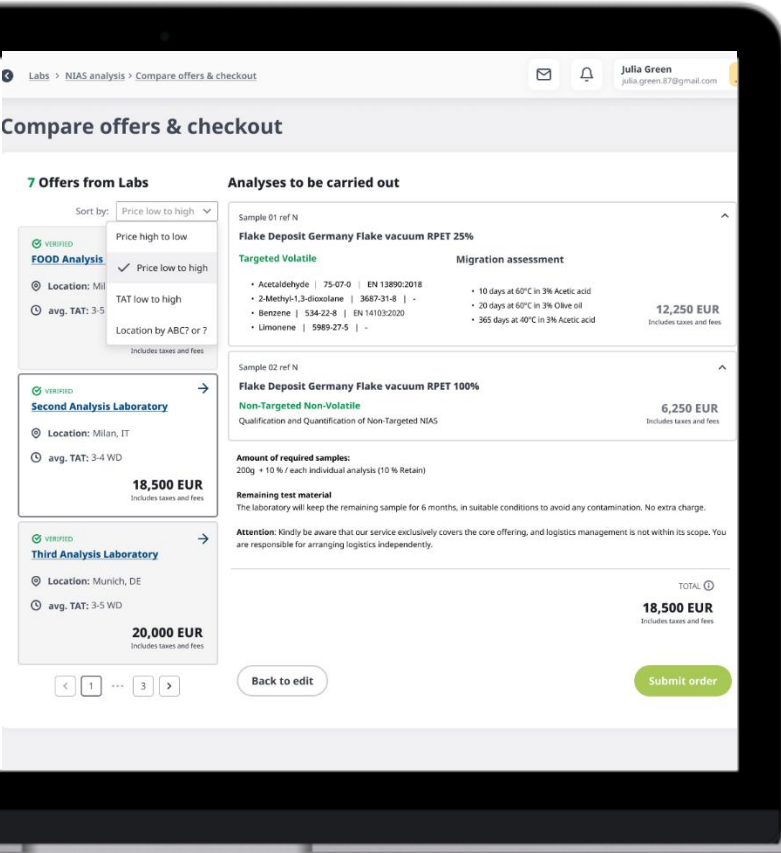
Scope of Labs

To create a harmonised concept that enables members of the PET value chain:

- to find the right testing partners (ISO 17025)
- to order FCM testing,
- to order PET NIAS measurements,
- to order migration tests,
- to deliver you comparable data and comparable results,
- to have centralized and standardized results,
- to optimize costs,
- to have accessible and secured data



Simplification

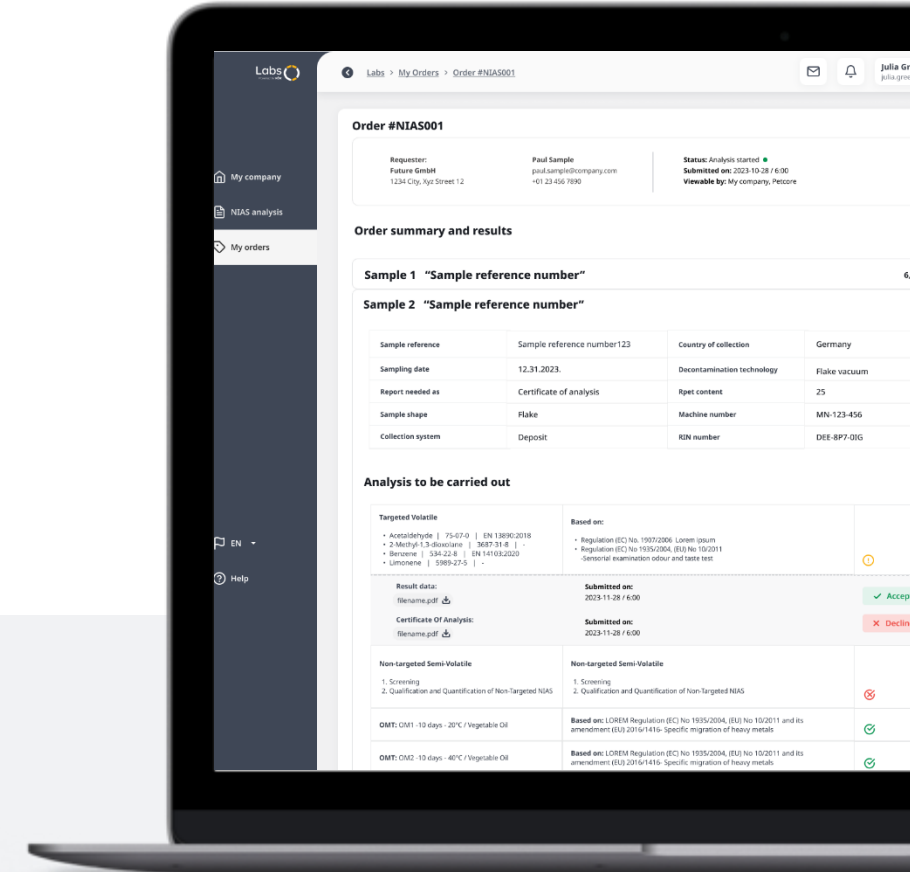


Labs is there for you to be able to **simplify and optimize:**

- Food Contact Material Testing,
 - NIAS PET Testing
 - Migration Testing,
- through KÖR's digital platform: Labs .


Labs solves

- Testing related challenges of Petcore Europe members:
 - perform the right measurement.
 - proficiency tests to provide proven data
 - aggregating data in the same format.



To see the video, click on the link:

<https://www.petcore-europe.org/images/2024/25-3-2024-presentation/25-03-2024-media1.mp4>


Powered by KÖR

My company

Calibration

My Gauges

NIAS analysis

Help

Version 49b53709

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General Terms & Conditions

Privacy Policy

Vendor Terms & Conditions

Labs > NIAS analysis > Submit order for NIAS analysis

134

Fatima Kazár

B Company

FK

What needs to be analysed?

What type of analysis needed? NIAS analysis

Sample 01

General information

Sample reference

ffff

Sampling date

03 / 14 / 2024

Reports needed as

Certificate of analysis with result sheet

Specifics for sample

Sample shape

Flake from trays

Collection system

Deposit

Country of collection

Hungary

Decontamination technology

Fb x1

rPET content %

20

Machine number

rl0123

RIN number

RL0123

Analysis to be carried out

Tick the box corresponding to determination to be carried out

<input type="checkbox"/>	Targeted Volatile	Quantification of targeted volatile NIAS • Targeted substance list TBD.
<input checked="" type="checkbox"/>	Non-Targeted Volatile	Qualification and semi-quantification of non-targeted volatile NIAS
<input type="checkbox"/>	Targeted Semi- Volatile	Quantification of targeted semi-volatile NIAS • Targeted substance list TBD.
<input checked="" type="checkbox"/>	Non-Targeted Semi-Volatile	Non-targeted semi-quantification of semi-volatile NIAS
<input type="checkbox"/>	Targeted Non- Volatile	1. Screening and 2. qualification and quantification of targeted non-volatile NIAS • Targeted substance list TBD.
<input checked="" type="checkbox"/>	Non-Targeted Non-Volatile	Qualification and non-targeted semi-quantification of non-volatile NIAS
<input type="checkbox"/>	Oligomers	Quantification of oligomers

NIAS requests

Search by ID

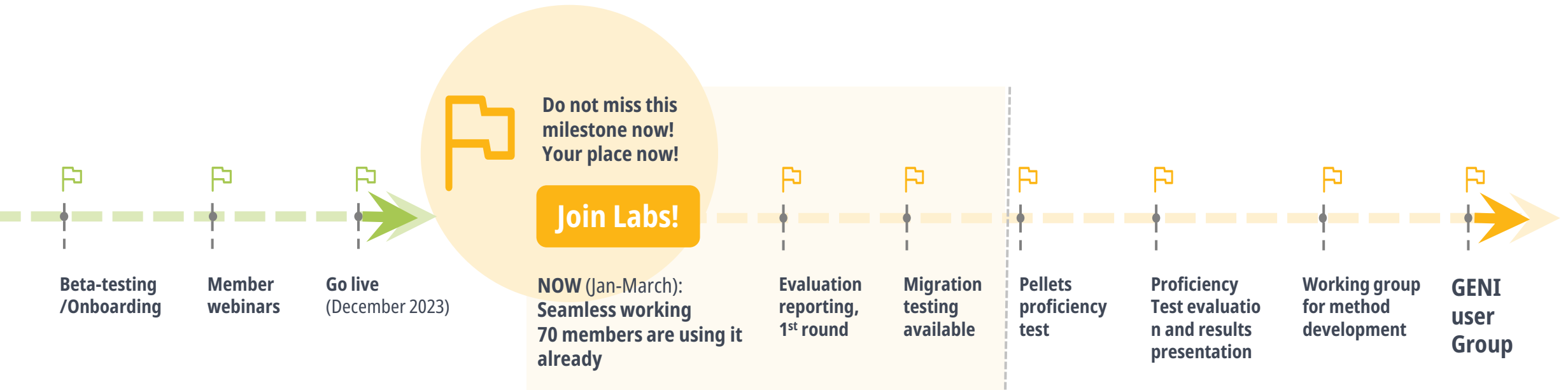
+ NIAS request

Request ID	Status	Submitted on	Viewable by	Delivery report status	...
RPET-595676	● Order confirmation pending	2024-01-16 14:51	the MVP company, Petcore FB	—	...
RPET-596376	● Draft	2024-01-09 09:05	the MVP company, Petcore FB	—	...
RPET-032419	● Draft	2024-01-09 09:05	the MVP company, Petcore FB	—	...
RPET-284103	● Draft	2023-12-21 08:29	the MVP company, Petcore FB	—	...
RPET-641658	● Draft	2023-12-21 08:27	the MVP company, Petcore FB	—	...
RPET-169084	● Draft	2023-12-21 08:26	the MVP company, Petcore FB	—	...
RPET-370160	● Draft	2023-12-20 15:33	the MVP company, Petcore FB	—	...
RPET-852230	● Draft	2023-12-20 15:30	the MVP company, Petcore FB	—	...
RPET-598176	● Draft	2023-12-20 10:59	the MVP company, Petcore FB	—	...
RPET-859930	● Draft	2023-12-15 10:21	the MVP company, Petcore FB	—	...
RPET-167984	● Draft	2023-12-11 15:41	the MVP company, Petcore FB	—	...
RPET-379260	● Analysis started	2023-12-11 14:58	the MVP company, Petcore FB	—	...
RPET-854430	● Draft	2023-12-11 14:40	the MVP company, Petcore FB	—	...
RPET-918922	● Draft	2023-12-11 12:40	the MVP company, Petcore FB	—	...
RPET-283403	● Draft	2023-12-08 09:43	the MVP company, Petcore FB	—	...
RPET-038019	● Draft	2023-11-27 17:26	the MVP company, Petcore FB	—	...

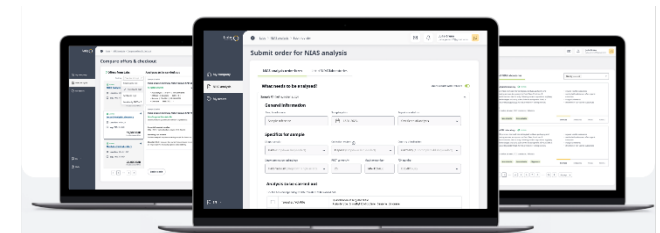
2023-2024 timeline

Labs timeline

A platform that provides clients with control



Labs
Powered by **KÖR**



New features

The future is interactive

FOR CUSTOMERS

- **Customer price agreements with Laboratories will be available in Labs.**
- Label printing with QR code for sample shipment.
- Post-work feedback and laboratory rating
- Advanced order editing functions: revoke or edit after submit
- More specific information about laboratories
- **Better email notification system**
- **User experience improvements**

User feedback



FOR LABORATORIES

- **More dynamic pricing function:**
 - prices will be changeable by labs anytime to follow pricing trends
 - custom prices will be available for handling discounts and other special price agreements
- QR code generation with sample data, and label printing
- Post-work feedback and laboratory rating
- **More specific information about laboratories' turn-around times**
- Advanced order editing functions: revoke or edit after submit
- Better email notification system
- **User experience improvements**

Outlook on data storage & handling



Anonymized data result
(Petcore data bank)



Access to visualization own data



Aggregated results



Customer-based dashboards
(trends, periodical comparisons etc.)



Decontamination technology efficiency



Dashboard comparing own data
to the aggregated trends of the industry



Statistical data available in Labs soon



Bring Your Own Data – upload
(historical analysis result data, aggregation possibility, trends, comparisons)

Keep it interactive...

FOR CUSTOMERS

- Provide automatic data transfer
- Ability to integrate Labs with ERP Systems for smoother administrative process
- A wide variety of tests - any kind
 - multi-level user roles and permissions, mirroring customer and laboratory organization hierarchy
- Single sign-on
- Logistics provider selection in Labs
- Machine learning based data analysis and proactive alerting for possible upcoming contaminated sample trends

User feedback



FOR LABORATORIES

- Ability to integrate Labs with LIMS solutions
- Built-in sample shipping and package tracking
- Real time automatic pricing system for vendors to provide more optimal prices, and stay competitive
- Automatic matching of SML data

Outlook on migration testing

Migration next steps

OVERALL MIGRATION		
	Time	Temp
OM 0	30 mn	40°C
OM 1	10d	20°C
OM 2	10d	40°C
OM 3	2h	70°C
SPECIFIC MIGRATION		
SM	10d	5°C 20°C 40°C 50°C 60°C 70°C
Only cell and pouch are allowed		

SIMULANT	
Simulant A	Ethanol 10%
Simulant B	Acetic Acid 3%
Simulant C	Ethanol 20%
Simulant D1	Ethanol 50%
Simulant D2	Vegetable Oil
Substitute 1 for D2	95% Ethanol
Substitute 2 for D2	iso-Octane
Simulant E	Tenax 60-80 mesh, pore size 200nm

Analysis after specific migration

Method	Analyte
Screening after specific migration	VOC-, semi-VOC, non-VOC NIAS (semi-quantitative)
Targeted NIAS quantitative	VOC-, semi-VOC, non-VOC NIAS
EN 13130-2	Quantitative determination of terephthalic acid iso-phthalic acid in food simulants
EN 13130-7	Quantitative determination of monoethylene glycol and diethylene glycol in food simulants
EN 13130-1	Quantitative determination of primary aromatic Amines
EN 13130-1	Elements (Ba, Co, Mn, Zn, Cu, Fe, Li, Al, Ni, Hg, Cr, As, Pb, Cd, Sb)

Proficiency tests

Proficiency tests 2024

FB SHEETS

- Samples prepared and sent to the laboratories
- Analysis started
- Evaluation after result upload

PET PELLETS

for onboarded and company internal laboratories

OVERALL AND SPECIFIC MIGRATION

for onboarded and company internal laboratories

Workflow proficiency test



Info/selection of Tests/materials on LABS

- Info-sheet download per RR
 - Material
 - Parameter(s)
 - Methods
- Background



Order Form on LABS

- Invitation letter to laboratories
- Test protocol incl.



Order via LABS

- Easy selection
- Transparent costs
 - Incl. logistic



1.) Order confirmation 2.) Sample shipping confirmation

- Sample preparation and packing
 - Samples blind-coded
- Sample forwarding with info sheet
- Tracking number to participant



Confirmation of „sample arrived“

Download result sheet

Sample analysis according to RR scheme

Upload of filled result sheet

- Pre defined result sheet
- Down-/Upload function on LABS
- Database for result storage
- Confirmation of successful upload



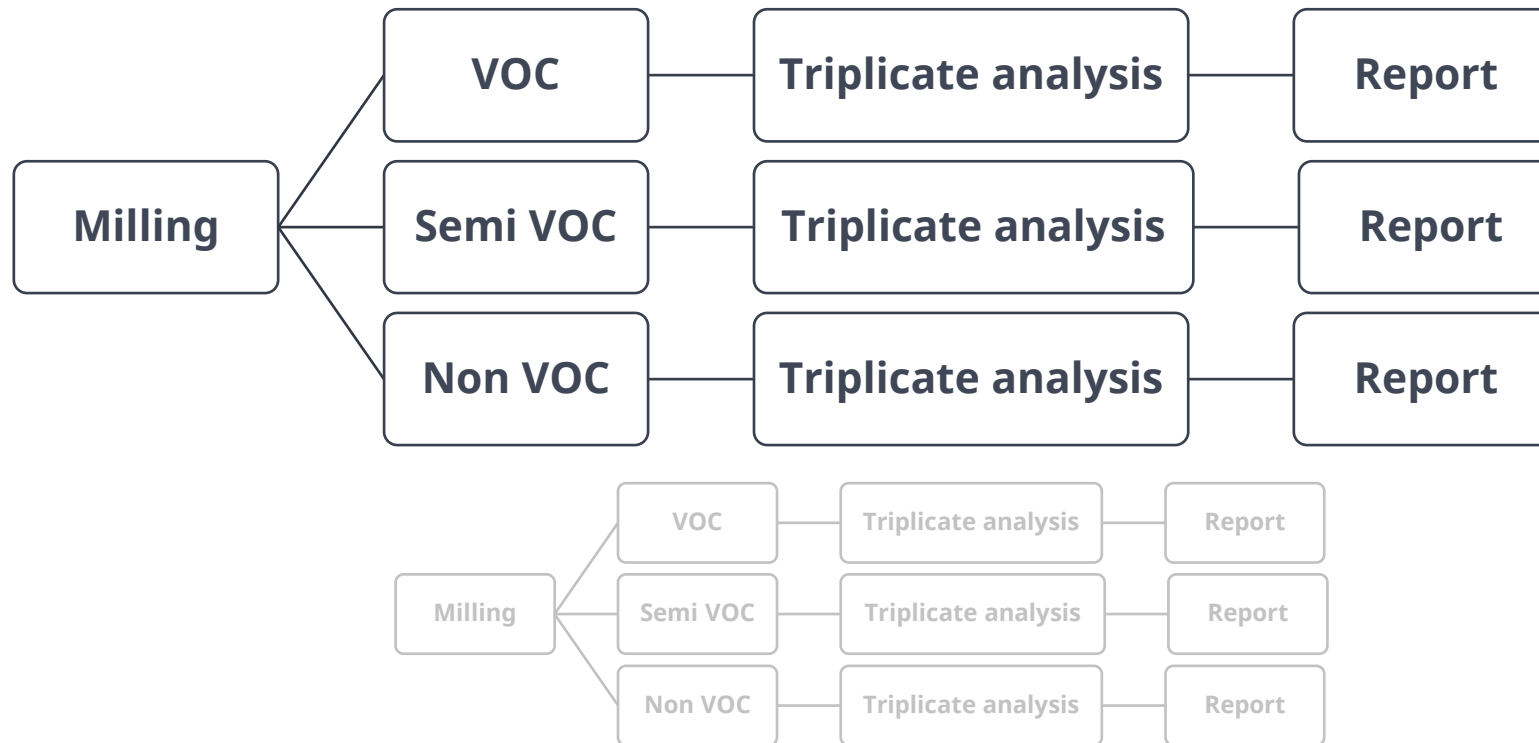
Result evaluation

Transmission of results and statistics

- Result generation incl. statistical evaluation
- Report generation
- Results to participant

Analysis scheme

Evaluation of repeatability and consistency per Laboratory



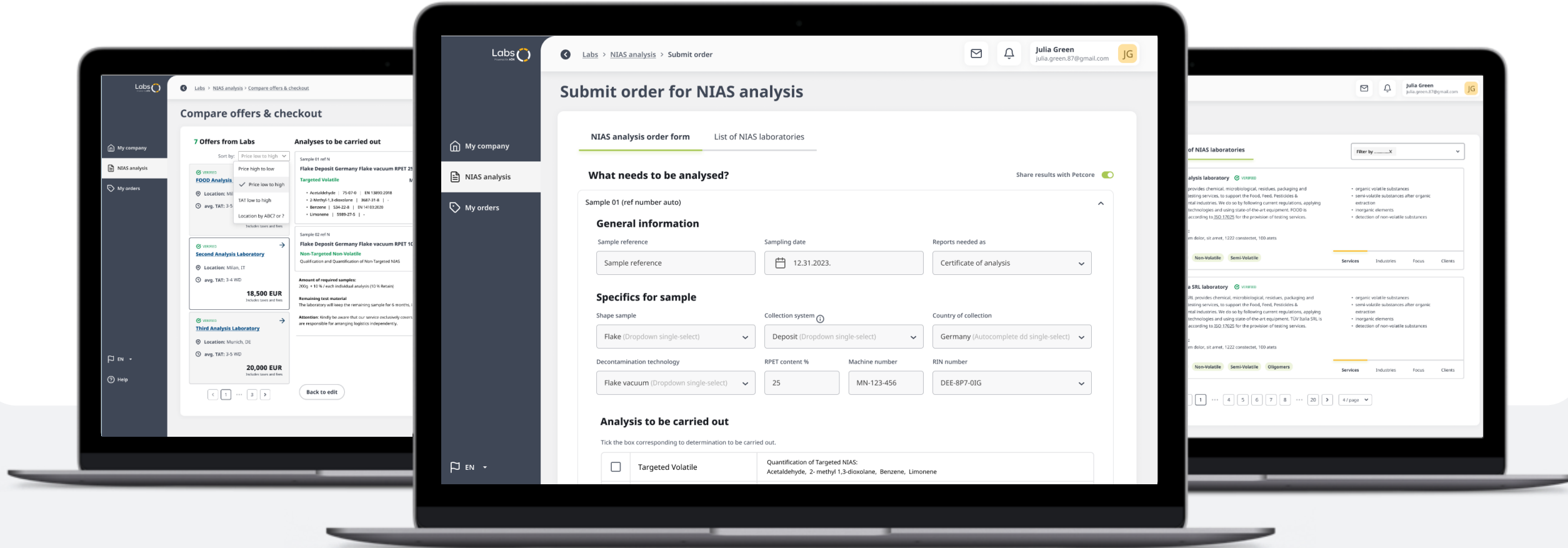
Semi quantitative screening and quantitative detection of target substances

Matrix NIAS screening

		Grinding			Grinding		
Non targeted NIAS screening		1 st Analysis			2 nd Analysis		
Sample 1	Extraction conditions	Result 1	Result 2	Result 3	Result 1	Result 2	Result 3
VOC semi quantitative screening	100°C/1h	x	x	x	x	x	x
	150°C/1h	x	x	x	x	x	x
	200°C/1h	x	x	x	x	x	x
Semi-VOC semi quantitative screening	Extraction conditions	Result 1	Result 2	Result 3	Result 1	Result 2	Result 3
	Time/temp/solvent	x	x	x	x	x	x
Non-VOC semi quantitative screening	Extraction conditions	Result 1	Result 2	Result 3	Result 1	Result 2	Result 3
	Time/temp	x	x	x	x	x	x

Wrap-up

Labs your digital platform for your testing needs



Values



**Single gate service complying to
Petcore Europe**



**All kinds of FCM, NIAS, migration,
ROHS, PFAS REACH tests are available**



Real time price offers



Comparable data, comparable results



**Wide laboratory network
competitive test-prices guaranteed**



**Data security and accessibility acc.
to ISO27001 requirements**



Standardized, good quality data and reporting



Compliance with EU / other regulations



17025 Accredited and Certified Laboratories



Technical support along your testing needs

KÖR Team

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If you think of quality assurance testing think of Labs & KÖR!

Sign up today!

Reach out to us if you have forward looking inputs!



Thank you!

Bernd SCHWARZ

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Q&A



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**Thank you for attending
You can also find us on**



Presentation & recording will be shared on the 1st April