

# Introduction of the webinar and training activities

## Test Performance Studies organisation

Videos	What is a TPS?	On the week 02/15
Videos	VALITEST TPS: selection of the pests and of the TPS organizers	On the week 02/15
Webinar 1	<b>Preparing the TPS plan</b>	<b>Friday 19/02, 11am</b>
Webinar 2	Selection of the tests and associated documents	Wednesday 24/02, 2pm
Webinar 3	Selection of participants and contract	Monday 1/03, 2pm
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Webinar 6	How to tackle the analysis of TPS results?	Monday 22/03, 2pm
Videos	Calculate performance characteristics of a test and get useful information from your validation data by statistical analysis.	On the week 22/03
Webinar 7	Q&A session: the statistical analysis of TPS results	Monday 29/03, 2pm
Practical training sessions	How to analyse the results of Test Performance Studies?	30/03-1/04 (3 sessions)
Webinar 8	From TPS organisation to analysis of the results: example of the TPS on ToBRFV	Wednesday 7/04, 2pm
Videos	Reporting TPS results	To be confirmed/announced

# Preparing the TPS plan

2021-02-19

Françoise Petter (EPPO)  
Charlotte Trontin (EPPO)  
(Géraldine Anthoine (ANSES))



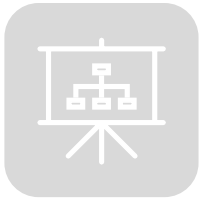
## TPS organizers

Natasa Mehle (NIB, SI)  
Monica Mezzalama (UNITO, IT)  
Catherine Harrison (Fera, UK)

Link to the Online Webinar:

<https://attendee.gotowebinar.com/recording/3362444409807066375>





# Outline of the presentation

- Introduction: TPS vs PT
- The TPS plan
- Interviews of TPS organizers (video)
- Q&A session with TPS organizers

# Interlaboratory comparisons

## Interlaboratory comparison

Test performance study  
(also called ring test or  
collaborative trials)

Evaluate the performance  
of a test

Proficiency test

Evaluate the performance  
of a laboratory

PM 7/122 (1) Guidelines for the organization of  
interlaboratory comparisons by plant pest  
diagnostic laboratories

# Main objectives of TPS and PTs

For more details see Table 1 of PM 7/122

	PT	TPS
a) Evaluation of the accuracy of the results produced by laboratories for specific tests and monitoring laboratories' continuing performance	X	
b) Identification of problems in laboratories which should lead to the initiation of actions for improvement. For example, these may be related to inadequate test procedures, effectiveness of staff training and supervision, or verification of equipment	X	
<b>c) Establishment of the comparability of tests</b>		<b>X**</b>
<b>d) Establishment of the effectiveness of a test</b>		<b>X</b>
d) Provision of additional confidence to laboratory customers	X	
e) Identification of interlaboratory differences	X	
f) Education of participating laboratories based on the outcomes of such comparisons	X	
<b>g) Establishment of uncertainty levels</b>		<b>X</b>
<b>h) Evaluation of the performance characteristics of a test</b>		<b>X</b>

\*\* when several tests are included



## Poll 1

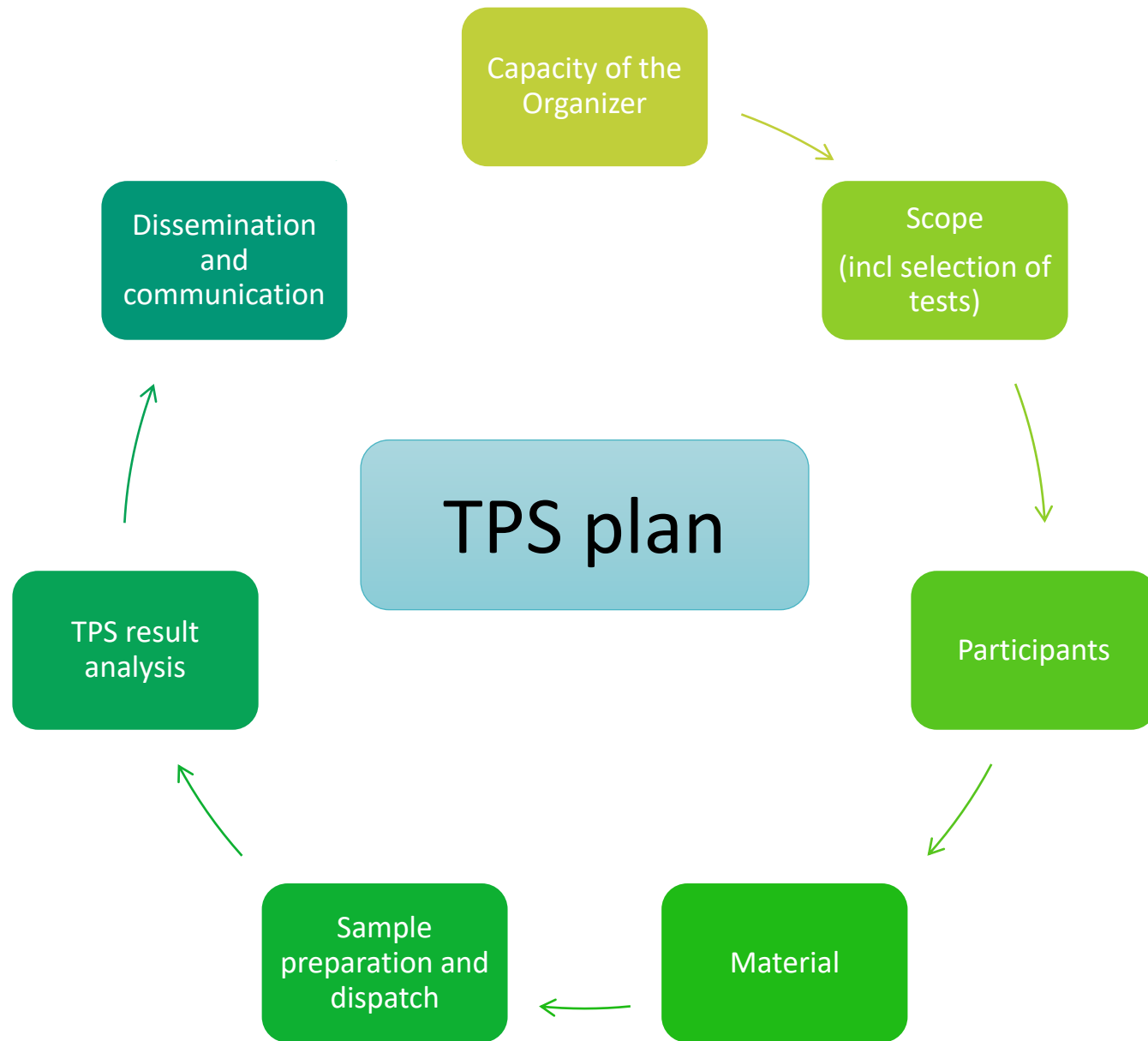
# Do you organize Interlaboratory Comparisons?

select one answer

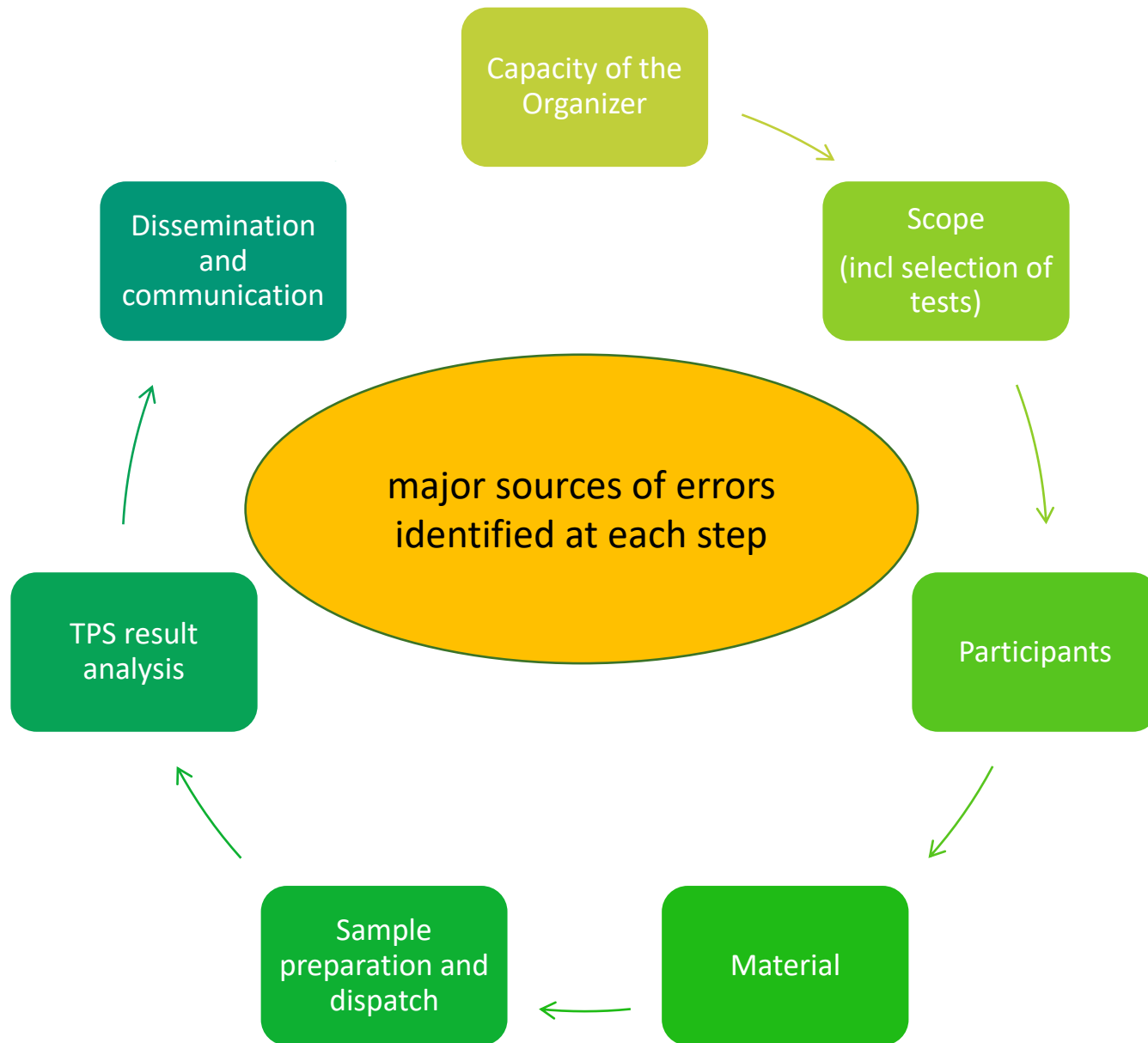
- No
- Yes Test performance studies
- Yes Proficiency tests
- Yes Test performance studies and Proficiency tests



# **Test Performance Studies (TPS)**







# Capacity of the organizer:

The TPS has to be feasible both biologically and logistically

Equipment and facilities

Experience?

Subcontracting for TPS?



**NO for technical competence on pest and test**



**YES for statistical analysis**

Procedures and forms are available

Resources  
(avoid that one person is responsible of several tasks)

Clear designation of responsible staff

# Equipment and facilities: examples

## Quality assurance system in place in the laboratory

In EPPO region PM 7/84 and PM 7/98

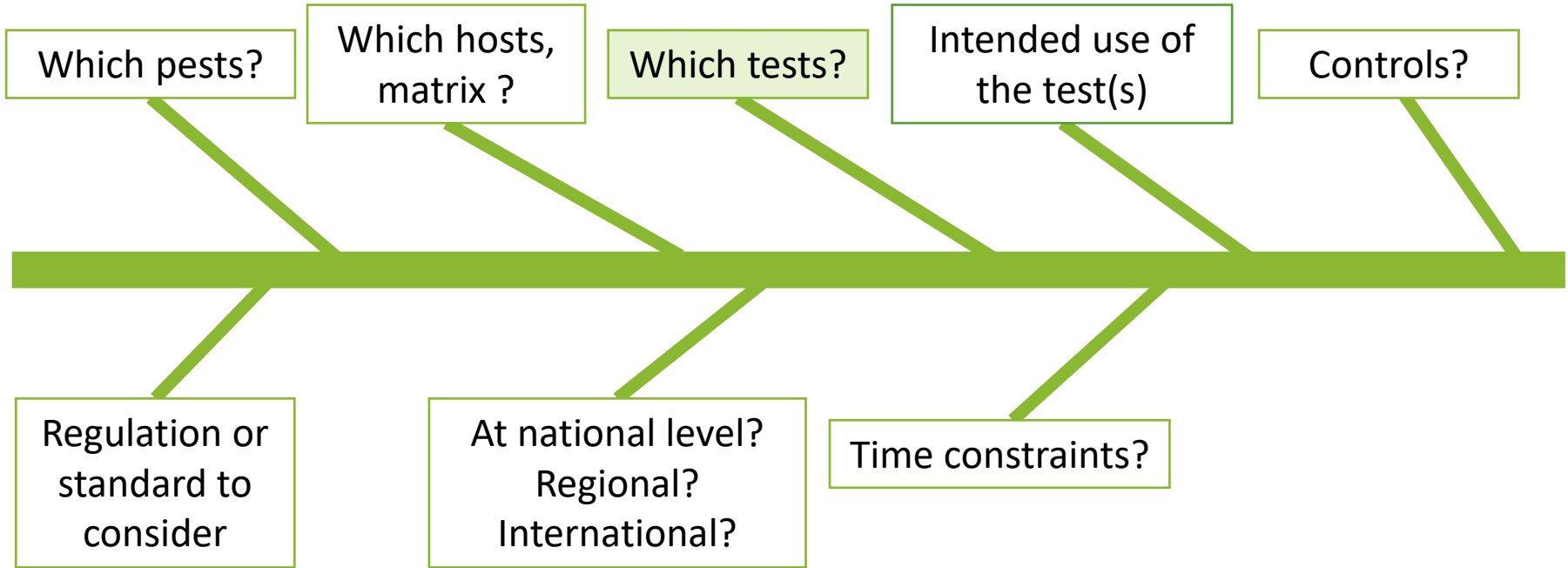


For example:

- Equipment and facilities appropriate to
  - prepare, test, handle, store and dispatch samples and when relevant reagents;
  - ensure that cross-contamination between test samples is avoided;
- Monitoring of Environmental conditions in the laboratory;
- Clear separation of areas where incompatible activities take place.
- Equipment required for the operation of the interlaboratory comparison is appropriately maintained, controlled
- Necessary action to correctly handle quarantine pests

# Scope of the TPS clearly defined

Why performing a TPS?  
What is your objective?



<b>Webinar 2</b>	Selection of the tests and associated documents	<b>Wednesday 24th February, 2 pm</b>
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# Participants: criteria and selection

## Acceptance criteria for participants

Equipment available?

Proficiency

Commitment to perform the TPS

Need to limit nb participants?

Different countries represented?

Documentation: clear information/instructions

Coding

## Constraints of the organizer

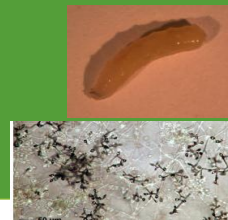
Webinar 3

Selection of participants and contract

Monday 1st March,  
2 pm



# Material



## Defining clearly the need

Different type of material

Diversity of material needed?

How much is needed/available?



How to get it?

How should it be stored?

Description of targets/characteristics of interest

Description of values/characteristics expected

**Webinar 4**

Preparation and dispatch of samples

Friday 5th of March,  
11 am

**Webinar 5**

Production of reference material for TPS

Wednesday 10/03,  
2pm

# Sample preparation and dispatch



**Risks of possible delay,  
loss of samples**



Nb of samples  
to prepare

Regulatory  
requirements

Regulations for  
transport

Stability

Homogeneity

Coding and  
labelling

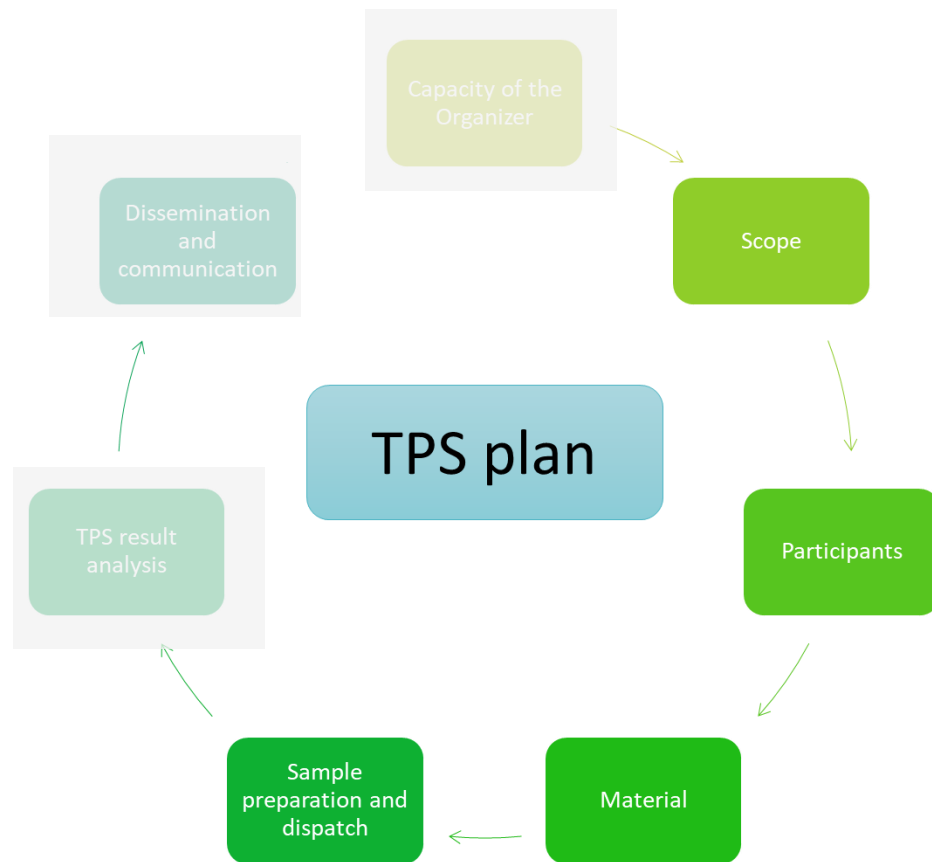


**Webinar 4**

Preparation and dispatch of  
samples

Friday 5th of March,  
11 am





**Practical  
training  
sessions**

How to organise Test Performance Studies?

**Register by the 22<sup>nd</sup> of  
February !!!**



# Result analysis

Methodology for result analysis

Proficiency

Controls to validate the results

Criteria for exclusion of datasets

Format for reports  
Feedback on how they performed the test

Statistical analysis to be used

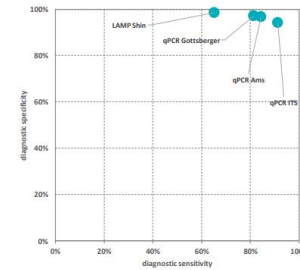


Figure 9: Graphical representation of the diagnostic sensitivity and diagnostic specificity of the tests included in TPS.

Reference participant	Assigned value = Positive	Assigned value = Negative	Assigned value = Undetermined*
Result obtained is positive	PA = Positive Agreement	PD = Positive Deviation	PA = Positive Agreement
Result obtained is negative	ND = Negative Deviation	NA = Negative Agreement	ND = Negative Deviation
Result obtained is undetermined	ND = Negative Deviation	PD = Positive Deviation	PA = Positive Agreement

\*only in specific cases (see 3.6) and should be avoided.

**Report to the participants within planned timescale**

# Result analysis



## Webinar 6

How to tackle the analysis of TPS results?

Monday 22nd of March, 2 pm



## Video

Calculate performance characteristics of a test and get useful information from your validation data by statistical analysis.

To be released on the week of the 22nd of March.



## Webinar 7

Q&A session: the statistical analysis of TPS results

Monday 29th of March, 2 pm

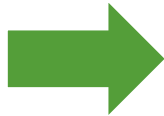
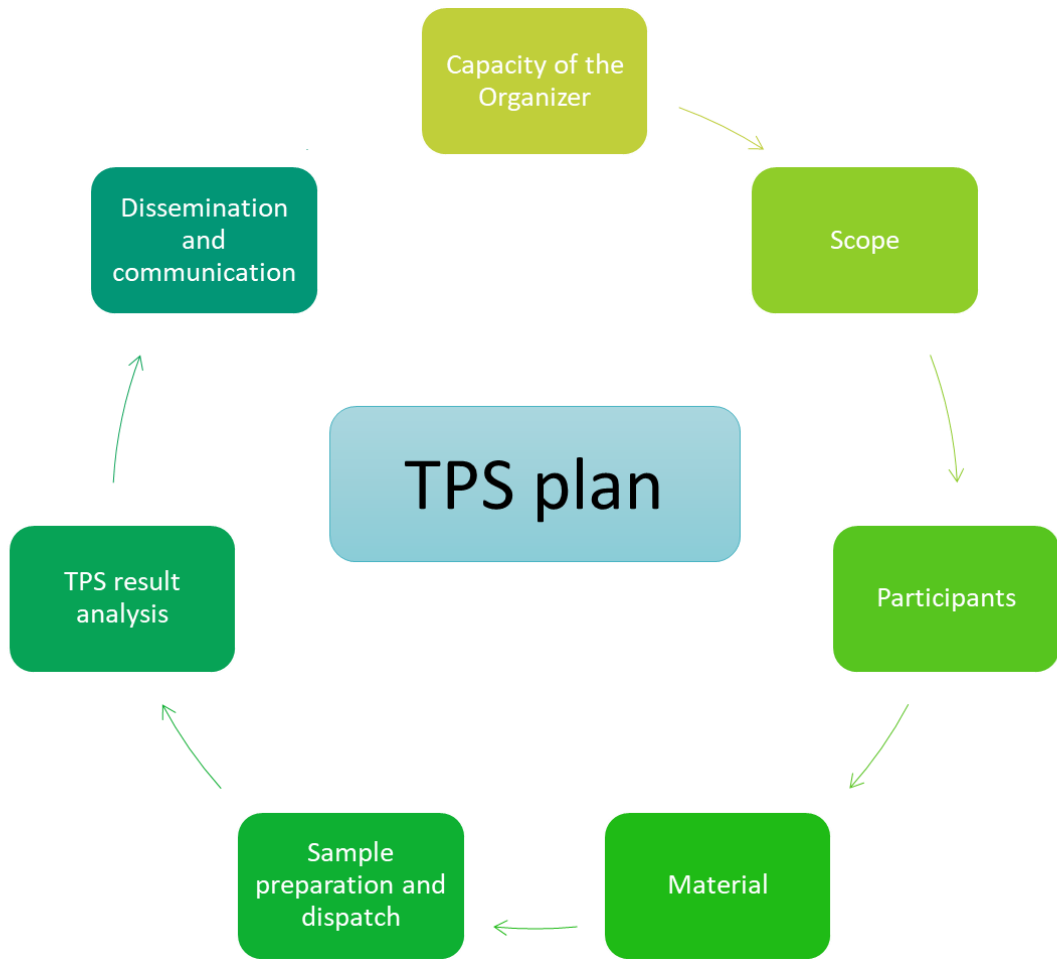


## Practical training sessions

How to analyse the results of Test Performance Studies?

30th of March to 1st of April

Register by the 1<sup>st</sup> of March



<b>Webinar 8</b>	From TPS organisation to analysis of the results: example of the TPS on ToBRFV	<b>Wednesday 7th of April, 2 pm</b>
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## Poll 2

According to you, in which step of the process did TPS organisers encounter major difficulty while preparing the TPS plan?

select one answer

- Capability of the organizer
- Scope of the TPS / selection of tests
- Getting material
- Preparation / dispatch of samples
- TPS result analysis



## Poll 3

What is the first document you would use if you have to plan a TPS?

select 1 answer

- EPPO Standards PM 7/122
- Checklist developed internally for proficiency tests
- Checklist developed internally for Test performance studies
- Checklist developed internally for validation studies
- Other

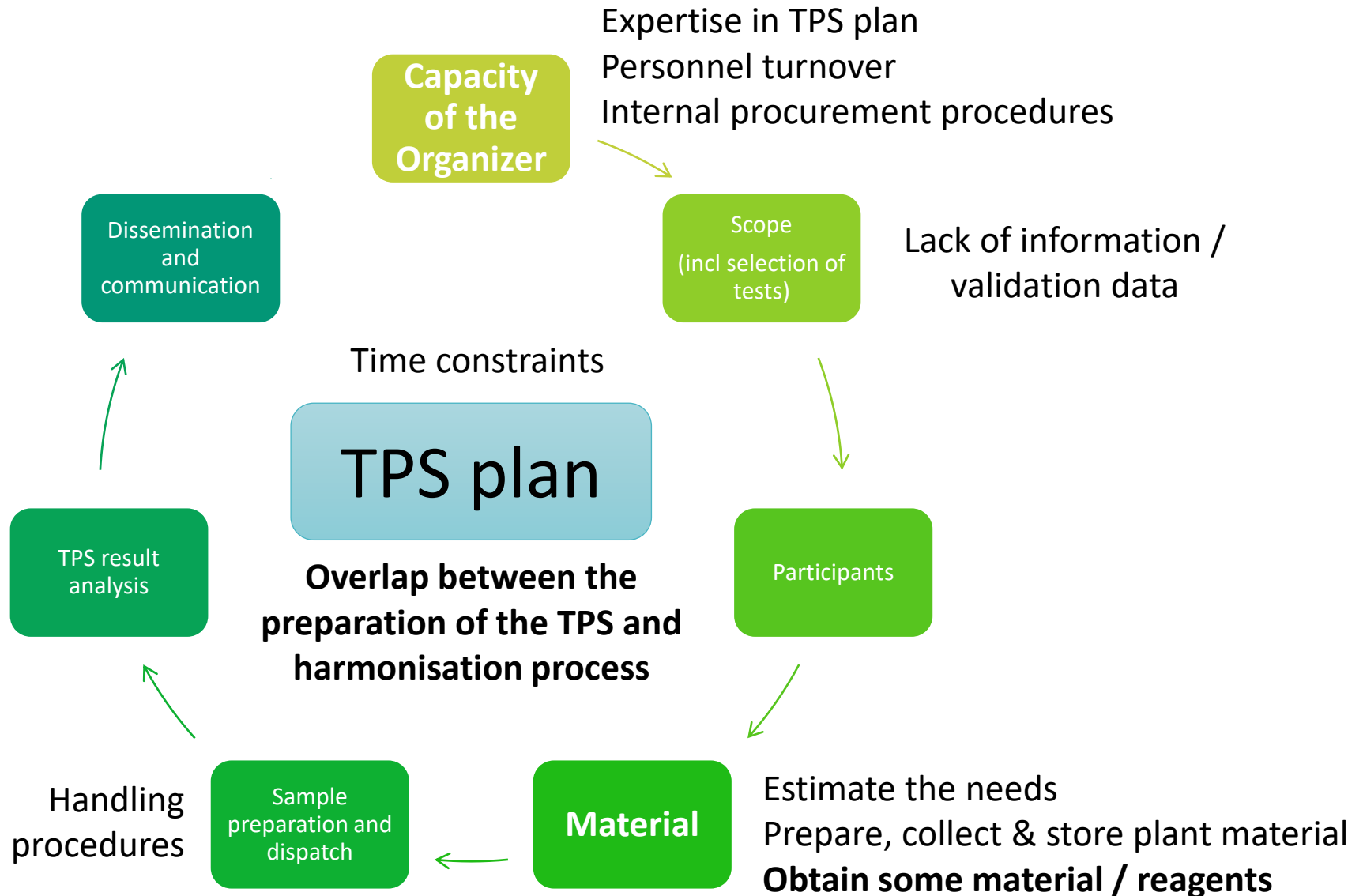
# TPS organizers interviews



By order of first appearance

- Natasa Nehle (NIB, SI)
- Tanja Dreo (NIB, SI)
- Jean Philippe Renvoise (ANSES, FR)
- Tom Raaymakers (NVWA, NL)
- Monica Mezzalama (UNITO, IT)
- Marta Luigi (CREA, IT)
- Anne Marie Chappe (ANSES, FR)
- Catherine Harrison (Fera, UK)
- Aude Chabirand (ANSES, FR)

# In which step of the process did TPS organisers encounter major difficulty while preparing the TPS plan?





# The TPS plan

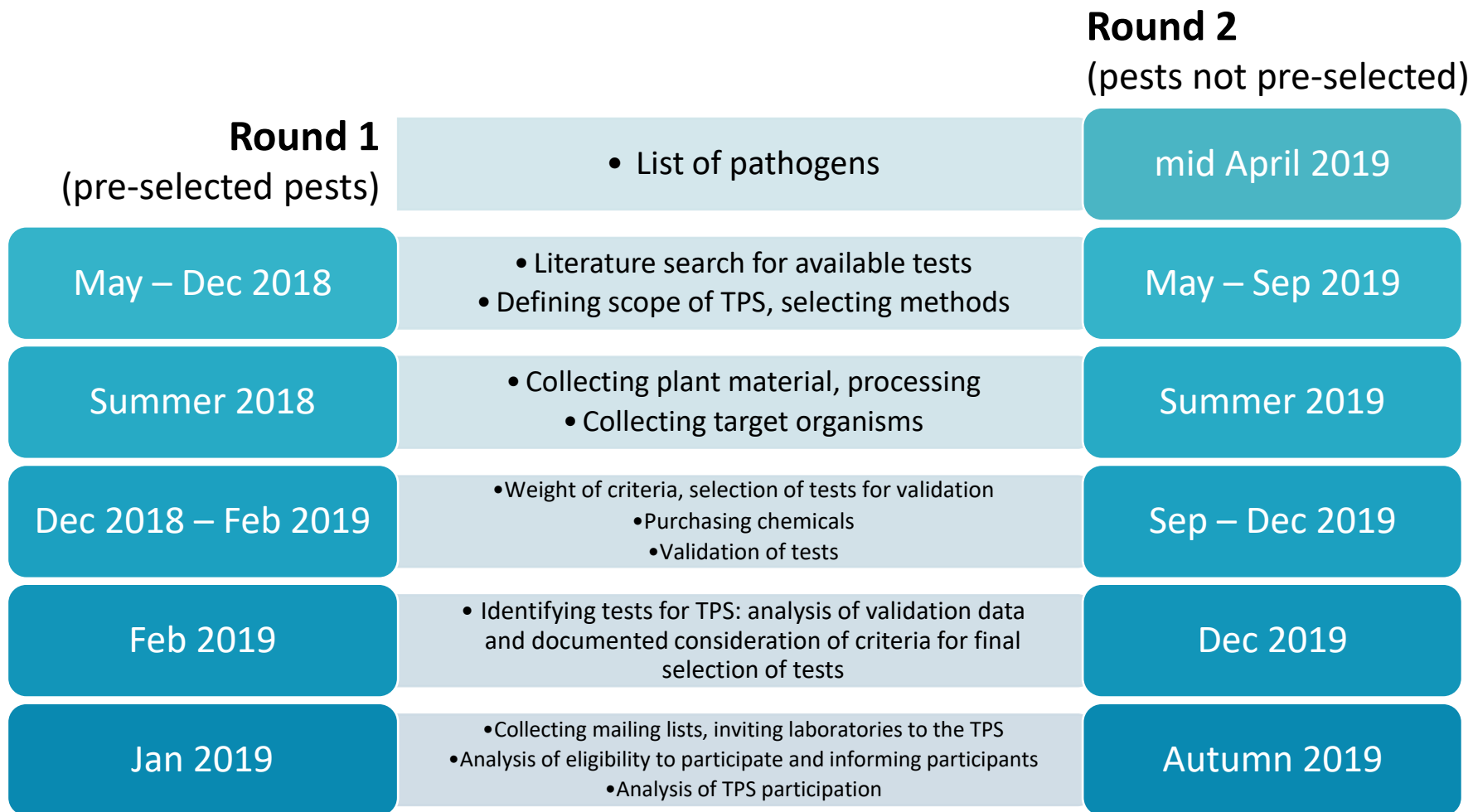
## Documents developed in the framework of VALITEST

What is the first document you would use if you have to plan a TPS?

- ✓ EPPO Standards PM 7/122
- ✓ Checklist developed internally for proficiency tests
- ✓ Checklist developed internally for Test performance studies
- ✓ Checklist developed internally for validation studies
- ✓ Other

# The TPS plan

## Documents developed in the framework of VALITEST



## Round 1

## Round 2

Mar 2019

- Sending contracts to participants

Feb 2020

Jan – Mar 2019

- Preparation of protocols and other TPS documents (see slide 13)

Jan – Mar 2020

Jan – Mar 2019

- Preparation of samples for dispatch
- Stability and homogeneity studies
- Preparation of reagents for dispatch and testing
- Randomization of samples and test panels
- Packing and dispatch

Jan – Mar 2020

Mar – Jun 2019

- Communication with TPS participants: LoA, clarifications...

Mar – Jun 2020

Jun – Aug 2019

- Collecting TPS results
  - Analysis of data
- Preparation of final results

Jun – Aug 2020

Feb 2020

- Final report about TPS
- Informing participants

Dec 2020

Apr 2020

- Preparation of reports, deliverables, data submission

Apr 2021



## Poll 4

Would you be interested in having access to the documents developed in the framework of VALITEST?

select 1 answer

- Yes
- No

# Advice from TPS organizers

- Preparation and planning takes time !
- Have several people involved
- Prepare a checklist specific for your laboratory
- Keep in mind the objectives of your TPS when planning the choice of the samples and data analysis.

# Thank you for your attention!



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