



Food and Agriculture  
Organization of the  
United Nations



# Digital Transformation strategy

of the European  
Commission  
for the Control of  
Foot-and-Mouth  
Disease

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European Commission for the Control of Foot-and-Mouth Disease

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Funded by the  
European  
Union

EuFMD's programme, tools and initiatives

**FAST**

Foot-and-mouth And  
Similar Transboundary  
animal diseases

**Pillars**

eufmd activities

**Dt**

eufmd digital  
transformation

**vlearning**

eufmd virtual learning  
centre

**microLearning**

eufmd virtual learning

**vlc EA**

virtual learning centre  
for East Africa

**Tom**

eufmd training  
management system

**SimExOn**

simulation exercises  
online

**KnowBank**

eufmd knowledge bank

**GetPrepared**

emergency preparedness toolbox

**RiskComms**

risk communications

**SQRA**

a method for spatial qualitative  
risk analysis applied to fmd.

**Pragmatist**

prioritization of antigen management  
with international surveillance tool

**EuFMDiS**

european foot-and-mouth disease  
spread model

**Vademos**

fmd vaccine demand  
estimation model

**GVS**

global vaccine  
security

**PQv**

vaccine  
prequalification

**PCP**

progressive control  
pathway

**PSO**

pcp practitioner  
officers

**VPP**

veterinary  
paraprofessionals

**PPP**

public private  
partnership

Sustainable development goals, UN-SDGs. EuFMD's programme has a focus on



Together against wasting resources, think twice before printing.



Thinking of the  
environmental  
footprint

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## Contents

Abbreviations and acronyms .....	vi
Introduction .....	vii
Executive summary .....	x
Progressive stages .....	x
Key targets and objectives.....	x
Strategy .....	xi
Actions in a summary .....	xii
Internal digital transformation: Organization's agility and resilience .....	1
Creating an enabling culture for digital transformation .....	1
Organizational structure for innovation.....	2
Digital solutions for agility and resilience .....	2
External digital transformation: Learning experience .....	4
Customers' needs identification .....	4
Partnerships for the goal.....	4
Digital solutions for learning experience enhancement .....	5
Testing stage .....	8
Following stages and steps .....	9
Conclusion .....	10
Appendix 1. The Massive Transformative Purpose (MTP).....	11
Bibliography to learn more .....	13

## Abbreviations and acronyms

AADIS	Australian Animal Disease Spread Model
CSO	Chief Strategy Officer
EuFMD	European Commission for the control of Foot-and-Mouth Disease
EuFMDiS	European Foot-and-Mouth Disease Spread model
FAO	Food and Agriculture Organization
FAST	FMD and Similar Transboundary Animal Disease
FMD	Foot-and-Mouth Disease
IT	Information Technology
MCDA	Multi-Criteria Decision Analysis
NSA	Animal Production and Health
OIE	World Organisation for Animal Health
OIN	Office of Innovation
OS20	Open Session 2020
OS22	Open Session 2022
PRAGMATIST	Prioritization of Antigen Management with International Surveillance Tool
PCP-FMD	Progressive Control Pathway for Foot-and-Mouth Disease
RVF	Rift Valley Fever
SDGs	Sustainable Development Goals
SQRA	Spatial Qualitative Risk Analysis
TOM	Training Management System
UN	United Nations
UNIN	UN Innovation Network
VPP	Veterinary Paraprofessionals

## Introduction

*Strange as it may seem, right now, in a moment of crisis, is precisely the time to boldly advance your digital agenda. Playing it safe now, even if feels like the right thing to do, is often the worst option.<sup>1</sup>*

The COVID-19 pandemic raised awareness on the importance of control, prevention, and most of all, on the impact of contagious diseases on public health and livelihoods. Transboundary animal diseases affect the same way on animal health and welfare, causing serious negative impacts on the livelihoods of livestock keepers, economies, and more.

The pandemic also raised awareness on the importance of wisely embracing digital solutions into working businesses and personal lives. It accelerates the gradual process of integration of digital solutions within the traditional way organizations deliver value, with the aim to explore new paths to work efficiently from remote, and to reach an audience not able anymore to interact in the usual face-to-face modality.

Within this context, the digital transformation process to which organizations were slowly approaching accelerated. Digital Transformation is the process of strategy development to redesign or develop new digital solutions. It refers to the introduction of new advanced digital solutions, but as well, to the redesign of existing technologies under a new innovative perspective, able to meet changing demands and personalize customers' experiences.

This concept is used when an organization decides to innovate the efficiency of internal businesses, foster a resilient, agile, and customer-centric culture, and enhance the customers' experiences. *"Digital transformation refers to the speed at which technology is changing and its effect on consumers' behaviour and expectations. These rapidly changing technologies lead to new business models that redefine the position of technology, employees, customers, and processes in an organization."<sup>2</sup>*

The 2020 pandemic and following lockdown, lead to a great increase of digital interactions and products' digitalization. For instance, in April 2020, worldwide museums started to integrate virtual tours of their spaces; several companies and organizations introduced a smart-working format; food and drink services subscribed to online delivery platforms; clothing shops equipped themselves with artificial intelligences able to allow virtual avatars to try on clothes. Hence, companies, organizations integrated digital solutions to meet the changed needs of their customers.

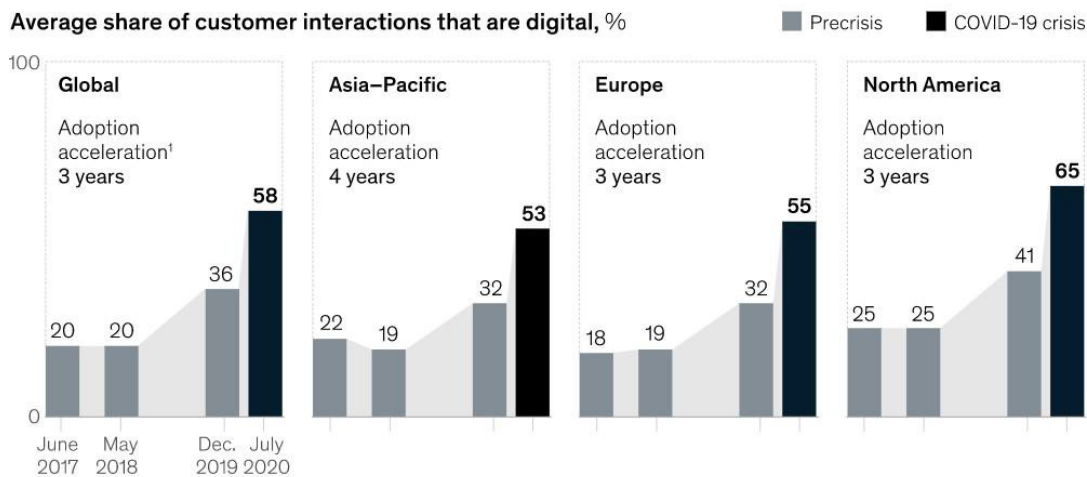
In the same way, also individuals accelerated their process of technologies' integration into their lives and work: by taking online lessons and yoga classes, by subscribing to streaming services, by buying tickets for virtual tours of international museums, by ordering from an online delivery food or drinks platform, hence adapting their lives to a changed and virtual reality.

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<sup>1</sup> James Bloor, Chief Strategy Officer (CSO) at Distinction.

<sup>2</sup> 2020 UCT-GSB / GetSmarter, Digital Transformation Strategy booklet.

## The COVID-19 crisis has accelerated the digitization of customer interactions by several years.



<sup>1</sup>Years ahead of the average rate of adoption from 2017 to 2019.

McKinsey  
& Company

Image 1. McKinsey & Company survey on digital transformation and COVID-19 pandemic, 2020.

Nowadays, organizations that want to be successful in engaging with their customers, are constantly looking for modern technologies and solutions able to provide a memorable experience, by reproducing real world experiences into the virtual one; innovations that go the extra mile.

The European Commission for the control of Foot-and-Mouth Disease (EuFMD) is part of this context. Over the years, it has developed various tools, platforms, and projects, addressed to Member Nations, and worldwide veterinarians, to assist them in the control, prevention, preparedness, and vaccination against of FMD and Similar Transboundary Animal Diseases (FAST Disease).

The pandemic accelerated its need to introduce digital solutions within the training programme. *“One of our goals was to find innovative solutions to enhance the simulation exercises in a time where travel was not allowed.”* said Fabrizio Rosso, EuFMD Deputy Executive Secretary.

Through the adoption of different virtual platforms, communication, collaboration, and co-working between colleagues improved. Training activities previously delivered in a face-to-face modality, became fully virtual, hosted by an online platform that was further equipped to function seamlessly remotely. Tools, resources, and publications have been digitalized and integrated into the websites and online platforms. A virtual environment has been developed to host Open Session 2020, one of the main

scientific events organized by the EuFMD; and the Event App has been empowered to perform added functions.

The path to digital transformation is considered a never-ending process, therefore this strategy is presented to guide the team toward the future introduction of digital innovations, with the aim to lay down the foundations of the innovation culture, from which both EuFMD members and recipients of training activities will greatly benefit.

## Executive summary

An organization undertaking a digital transformation process starts designing a strategy and timeline of implementation. This executive summary's goal is to provide a description of the chosen strategy, targets, objectives and main actions that will be implemented.

### *Progressive stages*

The proposed strategy aims to highlight and guide throughout the main operational and strategic choices related to the introduction of digital solutions and the strengthening of an organisational structure that allows the development of a culture of innovation based on a customer-centric approach.

For convenience, the development of the first digital transformation strategy will be referred to as Stage 1.

1) Introduction of Digital Transformation to the EuFMD leaders, employees, and activities recipients **(2022-23)**.

It will cover two years with quarterly performance evaluations, and it includes the creation of a shared new digital culture, the adoption of a strategy and the introduction of the first solutions to enhance the digital agility of the internal Teams, and the learning experience provided to training activities' recipients. The final goal is to advance and consolidate innovation at all levels. The presented strategy is referred to the stage 1.

2) Strategy reinforcement and continuous process of innovating **(2023- onwards)**.

It includes an annual assessment of the digital solutions introduced to evaluate if a new update is needed or available; and the establishment of a new mind set for the EuFMD members, who will plan training activities by considering potential improvements under an innovative perspective.

### *Key targets and objectives*

The success of a digital transformation strategy relies on the identification of the targets whose digital solutions are addressed to. The proposed strategy aims to reach the following purposes by targeting the recipients of training activities, and the EuFMD members who work to deliver the programme. At this scope, the internal transformation will refer to the innovations addressed to the Team members, and the external one to the recipients of training activities.

1. **(INTERNAL TRANSFORMATION)** EuFMD Teams, people, and culture. The objective is to provide greater agility and resilience to the organization's members and improve their collaboration by introducing and transforming the existing and needed solutions.

2. **(EXTERNAL TRANSFORMATION)** Recipients of the EuFMD learning activities: Member Nations, veterinarians, epidemiologists, students, veterinary paraprofessionals, researchers, partners, etc. The objective is to enhance the learning experience by providing personalized digital solutions.

Concisely, the goal is to provide innovative tools to enable innovative outcomes both for the EuFMD members, who will operate more wisely and efficiently, and both for the recipients of training activities, whose learning experiences will result enhanced.

### **Strategy**

Within the framework of digital transformation strategy, literature identifies three main approaches:

1. **Inside-out strategy:** The organization looks at how its businesses can utilize existing resources to introduce innovation. This strategy aims to focus and strengthen internal abilities, to empower the organization to develop digital solutions. The starting point is the development of a certain tool or service -through current abilities and expertise-, then the organization search for ways to create a desire for it.
2. **Outside-in strategy:** When developing innovation, the organization's focus is on its customers and their experiences. The starting point of this approach are the customers' needs and the market demand, before creating marketing strategies. Unlike the inside-out approach, the outside-in starts at the end and works backward by looking at what the customer wants and producing solutions. In this case, partnerships with digital agencies are crucial.
3. **Hybrid approach:** Combination of inside-out and outside-In strategies. The organization redesigns existing solutions or introduces new ones, acknowledging its strengths and ability, but maintaining the focus on the customers' needs. One or more digital solution agencies are identified for the implementation and testing stage, as the organization recognizes a surplus in establishing a strategic partnership to provide added value.

Considering the organization's dimension, targets, and objectives to achieve, the adoption of a hybrid approach is the selected strategy. The EuFMD Teams will work to investigate and ideate innovative solutions, focusing on the data collected from the experiences of customers and team members. Then, digital agencies will assist developing and testing tools and platforms. This combination will allow the internalization of certain projects developed and the reduction of associated costs, the enhancement of internal skills in innovating and implementing, and the improvement of the learning experience provided to our training activities' recipients.

Furthermore, United Nations (UN), and Food and Agriculture Organization (FAO) offices dedicated to innovation and digital transformation will provide further support in packaging and promoting the innovations developed. Particularly, the UN Innovation Network (UNIN) and FAO Office of Innovation (OIN) will broadcast through their networks the digital solutions introduced or restyled to reach a greater audience.

## ***Actions in a summary***

### *Internal digital transformation: Organization's agility and resilience*

- **Internal structure enhancement:** Internal organization and structure strengthening, and identification of human capital needed.
- **Digital Culture Introduction:** Simultaneous process of new digital culture introduction aimed to foster innovations and digital solutions.
- **New Digital Solutions - Investigation stage:** Internal meetings/surveys to identify tools, platforms and operations that hinder efficiency and to listen ideas about new potential solutions may help them work better.
- **New Digital Solutions - Implementation and testing stage:** Once identified the solutions needed, the EuFMD or a third party will start developing the product, to test it later with Team members for final feedbacks and further reviews.

### *External digital transformation: Learning experience*

- **Data structure enhancement:** Enhancement of IT and Data Team to support the EuFMD in introducing Digital solutions and to help in maintaining the existing systems, servers, and digital tools. The existing data storage libraries will be reorganized to further discover data and to facilitate the search of information.
- **Existing Digital Solutions – investigation and implementation stage:** Several tools, projects, and platforms previously developed by the EuFMD, will be selected for their transformation under a digital perspective. Once selected, and identified the strategy for their improvement, the EuFMD will evaluate if the support of a third-party is needed for the implementation stage.
- **New Digital Solutions – Investigation stage (Internal):** Meetings/surveys with the EuFMD trainers, OPS, and projects coordinators to identify the key issues faced by courses, workshops, and events by participants.
- **New Digital Solutions – Investigation stage (External):** Simultaneously to the internal investigation, data and feedbacks from the training activities' recipients will be collected.
- **New Digital Solutions - Implementation and testing stage:** Once collected the information needed and identified the solution, the EuFMD or a third party will start developing tools or services to enhance the learning experience provided. The product will be tested/piloted before the official introduction for future activities' recipients.

## Internal digital transformation: Organization's agility and resilience

*“An agile organization is equipped to deal with unexpected changes and can turn these changes into opportunities to help the business thrive. Resilience is also important for organizations wanting to adapt their operations to changing conditions and is a quality that can lead to successful adaptation despite threatening circumstances.”<sup>2</sup>*

Innovation requires agility and resilience. In an era characterized by volatility and uncertainty, these two characteristics become crucial to adapt to fast changes in markets, consumers, technologies, and other external threats that can cause disruptions. An agile and resilient organization is equipped to cope with changing conditions, and to evaluate and reinvent newly and previously created products, tools, and services. To embrace agility and resilience, a functional organizational structure to devise new digital solutions, and a shared culture of innovation for all the Team members, are required.

The internal digital transformation pursues the objectives to:

1. Introduce an enabling culture for digital transformation.
2. Introduce an organizational structure to enable the devising of digital solutions and goal-oriented partnerships.
3. Introduce or reinvent digital solutions to overcome potential efficiency obstacles for Team members and to provide a balance between their working and private life.

To provide the EuFMD of a more agile and resilient organization in efficiently delivering its innovative programme and work, the organizational internal structure needs to support inherently the development of digital solutions and the establishment of new partnerships. Simultaneously, a new culture aimed to foster innovation need to be introduced, to continue innovating.

### ***Creating an enabling culture for digital transformation***

*“A strategy relies on a plan to mobilise people around reaching organisational goals. Leaders can help shape culture through conscious and unconscious actions, such as leading by example or initiating changes in the way people communicate<sup>3</sup>.”*

Working on culture is key to fully reach the goal and to be sure that the innovation process will continue after the introduction of the first digital solutions.

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<sup>2</sup> 2020 UCT-GSB / GetSmarter, Digital Transformation Strategy booklet.

<sup>3</sup> 2020 UCT-GSB / GetSmarter, Digital Transformation Strategy booklet.

There are several direct and indirect actions that help in establishing this culture, such as increasing communications on the topic, organizing group meetings, calls and games to raise awareness, establishing a system of incentives.

A suggested starting point is to collect data and information about the Teams' vision of innovation and culture. People are key when it comes to culture, hence the process should start from their perceptions and ideas.

### ***Organizational structure for innovation***

The current Strategic Communication Team will be charged of the development and implementation of the EuFMD Digital Transformation Strategy. It will work in close collaboration with all the EuFMD Teams and people to evaluate current tools and devise innovative solutions, and to continue innovate the existing and new ones.

A new IT and Data Team will be introduced with the purpose:

- Data discovery, collection, and analysis.
- Securing data and digital assets.
- Providing consultancy and support when negotiating with the digital solutions agencies who will partner with the EuFMD to develop digital products and for the products previously introduced.
- Developing the virtual projects of the EuFMD –when possible.

The IT and Data Team will work in close collaboration with the Strategic Communication Division. Recurrent meetings will be scheduled between these two Teams to:

1. Improve the digital solutions already developed: starting from an initial analysis of the solutions already developed, and by continuing with the studying of the potential opportunities and limitations for future improvements.
2. Introduce new digital solutions.

### ***Digital solutions for agility and resilience***

The digital tools and platforms that currently support the smart working of EuFMD members need to be as performant as they require. Some of these platforms offer numerous possibilities for digital efficiency and improved functions, such as Microsoft Teams (MT) and SharePoint site (SP). Other digital platforms and tools will be evaluated if not possible to use the MT and SP integrated features.

The EuFMD rapidly adapted to deliver its training programme from a face-to-face dimension to a virtual one. Meetings, calls, workshops, events are delivered in a virtual format by using platforms highly recommended for smart working. Not necessarily the most downloaded and used platforms are the most suitable for our organisation and the target group to be reached with our training activities. To this end, the tools currently used will be re-evaluated and analysed in comparison with other recently emerged

online tools and platforms. The Strategic Communication Team will work closely with the Virtual Learning and OPS Teams to understand potential issues and personalize solutions.

The internal collaboration and external communications will be enhanced using digital solutions. MT and SP will be further analysed to understand opportunities for increased collaboration and to further promote the innovation culture.

## External digital transformation: Learning experience

The EuFMD plans to enhance the learning experience provided by its highly qualified trainers to worldwide professionals and students. The digital strategy will allow to improve existing services and products and to introduce new interactive solutions for a more personalized and customer-centric learning experience.

Simultaneously to the customers' needs identification, digital solutions agencies will be evaluated to partner for the development and testing stages.

### *Customers' needs identification*

Simultaneously with the internal transformation will occur the external one.

The starting point for an outside in strategy focused on enhancing the learning experience is the understanding of the current customer's needs. Suggested approaches include:

- **Listen the employees:** internal meetings with focal points and projects/pillars coordinators to collect their opinions and listen their experiences. Through surveys, and polls it is possible to gather information related to their experience with potential issues, comments, solutions identified to problems, etc.
- **Listen to the customers:** surveys, and other interactive and dynamic methods to collect data on veterinarians and students' experiences in learning with the EuFMD, as quick polls and surveys at the end of each virtual activity on how it went, connectivity issues, quality of the trainers, and of the content, general feedbacks, and suggestions etc.
- **Look at the data:** Through a reorganization of current storing systems, the process of data discovery and data analysis will start (previously collected information, as participations rates, assignments completed, course completion rate, etc). Further data can be aggregated with the ones gathered from the employees and customer's analysis.

Once identified issues, new solutions can be found to overcome problems and further personalize and enhance the learning experience provided.

### *Partnerships for the goal*

Strategic partnerships with digital solutions agencies are crucial to introduce and modify businesses and activities recipients' experiences. Innovation experts are needed to provide guidance and assist in the development and testing stage of a new service, tool, or product. Goal-oriented partnerships will provide an added benefit and help stimulate further innovation.

As relevant as digital solutions agencies are the partnerships able to help communicate the innovations developed, and reach the audience targeted. The FAO Office of Innovation (OIN) will provide support in packaging and promoting the innovative solutions developed. Through their network and a specialized platform to promote and target projects, these innovations will reach a greater audience and promotion on a wider scale. The UN Innovation Network (UNIN) will be reached to further support to communicate the innovations and reach the target. The theme of Innovation is also relevant within the European Commission's objectives: several initiatives and fundings are available for digital and innovative projects.

### *Digital solutions for learning experience enhancement*

The proposed strategy covers two years, with quarterly performance evaluations. Its implementation will start in January 2022.

During the first year, the virtual presentation of the EuFMD will be redesigned, with the migration and restyling of a new main website, and of the virtual environment created for OS20. In the specific, the current **website** will be moved to a new server own by the EuFMD and completely redesigned. It will be fully operative from May 2022; then, the process of integrating and digitalizing tools into the site will start. The **virtual space** created for OS20 will be redesigned in a new setting and with new characters and avatars. The chosen digital solution agency will assist in the development and testing stages. Some environments will be organized to host the future edition of Open Session and the future events and meetings the EuFMD will organize.

In the same period, some projects, initiatives, and tools related to the Virtual Learning programme will be innovated. Mobile learning initiatives will be promoted included the development of training activities with a mobile-first approach<sup>2</sup>. The Microlearning programme will be extended to at least another 4 courses. The EuFMD Training Management System (TOM), launched in June 2021, and currently at the piloting stage, will be fully implemented by the end of 2022. The Knowledge Bank, the public digital library created by the EuFMD, will be redesigned with dynamic and interactive results displaying and dashboard.

In 2023, digital innovation will target platforms, projects and tools previously developed by the EuFMD. The characteristics, displaying, and interaction modes of the following platforms will be evaluated. The outcome of this analysis not necessarily will indicate the need of a digital transformation. Despite this, the goal is to select at least three tools to be innovated by 2023. A brief overview of the main projects that will be evaluated is provided hereunder:

- **EuFMDiS**: It is a multi-country FMD outbreak simulation model, used to evaluate various control options to eradicate the disease. It can also evaluate available resource and vaccine supply issues. It is the adaptation of the Australian Animal Disease Spread Model (AADIS).
- **Get Prepared toolbox**: It is a set of existing tools and new ones for contingency planners to assess gaps in different areas of preparedness and resource requirements for animal disease emergencies.

- **Prioritization of Antigen Management with International Surveillance Tool (PRAGMATIST)**: It has been developed to assist risk managers to make decisions about the FMD vaccines that they purchase/maintain, based on current risks to countries covered by the bank.
- **Progressive Control Pathway for Foot-and-Mouth Disease (PCP-FMD) TRAC**: The PCP-FMD Tool for Review and Communication (TRAC) has been developed by the IZSLT to facilitate the submission and management of national strategic documents related to the acceptance process from PCP-FMD Stage 1 to 3. This online platform enables a digital management of the submission, review and final acceptance of the plans/programmes (either Risk Assessment Plan, Risk-Based Strategic Plan or Official Control Programme) and allows to access the PCP-FMD Self-Assessment Tool (SAT) and the relevant plan/programme templates.
- **Vaccination demand Estimation Model (VADEMOS)**: It is a decision-support tool intended to be used to estimate current and future demand for FMD vaccine and predict future growth of the demand at national level. It will assist the processes needed to bridge the gap between FMD vaccine demand and vaccine production/supply in endemic countries.
- **Online simulation Exercise software**: The EuFMD uses a crisis simulation software, [Conducttr](#), for online simulation exercises on animal diseases emergencies, mostly on FMD and Rift Valley Fever (RVF). To evaluate whether and when possible, the software integration and application within other training activities organized.
- **Spatial Qualitative Risk Analysis (SQRA) pedagogical toolkit**: It includes training resources in multiple interactive formats covering the fields of qualitative risk analysis, risk mapping, social network analysis, Multi-Criteria Decision Analysis (MCDA), risk-based surveillance and control and performance indicators of surveillance systems. The SQRA toolkit aims to reinforce the capacities of animal health services, to optimize the surveillance and control of transboundary animal diseases.
- **Risk Monitoring tool**: A semi-quantitative ‘generic risk assessment’ framework for EuFMD Member states to monitor the likelihood of entry of FAST diseases from Pillar II countries.

Digital solutions will be evaluated for the FMD Virus Global Intelligence and Multistakeholder platforms.

During 2022, the gaming activities already developed will be evaluated as well (Lesion ageing and the wall game). Further gaming solutions will be introduced.

The way the EuFMD delivers events, meetings, and workshops will be analysed to further innovate and make them more interactive and innovative. The Innovation Team will work closely with the Virtual Learning Team to understand potential issues and personalize solutions. As well, also the communications and collaborations will be enhanced to reflect this new digital dimension.

Some solutions are currently; in particular, the Innovation and IT Team are working to develop a system to collect weekly tasks, and to connect people and projects (following the previous style of the bullet points' tasks gathering); a system of manual time tracking to analyse time-consuming operations and

accelerate the usual designing process of a certain activity; and a Calendar notification system, to alert Supervisors, HR Coordinators, and employees about important contractual deadlines.

*Summary: Timeline of digital solutions introduction and development*

- **[2022] Virtual Learning.** The objective is to introduce Mobile-first learning initiatives, to extend Microlearning to at least to another 4 courses, to fully implement TOM and redesign the Knowledge Bank.
- **[2022] Virtual EuFMD presentation.** The objective is to redesign and enhance the EuFMD website and virtual space and enable these two platforms to support the subsequent integration of the newly developed digital solutions.
- **[2023] Tools and projects developed by the EuFMD.** The first selected to consider are EuFMDIS, Get prepared, Pragmatist, PCP-FMD track, Vaccination demand, simulation exercise software, SQRA toolkit, VPP, Risk monitoring tool, FMD virus global intelligence, Networking and multistakeholder platform. These tools and projects will be studied and improved under a digital/virtual perspective (some projects during 2022, as VPP App, and Vaccination demand).
- **[2023] Communications.** The objective is to improve the internal communication/collaboration and enhance the external one, through an increased presence on social media and the use of more dynamic and interactive resources, able to communicate the new strategy and digital solutions introduced.
- **[2023] Meetings/Workshops organization and delivery.** The objective is the improvement of the employee's agility and resilience through the introduction of digital solutions able to overcome effectiveness obstacles, reduce the workload, enhance working efficiency and balance with personal life.
- **[2023] Soft Learning experiences.** Games improvement and development.
- **[2023] Call/Help centre.** To evaluate the introduction of bots or AI solutions to provide a new personalized support to recipients of training activities, employees and any other interested to learn more about the EuFMD and its projects. Preliminary market study of trends and demands to understand if still a need in 2023.

Other digital solutions will be evaluated and introduced during this process, as VR experiences (potential projects: Biosecurity procedures in VR, Real-Time Training in VR)

*Virtual Reality for Training: learn by doing!*

Matthew Wilson and Luke Wilson developed "[Virtual reality to support FMD training](#)" (2020) for the Australian Department of Agriculture, Water and the Environment. It is a study on the benefits and usage of VR for training activities on FMD. Their analysis starts with a review of the current training methods, to provide a comparison with the VR applications: "Training typically involves the transfer information in a classroom setting followed by practical sessions. There are limitations with this style of training relating to cost, availability, and resource requirements. VR has the potential to address some of these limitations

reducing costs, improving training outcomes and improving access to training for broader audiences. VR provides a unique opportunity to immerse users within virtual training environments engaging them in ways not possible with traditional training methods. The core concepts of meaningful and effective VR training are presence and learning by doing. Learn by doing is a term used to describe training through practical exercises."

The major benefits of VR technology applied to training relates to the ability of participants to feel "immersed in the training environment and feel as if they are in the scenario."<sup>4</sup> It increases engagement and attention, which in turn increase the knowledge and memory retention. VR training provides participants with the opportunity to train in a dangerous scenario with reduced risks of accidents (as during natural disasters or emergencies). The risks result reduced also for damages to equipment and plant. *"VR allows users to quickly and cost effectively repeat a training scenario as often as required. Trainees can use VR training repeatedly to develop muscle memory and familiarise and adapt themselves with training scenarios"*<sup>5</sup>. In addition, the costs with VR training are reduced, when considered a face-to-face dimension, hence trainers, travels, equipment etc.

The authors also provide a categorisation of VR training applications into the following:

- 1) Procedural training: participants perform procedures within the VR environment. It allows them to practice and exercise muscle memory.
- 2) Informative training: participants receive information related to a certain topic, equipment, etc.
- 3) Behavioural training: participants practice on control behaviour under some specific conditions.
- 4) Problem-solving training: participants practice with lessons learnt to solve problems.
- 5) Teamwork training: participants practice with other participants.

## Testing stage

Test the solutions with customers and teams. Partners who developed the identified digital solutions will implement tests to look for technical glitch, and to fix them, when needed.

At the same time, the EuFMD will test same solutions with internal teams, when these refer to the improvement of agility and resilience, and with the recipients of the EuFMD Training activities, when the solutions relate the enhancement of the learning experience.

The testing phase is particularly important as it allows to adjust the final output, and to verify directly on the field that the design phase corresponds to the feasibility of the solution.

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<sup>4</sup> Virtual reality to support FMD training, Australian Department of Agriculture, Water and the Environment.

<sup>5</sup> Virtual reality to support FMD training, Australian Department of Agriculture, Water and the Environment.

## Following stages and steps

Once developed the first digital solutions, the organization may feel to have reached the objective, to have introduced innovation, and consequently, to slow down the entire process of transformation. For this reason, working on the culture since the beginning is extremely relevant: the Teams need to perceive clearly transformation as an ongoing and never-ending process. We need to continue to innovate' and optimize the digital solutions implemented.

The reinforcement and adaptation of the system of incentives may be a crucial element to continue motivating employees in being creative, consequently affecting the always-enhanced experiences provided to customers.

## Conclusion

*“There is no single technology that will deliver ‘speed’ or ‘innovation’ as such. Digital transformation works when leaders in organizations focus on changing the mindset of their members as well as the organizational culture and processes before they decide what digital tools to use and how to use them. What the members envision to be the future of the organization drove the technology, not the other way around.”<sup>6</sup>*

The Digital Transformation strategy proposed will enhance digital solutions already developed and introduce new ones to improve the learning experience provided to training activities’ recipients, and will provide greater agility, resilience, and efficiency to the different Teams and people.

In the meantime, the fostering of a new culture built on innovation will further boost the introduction of digital solutions to enhance and personalize the learning experience provided.

The final goal/aim is to provide the veterinary and scientific community with the opportunities and tools able to meet their needs and exceed their expectations, through a combination of technology and expertise.

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<sup>6</sup> Sharron L McPherson, Co-Founder and former Chief Executive Officer of Women in Infrastructure Development Pty Ltd (WINDE) and Associate professor at the University of Cape Town Graduate School of Business.

## Appendix 1. The Massive Transformative Purpose (MTP)

The Massive Transformative purpose (MTP) can be defined as the ambitious goal to which an organization aspires when embarking on the digital transformation journey.



It includes values, objectives and the target, with the implied goal of introducing transformations and inspiring future actions in the community it operates. "In the simplest sense, an MTP is a highly aspirational tagline for an individual or group, like a company, organization, community, or social movement. It's a huge and audacious purpose statement."<sup>7</sup> The EuFMD digital transformation process will be guided by a highly aspirational tagline, whose principles and criteria will define actions and operations. Hereunder attached a draft suggestion of MTP, integrated with the input provided by the Brand Exploration workshop organized in April-May 2021.

*"A global center of excellence in building generations of animal health specialists."*

Six components will guide the process of improvement of the learning experience provided to training activities' recipients:

1. **Inclusivity:** Inclusion of all the learners, regardless gender, disability, race, income, education and so on. This also means personalizing learning outputs and experiences as with the production of flipbooks, soft gaming activities, online video cartoons, animated infographics, and so on.
2. **Accessibility:** Accessible resources and information: to reach and be easily reached by anyone who may need to be trained in FAST Diseases.
3. **Interactivity:** To use, create, innovate tools, software, platforms through available advanced technologies, to provide always more personalized solutions for learning and to increase the memory retention of courses' recipients.
4. **Quality:** To improve the quality of the learning experience provided by the EuFMD trainers, using

<sup>7</sup> SingularityHub, The Motivating Power of a Massive Transformative Purpose, 2016

technology. The focus should be kept on scientific and technical content and not on new interactive and dynamic technologies, to be intended as a means.

5. *Simplicity*: To make it easier to access and use the current and future tools and technologies. User friendly platforms, to remove potential technological barriers.
6. *Data Responsibility*: Through a data-driven approach, to get insights on how to provide better and more personalized solutions, securing and safeguarding at the same time, the confidential information provided by participants.

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## EuFMD Committees

Executive Committee, Standing Technical Committee (STC), Special Committee for Surveillance and Applied Research (SCSAR), Special Committee on Biorisk Management (SCBRM), Tripartite Groups.

## Hold-FAST tools

AESOP. Assured emergency supply options; EuFMDiS, FMD spread model; GET PREPARED toolbox. Emergency preparedness; GVS. Global Vaccine Security; Online Simulation Exercises; Outbreak Investigation application; Pragmatist. Prioritization of antigen management with international surveillance management tool; PCP-FMD. Progressive Control Pathway for foot-and-mouth disease; PCP-Support Officers; SAT. PCP Self-Assessment Tool; RTT. Real Time Training; SMS Disease reporting; SQRA toolkit. A method for spatial qualitative risk analysis applied to FMD; Telegram; TOM. EuFMD training management system; Global Monthly reports; VADEMOS. Vaccine Demand Estimation Model; VLC. Virtual Learning Center. Microlearning.

## United Nations Sustainable Development Goals (UN-SDGs)

EuFMD's programme has a main focus on



Thinking of the  
environmental  
footprint

Together against wasting resources,  
think twice before printing.

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