

## D.4.3.2

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Action Plan for a CE-wide smart KET Access &  
Service Network - and beyond

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## 1. Executive Summary

The KETGATE network has increased from initial 8 member organizations in August 2019 to 27 member organizations in August 2020. Expanding the network was important step in order to provide wide geographical and KET service network across Central Europe. In this way SMEs can have more and better opportunities to receive KET service. New KETGATE members were included by process agreed by KETGATE consortium. Consortium has also decided to migrate to more user friendly and efficient platform - Microsoft Teams. This also supported the strengthening process of the network. Action plan for strengthening was prepared during regular teleconferences and shared at the coordination meeting in May 2020. Numerous new service requests were collected and shared at the KETGATE platform which lead to service provision agreements. The consortium also prepared conclusions and recommendations in order to boost the R&D environment in Central Europe. This includes raising awareness, provide financial instruments, organize brokerage events, developing advisory services and organizing transnational round tables of stakeholders.

## 2. Introduction

This report presents the activities of the KETGATE consortium in 2019 and 2020 to expand and strengthen the network mid-to-long-term with the target of a CE-wide KET access & service network. The report also includes recommendations for improving the KET service provision environment in order to enhance R&D of Central European SMEs. The report summarizes also some key observations from D.T4.3.1. regional reports and discussions in coordination meetings.

## 3. Expanding the KETGATE Network

### 3.1. Promoting the network among new members

At the coordination meeting in April 2019 the KETGATE consortium has decided to start with promotion and inclusion of new members in the network. One of the reasons for this decision was because during the pilot project phase we realized that not all Service Requests can be fulfilled by existing RTOs in the network and we also wanted to increase the number of Service Requests in the network.

JSI has with help of SEZ and other partners prepared template for institutional commitment - one for new members with role of KETGATE Point (Smart KET Access Point) and one with role of RTOs. Signing of institutional commitment was entry point for new organizations, which wanted to join the network. Project partners invited associated partners and other BSO as well as RTO organizations to join the network. In the period between May 2019 - May 2020 eight new organizations joined the network. Two of them were KETGATE Points and six RTOs.

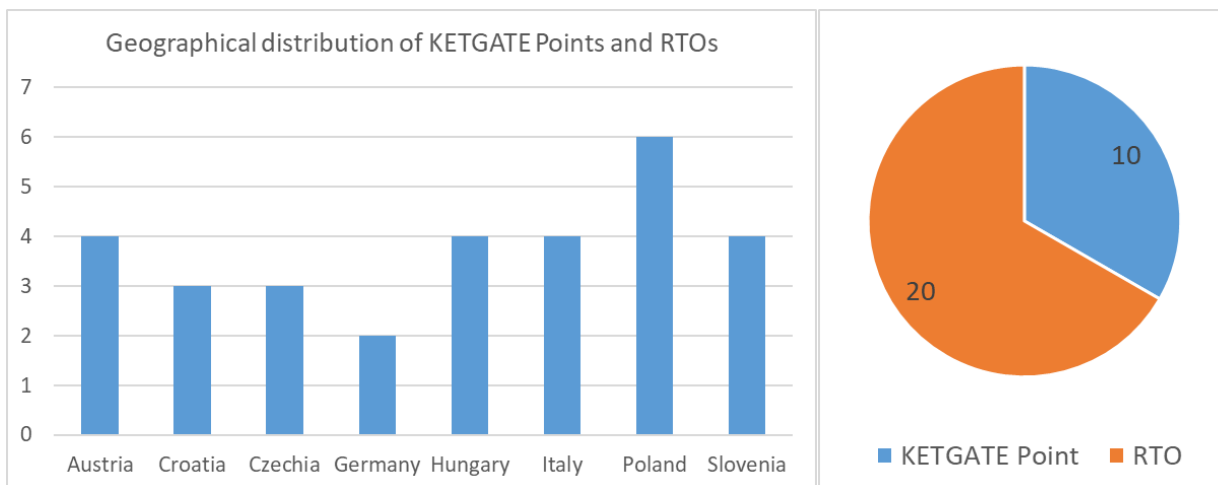
At the virtual coordination meeting in May 2020 the KETGATE consortium has decided to increase the promotion activities in order to attract new members that will join the network. It has been decided, that until the end of July 2020 each partner should acquire 3 new organizations to join the network. In the period May 2020 - July 2020 10 additional organizations have signed institutional commitment. In the end of July 2020 27 organizations including PP have signed institutional commitments to join KETGATE network. Three of these organizations have both roles - KETGATE Point and RTO role. In total 2 new KETGATE Points and 17 RTOs joined the network. Figure 1 shows the geographical and role distribution of KETGATE Points and RTOs in the end of July 2020. One could observe that the relation RTO : KETGATE Point ratio has changed from



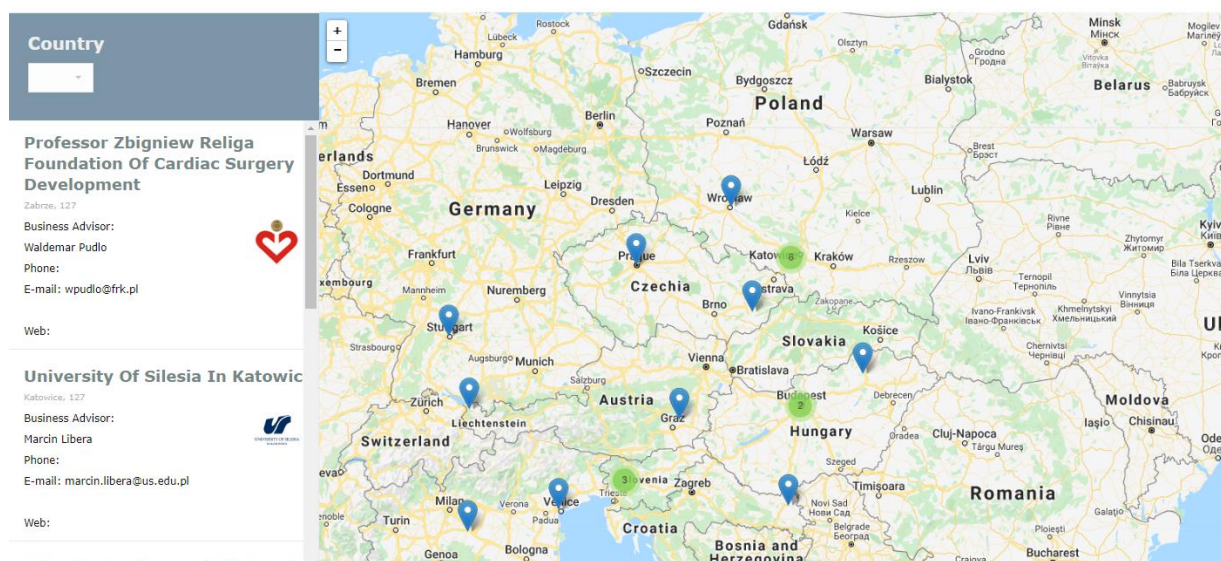
initial 3:8 to 20:10. The ratio RTO : KETGATE Point is balanced and suitable for lively and strong KET service provision network. The geographical distribution of KETGATE members is also very good.

**Table 1. KETGATE members on 15.08.2020.**

Organ. no.	Name of the organization	Country	Role	Project partner
1	Bay Zoltán Nonprofit Ltd.	Hungary	KETGATE Point	YES
1	Bay Zoltán Nonprofit Ltd.	Hungary	RTO	YES
2	V-Research GmbH	Austria	RTO	NO
3	Jozef Stefan Institute	Slovenia	KETGATE Point	YES
3	Jozef Stefan Institute	Slovenia	RTO	YES
4	Steinbeis-Europa-Zentrum	Germany	KETGATE Point	YES
5	Veneto Innovazione spa	Italy	KETGATE Point	YES
6	Centre for Energy Research, Institute of Technical Physics and Materials Science	Hungary	RTO	NO
7	SEAMTHESIS Srl	Italy	RTO	NO
8	TERA Tehnopolis Ltd.	Croatia	KETGATE Point	YES
9	Slovenian National Building and Civil Engineering Institute	Slovenia	RTO	NO
10	University of Miskolc	Hungary	RTO	NO
11	Joanneum Research	Austria	KETGATE Point	YES
11	Joanneum Research	Austria	RTO	YES
12	National Cluster Association	Czechia	KETGATE Point	YES
13	Central Bohemian Innovation Center	Czechia	KETGATE Point	NO
14	Tomas Bata University in Zlin	Czechia	RTO	NO
15	Friuli Innovazione Research and Technology Transfer Centre	Italy	KETGATE Point	NO
16	Research Center for Non Destructive Testing GmbH	Austria	RTO	NO
17	Hahn-Schickard	Germany	RTO	NO
18	Upper Silesian Agency for Entrepreneurship and Development Ltd.	Poland	KETGATE Point	YES
19	Centre for Advanced Manufacturing Technologies, Wroclaw University of Science and Technology	Poland	RTO	NO
20	Central Mining Institute	Poland	RTO	NO
21	Łukasiewicz Research Network - Institute of Non-Ferrous Metals	Poland	RTO	NO
22	Professor Zbigniew Religa Foundation of Cardiac Surgery Development	Poland	RTO	NO
23	Faculty of Electrical Engineering, Computer Science and Information Technology Osijek	Croatia	RTO	NO
24	UniSMART - Fondazione Università degli Studi di Padova	Italy	RTO	NO
25	University of Primorska	Slovenia	RTO	NO
26	Institute of Physics	Croatia	RTO	NO
27	University of Silesia in Katowice	Poland	RTO	NO



**Figure 1. Geographical distribution of KETGATE Points and RTOs on left and; distribution of roles of KETGATE members on right.**



**Figure 2. Graphical presentation of the network on the webpage ketgate.eu.**

### 3.2. Integration process of new members

Table 2 summarizes the integration process of the new KETGATE member organizations. RTOs and BSOs that comply with the criteria set by KETGATE consortium can contact local KETGATE point through the KETGATE website. After that, the local KETGATE point sends them the institutional commitment to be signed. After the new organization and the KETGATE coordinator (SEZ) sign the commitment, this is sent to JSI, which integrate them on the webpage ketgate.eu and invite them to the platform Microsoft Teams, where Service Requests of SMEs and toolboxes are shared. New members are also invited to provide more information about their organization, Business Advisor, KET Facilitator, RTO service offers, patents, etc. to be published on the webpage. This information is sent to JSI, which uploads it on the webpage.

As an example, the integration of newly joint RTO INSTITUTE OF TECHNICAL PHYSICS AND MATERIALS SCIENCE, CENTRE FOR ENERGY RESEARCH on the webpage can be observed on Figure 3.



**Table 2. Summary of integration process of new KETGATE members.**

What	Who
1. New member signs the commitment (KETGATE point/RTO)	New member with support of regional project partners
2. Logo, webpage and description of new member organization (max 500 characters) is sent to JSI	New member with support of regional project partners
3. Integrate the new member on ketgate.eu	JSI
4. New KETGATE point receives access to KETGATE platform Microsoft Teams to publish tech. service request New RTO receive access to KETGATE platform Microsoft Teams to receive tech. service request	JSI
5. New member receives templates for providing detailed information about KETGATE Point / RTO (KET services, technology offers, publications, etc.), information is sent to JSI to be published on ketgate.eu.	New member, JSI

## INSTITUTE OF TECHNICAL PHYSICS AND MATERIALS SCIENCE, CENTRE FOR ENERGY RESEARCH

[Home](#) / [RTO](#) / [Institute of Technical Physics and...](#)

### Mission of the Institute:

- Interdisciplinary research on complex functional materials and *nanometer-scale* structures, exploration of physical, chemical, and biological principles, their exploitation in *integrated micro- and nanosystems*, and in the development of characterization techniques.
- Dissemination of the results in international programs, education and industrial R&D, with special attention to the needs of SMEs.

### Medium term R&D plan:

- Research of new 2D semiconductors. Defect-engineering: the properties of novel 2D materials through atomic scale modification and investigation of the novel properties. Precise fabrication of 2D hetero-structures (artificial crystals) built layer-by-layer from various 2D crystals with controlled rotational orientation, and investigating the atomic and electronic structure of the new materials by experimental and computer simulation methods.
- Research of semiconductors in cooperation with EU partners in the field of nitride transistors, metal based transistors, microscopy of novel 2D semiconducting layers, superconductors. Research on MEMS / NEMS sensor principles, development of autonomous, flexible, wearable and integrated micro and nanosystems for environmental sensors, physical (mechanical, optical, thermal), medical (microfluidic, biochemical sensors,) applications and their validation in real conditions. Development special microfluidic systems for sample transport, for preparation, for molecule detection and for analysis in Lab-on-a-Chip devices.
- Development of various semiconductor micro and nanosystems, application of new materials, structures and functions, transfer the results to SMEs and industrial partners.
- Synthesis of layers with appropriate bandgap for solar cell applications including Fe2S2 and FeSi4. Research of ceramic



Institute of Technical Physics and Materials Science, Centre for Energy Research

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**Phone number of the KET facilitator:**  
+3613922222

**Website of the RTO:**  
[www.mfa.kfki.hu](http://www.mfa.kfki.hu)

**Figure 3. Example of integrated new RTO on the webpage ketgate.eu.**



## 4. Strengthening the KETGATE Network

In order to strengthen the network KETGATE, it is important that there is high number of SMEs using the services of the network. As the goal of the project is to have 30 concrete KET service offers sent to SMEs and 15 signed contracts, accepting the offers it is crucial to have high number of Service Requests of SMEs gathered and shared on the KETGATE platform. It is also important to promote the service requests among KET Facilitators and have responsive RTOs in order to send concrete service offers to SMEs.

During the pilot phase consortium used ketgate.eu intranet as KETGATE platform, but it has been realized that there is a need for more user friendly and practical platform, so the KETGATE platform was moved to Microsoft Teams.

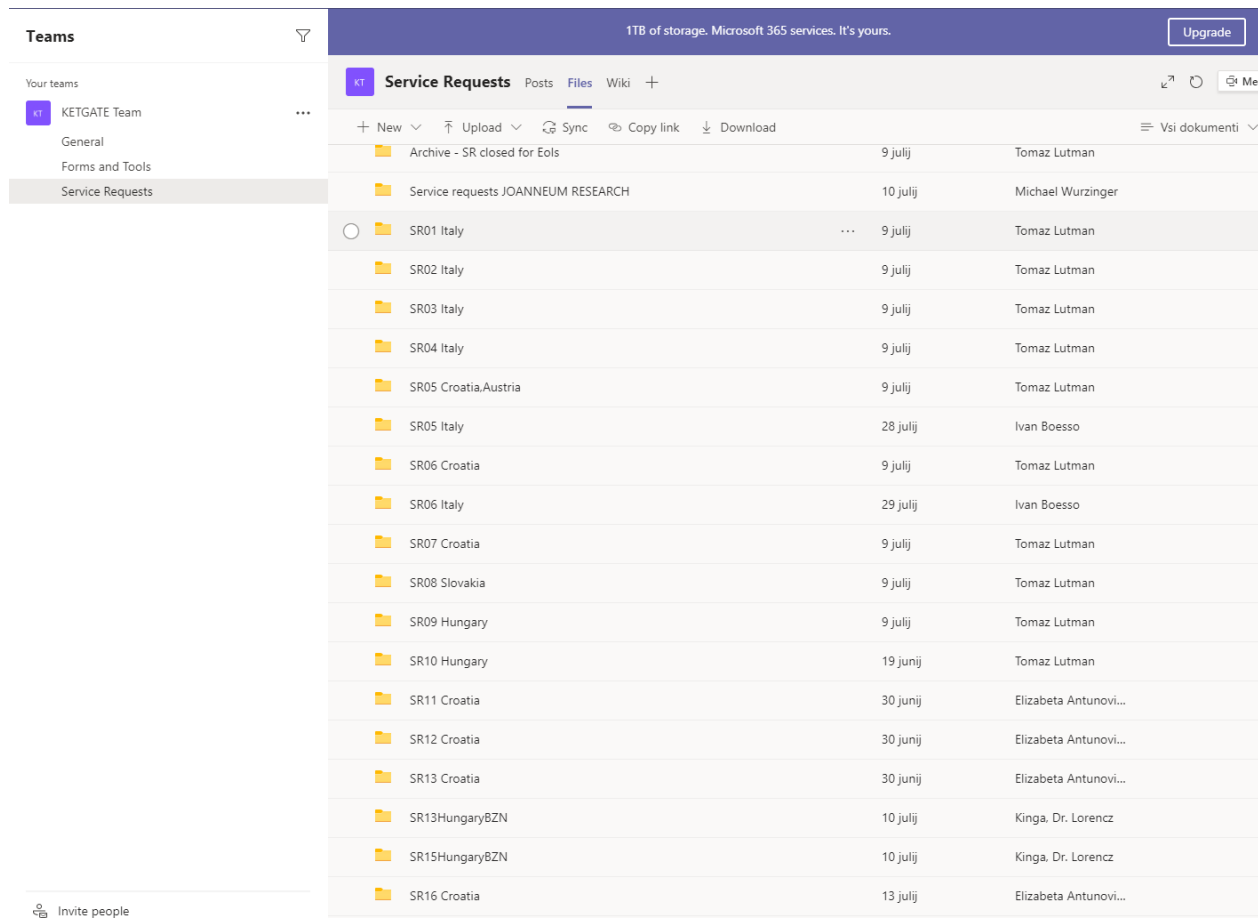
In order to increase SME-RTO cooperation, the consortium decided to provide new service requests in spring 2020, specially at the virtual b2r event. It has also been decided that since there are new RTOs in network, those service requests that did not result in pilot project in 2019 are reviewed by respective partner. A critical review has to be made: Is technology service request clear and specific? Is it too general? Is the request suitable for RTO - is the service sought already widespread on the market and provided by many companies or is it R&D oriented? Afterwards the service requests are uploaded on Microsoft Teams. The Business Advisor informs the KET Facilitators that new service requests are uploaded and asked them to provide feedback about interest by filling out expression of interest template. Further discussions about RTO-SME cooperation in the form of technical service provision are discussed. Consortium has decided that each project partner shall acquire 6 service requests until the end of May 2020 and total 10 until the end of July 2020. The newly joint KETGATE points shall acquire at least 4 service requests of SMEs until the end of July 2020 as they committed themselves in institutional commitment.

In the period May 2020 - August 2020 38 service requests were uploaded on KETGATE platform Microsoft Teams. The outlook of MS Teams platform with uploaded service requests can be seen on Figure 4.

In addition, it has been decided by consortium that also innovation audits will be performed, which will enhance the interaction with SMEs and supporting them in their innovation process. By knowing the R&D process of SME better, KETGATE point has better chances to successfully connect them with RTOs.

One of the important issues for strengthening the network is also supporting RTO-SME cooperation discussions with funding calls. This has been discussed and identified on regional level in D.T4.3.1. reports. Furthermore, possible funding sources have been reviewed on regional level in these reports. Self sustainable network by collecting membership and success fees of each SME-RTO cooperation has been discussed in D.T4.1.1.





**Figure 4. View of KETGATE platform where service requests are uploaded.**

## 5. Conclusions and Recommendations

During the KETGATE project duration the network expanded from initial 8 KETGATE points and 3 RTOs to 10 KETGATE Points and 20 RTOs from Central Europe. This growth indicates interest for providing KET services to SMEs and good trend for expanding KETGATE network mid-to-long-term with the target of a Central Europe-wide KET access & service network. In case of successful implementation of toolboxes growth in other regions of Europe is foreseen.

In order to maintain the network, it is important to strengthen it. Within the project, this was done by implementing validated tools, developing business models and providing information about access to funding for RTO-SME cooperation, and very important - interest of SMEs, which expressed KET service requests. By attracting interest of SMEs, more than 45 service requests of SMEs were shared on KETGATE platform during project duration and more are expected to be shared.

In order to attract interest of SMEs it is important to promote the KET services, technologies, research infrastructure and latest achievements of RTOs. It is also important to organize brokerage events and visit SMEs or contact them via phone and email in order to establish personal connection. One important tool to better understand and support R&D of SME is to perform innovation audit. In such a way SME can receive complete support of their R&D process, which increases their competitiveness on the market. Organizing brokerage events is important tool for gaining interest of SMEs and establishing connections which lead to KET service provisions to SMEs. The KETGATE Consortium gained new experience in brokerage events by



organizing one physical (Venice-Italy, January 2019) and one virtual event (May 2020). Due to large number of KETGATE points, the events had a very international character and enabled new connections which lead to KET service provisions of RTOs to SMEs. For the successful organization of the event, it was important to have a strong platform. This was especially crucial in the second brokerage event, which was virtual. Due to different challenges in the future, the virtual events and meetings might gain higher importance.

Consistent with the regional S3 strategy, policymakers are encouraged to make use of ERDF and other funds to engage their regional Technology Centres and Infrastructures to collaborate with other KETs Technology Infrastructures across borders so bridge the service and technology gap in their region. KETGATE project partners mapped and identified national/regional public authorities (PA) and policy makers (for example ministries, ministerial departments, state or regional agencies/organisations, funding managing authorities and bodies etc.) whom they would approach, create their awareness and organize meetings to handle policy recommendations.

The KETGATE project recommends offering incentives, financial mechanisms, financial instruments and enabling frameworks for policy makers to support their regional SME to use KET technology services across borders, in accordance with their Research and Innovation Strategies for Smart Specialisation (RIS3). The aim can be also to escalate regional smart specialisation strategies to EU level and vice versa. The use of EU cohesion and other EU funds/ funding sources for implementing KET financial instruments rather than national/regional funding sources possibly support cooperation of technology knowledge bases and enhance potential investment of blended public & private financial sources in Central Europe.

The actions we suggest to be implemented are:

1. Increase the awareness of the potential of KETs to business growth. Although there is a fair motivation among SMEs regarding the integration of KETs in their manufacturing process, the benefits of their use are still unclear. Also, SMEs lack efficient sources of state-of-the-art information and regular updates. They currently largely rely on the internet and not on specialized sources.

2. Enhance transnational collaboration between research and business. The lack of specialized skills and the difficulties to attract financing can be mitigated when collaboration happens at the European or international level. Skills, expertise and financing can be transferred to manufacturing companies interested in collaborating with European RTOs. In addition, transnational collaboration can strengthen weak innovation ecosystems and enhance cooperation between industry and technology centres and research institutes with multiplier effects for the local economies. Evaluation procedure, in particular the rating criteria used by the financial instrument shall prioritize the establishment of links between companies and the applied research sector. National/ regional implementation of the KET financial instrument shall be based on KETGATE platform model that creates a reliable quality of 'one-stop technology consultancy targeted at SMEs' where SMEs and other relevant actors can access services offers derived from the capabilities of partner RTO. The overall goal of the KETGATE platform is to connect organisations needing quality assured technology guidance with EU RTOs to help develop and implement technology solutions.

3. Financial instruments shall support linking industrial sector with the RTOs.

Financial instrument shall stimulate KET research, development and innovation of SMEs through collaboration with universities and research organizations (both private and public) that result in development of new, innovative products, processes or services. Financial instruments that build links between public and private knowledge providers (i.e. higher education institutes, public research bodies) and small businesses, shall be developed. Financial instruments shall help researchers based in third level institutions and RTOs to engage in research and support collaborative links between enterprise and the



research community that lead to the practical application of research in business, yielding benefits to both groups.

International RTOs should apply for EU Calls such as INNOSUP and similar, in order to have the possibility to provide interregional and transnational R&D services to SMEs using consolidated schemes such as the Financial Support for Third Parties from the European Commission. It is recommended to explore possibilities to align supporting schemes for companies (e.g. Component 5 on interregional innovation investments, which is an investment programme focusing on the commercialisation and scaling up of interregional innovation projects for the development of European value chains.)

One of the option to boost KET service provision is also to establish contacts to venture capital to support funding of start-ups and scale-ups to increase their liquidity also for contract research.

4. Promote and support the application of the Procurement for Innovation. Increased public R&D investment and greater collaboration within innovation ecosystems could foster the wider commercialisation of KETs-related products.
5. Developing/providing advisory services shall be complementary part of the financial mechanism or instrument to assist eligible public and private counterparts to improve the bankability and investment-readiness of large, complex, innovative projects that need substantial long-term investments.
6. Establish a transnational round table of stakeholders for developing and steering common actions in order to elaborate concrete action plans to foster RTO-RTO and RTO-SME cooperation and tackle obstacles, using existing cooperation networks and integrating the KETGATE Points Network in this framework.
7. Coordinate regional activities with European deep-tech initiatives (e.g. digital innovation hubs, pilot lines).
8. Provide further brokerage events to support transnational contacts between SMEs and RTOs.