Concept paper

Digital CX & IoT I Europe I 2019
Platforms for IoT & AR in Europe 2019
SITSI I Vendor Analysis I PAC RADAR

IoT platforms
- with application marketplaces
- for industrial applications
- based on open source

IoT data exchange & monetization platforms

AR platforms for connected workers

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teknowlogy | PAC, March 2019

teknowlogy | PAC

RADAR
IT SUPPLIER ASSESSMENT FROM PAC

PAC INNOVATION RADAR

The concept

What is the PAC RADAR?

The PAC RADAR by teknowlogy | PAC is an effective tool for the holistic evaluation and visual positioning of software and ICT service providers on local markets. Numerous ICT and business decision makers in user companies of all industries and company sizes rely on the PAC RADAR when selecting their partners and developing their sourcing strategies.

With the help of pre-defined criteria, teknowlogy | PAC evaluates and compares providers' revenue scope, development and market position in addition to performance and competencies within specific market segments.

Each PAC RADAR focuses on a certain IT services segment. Up to 30 leading providers are evaluated per segment. Participation in the PAC RADAR is free of charge.

All providers are evaluated using teknowlogy | PAC's proven methodology, which is based on personal face-to-face interviews and a detailed self-disclosure of each provider.

teknowlogy | PAC reserves to also evaluate and position those providers in the PAC RADAR that do not participate in the self-disclosure process.

After the evaluation of the pre-defined criteria, each supplier's position is plotted in the PAC RADAR. All criteria are classified by clusters and can all be attributed to the "Competence" and "Market Strength" main clusters.

Within the PAC RADAR the following applies: The closer a company is to the center, the closer they are to meeting customers' requirements!

The provider evaluation, including a market description and short company profiles, is published as a report.
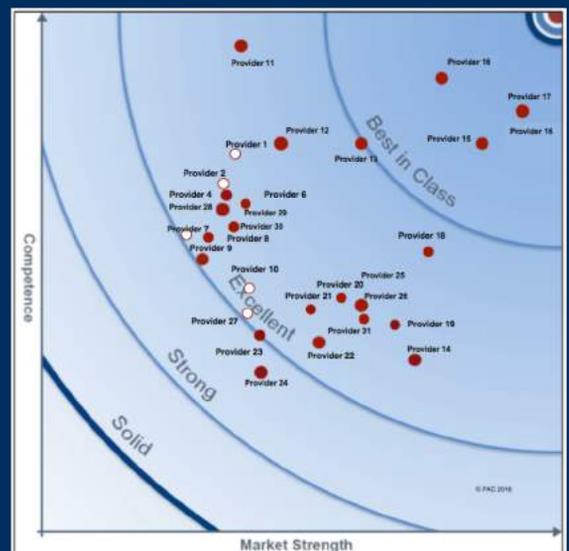
What is the PAC INNOVATION RADAR?

Concept and methodology of the PAC INNOVATION RADAR are similar to those of the traditional PAC RADAR.

While the traditional PAC RADAR focuses on mature services segments, the PAC INNOVATION RADAR, however, positions providers in rather new and innovative service segments.

Thus the focus of the evaluation is rather on the portfolio, vision, investment and capabilities than on existing references, projects and resources.

PAC INNOVATION RADAR graph

(exemplary presentation)

PAC INNOVATION RADAR

Definitions

What is the PAC definition of IoT platforms?

- IoT platforms provide two basic types of functionality to clients: IoT device management and IoT application management.

- **IoT device management** covers device provisioning, device connectivity, remote SW updates and remote control.

- **IoT application management** includes application development & integration, data analytics, data visualization and event processing.

What is the PAC definition of AR platforms?

- Augmented reality (AR) platforms provide two basic types of functionality to clients: AR application development and AR data visualization.

- **AR application development** contains a simple-to-use (low-code) application development platform, which allows non-developers to generate workflows and instructions for connected workers to improve their efficiency.

- **AR data visualization** enables the visualization of data across many different devices, such as smartphones, tablets and smart glasses. This includes the worker's interaction with the device to perform steps and tasks within a process.

**What is the PAC definition of IoT data exchange & monetization platforms?**

Companies need access to data – today and even more so in the future. But not all data are easily accessible. On the other hand, companies have access to large parts of data which are also potentially relevant for other companies. Sharing data is the right solution for both parties and data marketplaces can bring buyers and users together on a large scale. A new kind of platform is emerging, which orchestrates data exchange and monetization. This becomes especially relevant in the context of IoT data. These new platforms allow for the secure management of data access, confidential sharing as well as monetization.

PAC INNOVATION RADAR

Segmentation
of IoT & AR platforms

How does PAC segment the provider landscape for IoT platforms?

PAC is going to evaluate the providers of **IoT & AR platforms in Europe** by five new PAC INNOVATION RADAR segments, which are dedicated to specific user requirements:
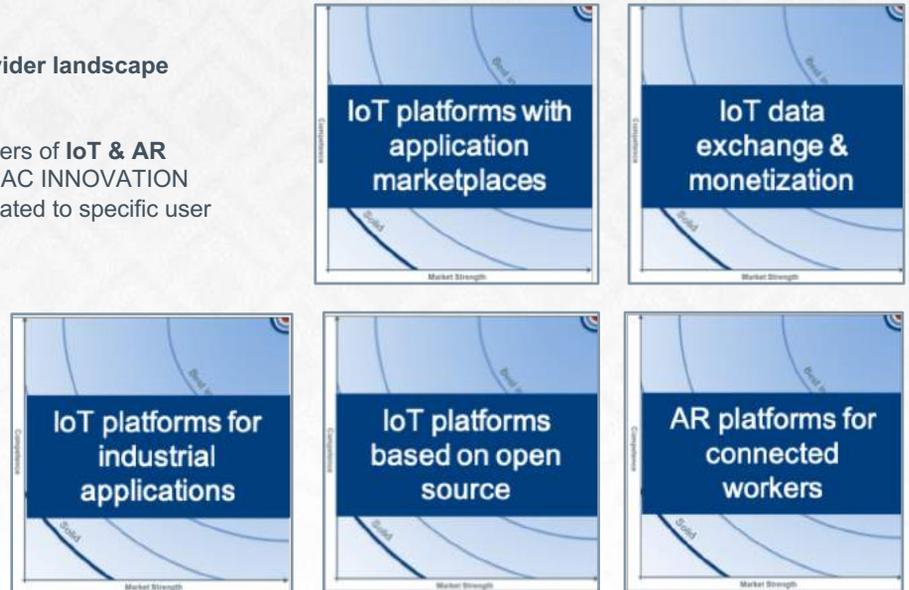
How will the providers be matched to the different types of IoT platform?

Depending on their specific focus area, the providers will be positioned in one or more of five PAC INNOVATION RADAR analyses.

Why is PAC introducing and evaluating new types of platforms?

First, the boundaries between the segments of horizontal IoT platforms (for device management, rapid application deployment, analytics application, device development) introduced earlier are blurring, and existing vendors of IoT platforms are extending their capabilities more and more into other segments.

Second, as the established market segments of IoT platforms are growing more mature, we ask the users for their opinion. The IoT Survey 2019 is the world's first annual survey of IoT platform users, based on a sample of over 2,000 survey responses. For details on the survey, please visit https://www.iot-survey.com.

Third, the feedback from users is that they are increasingly looking for platforms which provide additional or very specific capabilities, besides the above-mentioned horizontal IoT platform categories. Therefore we will frequently enhance the perspective of the PAC INNOVATION RADAR with insights from newly emerging areas in the IoT context to address fast-evolving user needs. This year, we will focus on augmented reality (AR), open source and application marketplaces, but also IoT data exchange and monetization.

PAC INNOVATION RADAR

Focus areas of different types of IoT & AR platform

What are the focus areas of the different types of platform?

In principle, we can group the platforms analyzed into three different categories of platform:

- **IoT platforms**
    - IoT platforms with application marketplaces
    - IoT platforms for industrial applications
    - IoT platforms based on open source
- **AR platforms**
    - AR platforms for connected workers
- **Data exchange & monetization platforms**
    - IoT data exchange & monetization platforms

The focus areas of these IoT platforms are the following:

IoT platforms with application marketplaces use a microservice structure and provide open APIs to their external ecosystem of developers. Based on this strength, we will see that powerful IoT platforms will establish and enhance an open marketplace of horizontal apps and add-ons, but also solutions for various verticals. This creates a continuous and entirely open system of innovation for the existing user base and their connected devices.

IoT platforms for industrial applications use a microservice structure and provide open APIs to their external ecosystem of developers. Based on this strength, we will see that powerful IoT platforms will establish and enhance an open marketplace of apps and add-ons dedicated to the complex industrial space. This creates a continuous and entirely open system of innovation for the existing user base and their connected devices.

IoT platforms based on open source are receiving more attention in the market, as they are becoming increasingly available. Also business users tend to consider them as a potential option in the IoT space. Since open source is relevant in general and very attractive to many users, we will take a first look at several of the most prominent open-source-based IoT platforms to understand their strengths and weaknesses by comparison.

AR platforms for connected workers provide worker-related application development and data visualization. AR application development contains a simple-to-use (low-code) application development platform, which allows non-developers to generate workflows and instructions for connected workers to improve their efficiency. AR data visualization enables the visualization of data across many different devices, such as smartphones, tablets and smart glasses. This includes the worker's interaction with the device to perform steps and tasks within the processes.

IoT data exchange & monetization platforms represent a new kind of platform, which orchestrates data exchange and monetization. This is becoming increasingly relevant in the context of IoT data, as more and more IoT data are being collected and made available via various IoT platforms. These new platforms for data exchange and monetization allow for the secure management of data access, confidential data sharing between data owners and buyers as well as data monetization.

PAC INNOVATION RADAR

Provider selection & participation

Which providers are positioned in the PAC INNOVATION RADAR?

Providers are selected and invited according to the following criteria:

- **Size of revenues** in the segment to be analyzed in the specified region;
- "Relevance": Even providers that do not belong to the top-selling providers in the segment to be analyzed are considered, if PAC classifies them as relevant for potential customers, for instance due to an innovative offering, strong growth, or a compelling vision.

There is no differentiation as to whether the providers are customers of PAC – neither in the selection of the providers to be positioned, nor in the actual evaluation.

What do providers have to do in order to be considered in a PAC INNOVATION RADAR analysis?

The decision as to which providers are considered in the PAC INNOVATION RADAR analysis is entirely up to PAC. Providers do not have any direct influence on this decision.

However, in the run-up to a PAC INNOVATION RADAR analysis, providers can make sure in an indirect way that PAC can adequately evaluate their offerings and positioning – and thus their relevance – e.g. by means of regular analyst briefings etc.
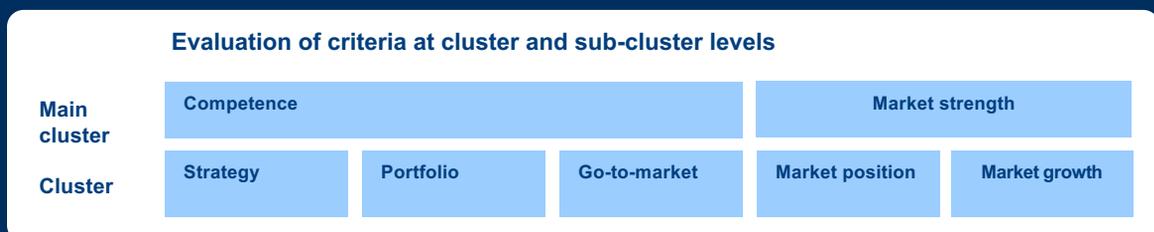
Why should providers accept the invitation to participate actively?

Whether or not a provider participates in the RADAR process does not actually affect their inclusion and positioning in the PAC INNOVATION RADAR, nor their assessment. However, there are a whole host of benefits associated with active participation:

- Participation ensures that PAC has access to the largest possible range of specific and up-to-date data as a basis for the assessment;
- Participating providers can set out their specific competences, strengths and weaknesses as well as their strategies and visions;
- The review process guarantees the accuracy of the assessed factors;
- The provider gets a neutral, comprehensive, and detailed view of its strengths and weaknesses as compared to the direct competition – related to a specific service in a local market;
- A positioning in the PAC INNOVATION RADAR gives the provider prominence amongst a broad readership as one of the leading operators in the segment under consideration.

PAC INNOVATION RADAR

Evaluation method

Evaluation of criteria at cluster and sub-cluster levels

	Competence			Market strength	
Main cluster					
Cluster	Strategy	Portfolio	Go-to-market	Market position	Market growth

PAC INNOVATION RADAR

The concept

Evaluation method

PAC uses predefined criteria to assess and compare the providers within given service segments.

The assessment is based on the report-card score within the peer group of the positioned providers.
This is based on:

- The provider's detailed self-disclosure about resources, distribution, delivery, portfolio, contract drafting, pricing, customer structure, references, investments, partnerships, certifications, etc.;
- If applicable, a poll among customers by PAC;
- The analysis of existing PAC databases;
- Secondary research;
- Dedicated face-to-face interviews as relevant.

The provider data is verified by PAC and any omissions rectified based on estimates.

If the provider does not participate, the assessment is performed using the proven PAC methodology, in particular based on

- Information obtained from face-to-face interviews with the provider's representatives, analyst briefings, etc.;
- An assessment of company presentations, company reports, etc.;
- An assessment of PAC databases;
- An assessment of earlier PAC (INNOVATION) RADARs in which the provider participated;
- A poll among the provider's customers (as required) on their experiences and satisfaction.

Reissue of published RADARs

The assessments in the PAC INNOVATION RADAR represent an assessment of the providers within the given peer group in the year in which the respective PAC INNOVATION RADAR was published.

The evaluations may not be directly comparable with those of any previous version due to subsequent content modifications. They particularly do not depict a development of individual providers over time.

Methodological and/or organizational modifications may be made due to changing market conditions and trends and can include:

- Different peer group in the focus of the analysis;
- Modification of individual criteria within clusters and sub-clusters;
- Increased or altered expectations by user companies;
- Adjustment of the weighting of individual criteria.

PAC INNOVATION RADAR

Publication and usage

Publication of the results by PAC

PAC publishes the results in the form of the PAC INNOVATION RADAR report, which, like all SITSI® publications, is provided to our customers for download via the portal www.sitsi.com.

Extracts from the PAC INNOVATION RADAR results are also supplied to the industry and business press as well as the leading ICT user associations.

Publication of the results by providers via reprint licenses

Participation in the PAC INNOVATION RADAR is free of charge. License fees are only payable for use of the results and for the exploitation rights.

Usage options for PAC INNOVATION RADAR results by user companies

The PAC INNOVATION RADAR supports ICT and business decision-makers in classifying and selecting the right service provider.

Using the dynamic MS Excel tool that is provided exclusively to user companies, ICT decision-makers can weight all evaluated criteria in line with their specific preferences and requirements. This gives you an initial steer on which provider is right for you.

Additionally, the PAC INNOVATION RADAR results are used as the basis for individual consultancy projects for provider evaluation and pre-selection.

Usage options for PAC INNOVATION RADAR results by providers

- **In strategic market and competition analysis:** The PAC INNOVATION RADAR is the ideal benchmarking tool. Providers get a neutral, comprehensive, and detailed view of their strengths and weaknesses as compared to the direct competition – related to a specific service in a local market.
- **In sales:** The PAC INNOVATION RADAR helps providers define a successful growth and positioning strategy. It further provides sales arguments based on an independent assessment of the specific strengths and weaknesses.
- **In sales, marketing, and communication via reprint rights:** Providers can exploit their positioning in the PAC INNOVATION RADAR for sales, marketing, and public relations via reprint rights to the assessment results.

PAC INNOVATION RADAR

Your participation

PAC is currently preparing **five PAC INNOVATION RADAR analyses around IoT platforms in Europe 2019.**
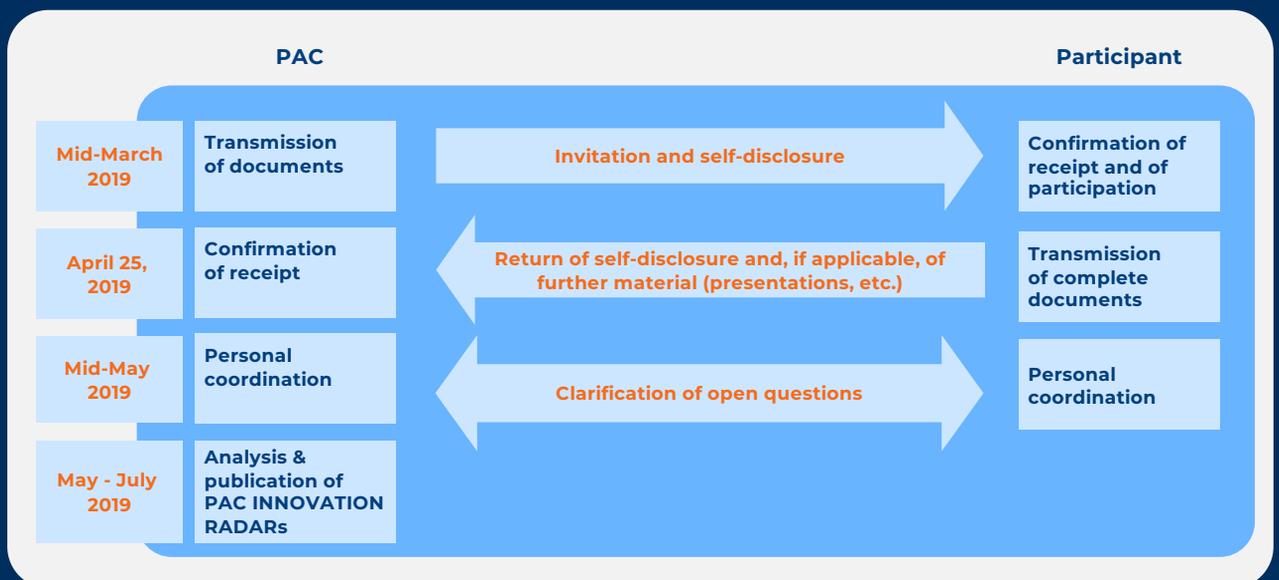
The PAC INNOVATION RADAR reports are going to be published in July 2019 (subject to change).

In order for full consideration to be given to your company, we request your cooperation.

Enclosed is a **self-disclosure questionnaire.** We kindly ask you to fill it in as completely as possible. Your responses will be checked for feasibility and adjusted as necessary to ensure comparability of data. Missing or incomplete responses will be completed by PAC using estimates.

To include the self-disclosure in the assessment, please return the self-disclosure by **no later than April 25, 2019.**

Participation of provider in the creation of the PAC INNOVATION RADAR

	PAC		Participant
Mid-March 2019	**Transmission of documents**	Invitation and self-disclosure →	**Confirmation of receipt and of participation**
April 25, 2019	**Confirmation of receipt**	← Return of self-disclosure and, if applicable, of further material (presentations, etc.)	**Transmission of complete documents**
Mid-May 2019	**Personal coordination**	← Clarification of open questions →	**Personal coordination**
May - July 2019	**Analysis & publication of PAC INNOVATION RADARs**		

Your contact at teknowlogy | PAC for all questions on the current PAC INNOVATION RADAR analyses

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About teknowlogy Group

teknowlogy Group is the leading independent European research and consulting firm in the fields of digital transformation, software, and IT services. It brings together the expertise of four research and advisory firms, each with a strong history and local presence in the fragmented markets of Europe: Ardour Consulting Group, BARC (Business Application Research Center), CXP and PAC (Pierre Audoin Consultants).

We are a content-based company with strong consulting DNA. We are the preferred partner for European user companies to define IT strategy, govern teams and projects, and de-risk technology choices that drive successful business transformation.

We have a second-to-none understanding of market trends and IT users' expectations. We help software vendors and IT services companies better shape, execute and promote their own strategy in coherence with market needs and in anticipation of tomorrow's expectations.

Capitalizing on more than 40 years of experience, we operate out of seven countries with a network of 150 experts.

For more information, please visit www.teknowlogy.com and follow us on Twitter or LinkedIn.