Knowledge Transfer Network

**4Manufacturing Web Application
'Industry 4.0'**

**Invitation to Tender
Statement of Works
KTN-ITT6246-01**

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1. Background

KTN is the UK's innovation network; we work in support of UK businesses to accelerate innovation. We work in support of UK government, primarily funded by Innovate UK (UK's innovation agency), to connect innovators and entrepreneurs to knowledge, technology, funds and markets. We particularly seek to support through networking high-growth-potential innovative businesses that can make an impact on the UK economy through improved productivity, jobs safeguarded and created and GVA contribution.

Industry 4.0, or the "4th Industrial Revolution" (4IR), represents a transformative opportunity for industry. It is clear that when implemented well, digitally based technologies and systems can transform manufacturing, helping realise a more productive, prosperous future. If the UK is to respond convincingly to this opportunity, then it is imperative that SMEs are engaged.

Through its "4Manufacturing" initiative (4M), KTN staff have developed, tested and refined an attainment framework approach to SME engagement focused on 4IR. Along with contractors, KTN has helped over 175 SME manufacturers, on a one-to-one basis, to take their first steps along the 4IR journey, helping them plan their innovation priorities and find the right connections - driving and enabling innovation and business improvement. We have engaged many more businesses through events.

We are seeking to implement a web application in support of the 4Manufacturing initiative, targeted at SMEs, for deployment by 4Manufacturing representatives from KTN and organisations outside KTN. The external organisations will be trained by KTN to deploy the 4Manufacturing programme.

In Scope: External and internal resource management of those working on 4Manufacturing, integration with purpose built website, integration with Workbooks CRM

Out of scope: Integration with any KTN ERP system

2. Services Required

The purpose of this request for quotation is to:

- Invite suppliers to present the features and capabilities of the web application they recommend, tailored towards KTN requirements.
- Invite a quotation for the web application presented, tailored according to KTN requirements.
- Invite suppliers to describe their approach to supporting KTN in configuration and implementation of the portal, should KTN choose to proceed.

2.1 Web application features and capabilities

In order to monitor the development of the 4Manufacturing initiative, those advisors liaising with SMEs will be asked to log their activity online.

A standalone web application is required to record the progress of SMEs on their journey toward the adoption of digital manufacturing. The tool should be independent of the website we embed it in, but should offer a seamless experience to users when accessed from the website.

Users should not be able to self-register; a login can be requested from the platform landing page, but the registration needs to be approved and provided by a KTN administrator.

4Manufacturing encompasses a set of 22 themes (see attachment); these themes structure dialogue with SMEs, enabling an identification and assessment of digital capabilities and opportunities. In a two-way dialogue with an advisor, the companies select a number of themes (typically one to three) that they wish to engage with. Within each of these themes KTN has defined a structure of five attainment levels, from (1) basic awareness to (5) exemplar, with descriptive text outlining what each attainment level looks like for a manufacturing business.

This framework for assessment and tracking should be replicated in a password protected portal. This would allow approved KTN advisors to:
- Log an initial contact and basic company information.
- Select themes.
- Record attainment.
- Generate a roadmap for the envisaged digital journey.
- Outline plans of action/next steps.
- Note advice given e.g. introductions/connections made to suitable partners, who may provide digital solutions or funding programmes.

In parallel with our one-to-one engagement, KTN has also engaged with manufacturers at a series of events across the nation. Event attendance should also be listed in the portal.

Theme journey and attainment will be the main focus of the web application. Users should be able to select a maximum of 6 themes to work on with any single SME.
- The portal should be able to generate an individualised, printable, graphical roadmap, populated with information from theme selection and attainment stage.
- The users should be able to log next steps and signposts that are theme/attainment stage specific and bespoke to the company, e.g. relating to a consortium or solution provider.
- At all milestones, users should have the ability to request help from KTN and this will most likely be an email output into Workbooks (our CRM) queue.

Users should have access only to those records they have created. In the future, we

may wish to give access to regional bodies to see data restricted to their region, but for the scope of this brief, only 4Manufacturing representatives will be provided with a login.

The portal should be navigable by company name or registration number. 4M representatives will be responsible for adding contact and company data. Company data will be created either manually or, perhaps, via the company registration number by accessing Companies House API.

Ultimately, the KTN CRM system (currently Workbooks) will be the main repository for the data obtained via the web application. Workbooks will also receive and assign any requests for support.

2.2 Web application objectives

The portal should provide KTN, and its approved advisors to SMEs, with an appreciation of the development of 4IR. It should also provide rich data to government, its departments (particularly – Innovate UK, BEIS and Education), and LEPs to inform policy and identify opportunities for sector/regional support.

It is important that results can be aggregated by sector, technology, theme, company, geographical region etc. and thus establish the need for particular actions (e.g. a requirement to help a particular sector or region through targeted funding or competitions). Funding, in its own right, may become a theme that is directly reported on and formalised – linking to competitions, bank loans (including government backed) and Private Equity Funding.

Analysis of the themes that the companies are engaging with will yield compelling insights into how UK stakeholders should work together to help SMEs engage in 4IR. We need to be able to pinpoint which themes are more popular and those that lack interest, enabling us to adjust our support accordingly and identify opportunities that are being missed. Similarly, we should be able to build a history of growth of theme attainment levels.

Reports on how many companies are being handled by a given 4M representative should be accessible, to allow us to identify in which regions they are active and how quickly they are processing their companies. We need to monitor referrals and follow-ups, as this is likely to be an area of weakness, or certainly an area for which we lack visibility, if people do this by email not connected to our CRM.

2.3 Target Audience

The portal will be used solely by approved 4M representatives, not the SMEs. SMEs will not have an account, but will receive the roadmap by email, directly from the web application.

The users will be digitally competent staff at LEPs, Growth Hubs and Chambers of Commerce etc. Should the project grow, it might be envisaged that:

1. Companies (when expert users) will have their own access.

2. Catapults have access.

We wish to develop 4Manufacturing as a nationally recognised program that is delivered locally by trained individuals who have an excellent track record in supporting change and innovation in companies.

2.4 Message & Tone of Voice

For users, there are two main calls to action: record progress and plan next steps. The site should employ a professional tone of voice, with no use of jargon and a consistent naming structure.

2.5 Brand Guidelines & Assets

- A hosting microsite (to be created in WordPress).
- A 4Manufacturing logo.
- Standard KTN brand guidelines.
- A Workbooks CRM database to receive the output.
- A specific domain e.g. ktn.co.uk/4Manufacturing
- Specific Terms and Conditions and Data Protection policy.
- User journey maps, with KPIs.

2.6 Perceived Barriers

If a company is to digitise, there is a need to build competence and confidence, whilst taking account of ongoing day-to-day resource demands, and gaps in knowledge and skills. Companies have been struggling to find support that offers this whole business perspective. Indeed, business advisors who both (a) understand digital and (b) are skilled at engaging manufacturing businesses are uncommon. Therefore, it is essential that the web application offers an intuitive experience to 4M representatives, with frequent signposts for guidance and support requests.

KTN's 4Manufacturing approach is based on starting small and growing step-by-step. This has been very attractive to the SMEs that we have engaged, encouraging these resource limited companies to take their first steps in digital technology and to generate momentum, supported by a roadmap. Consequently, it is imperative that the web application has an emphasis on actionable data output to inform the work of KTN support staff and advisors.

3. Deliverables

The following deliverables are required:

1. A mobile responsive web application to be embedded (e.g. via iframe) within our site. (*Browser versions and usage data can be supplied.*)
2. An admin area for a KTN administrator to assign logins and permissions.
3. Web forms (to record the information outlined above).
4. Database for reporting (refer to '2.2 Web application objectives') that users may interrogate within the portal and is capable of integrating with Workbooks CRM's open API.

5. PDF output of a roadmap in a graphical format that may be downloaded or e-mailed.
6. Email output to our CRM for support requests.
7. Support KTN in configuration and implementation of the portal.

4. Quote for Services – Fees

We require a quote for the deliverables specified in section 3. Timesheet submission is not required for this contract. Invoices should be provided on the completion of the deliverables. Expenses should be included in the quote supplied.

5. Term and Expiry Date

Completion of the web application by 12th January 2018. The web application will be a service for as long as the 4Manufacturing initiative is active.

6. Submission

In response to this Statement of Works please provide the following information:

Web Application Capability:
- A written response and a presentation describing the capability of your recommended software against KTN requirements according to the points outlined in 2.I. The written response and presentation should also highlight any particularly unique features offered by your recommended product. The presentation will ideally be delivered in person at the Business Design Centre, London. A Webex presentation can be arranged as an alternative method of delivery if a presentation in person is not feasible in the required timescale.

Implementation Support:
- Staff resources and bios (relevant experience) of the people who will undertake the work
- Evidence of past or current work
- What commitment you expect from KTN staff to support the configuration and implementation
- A work plan describing in detail, your approach to supporting KTN in configuration, implementation and training, with associated timings.

Schedule of costs:
- Cost breakdown for all the deliverables detailed above, including essential and optional components

Additional Information:
- Any additional services you could provide to enhance the project scope

Legal information:
- Your standard T&Cs

Please provide the information requested above by 12:00 midday on the 6th November
2017. The shortlisted suppliers will be invited to present their system to KTN before a
final selection is made for placement of the contract. Scoring of submissions will be
weighted as follows: Web Application Capability 50%, Implementation Support 20%
and Cost 30%.

7. Principal Contact for the Invitation to Quote

Please direct any questions or communications on this Invitation to Quote to:

Kate.wheatstone@ktn-uk.org

8. Terms and Conditions

This Invitation to tender is subject to "KTN's Terms and Conditions of Contractor
Engagement – Company Edition", which are provided separately.

Please note that KTN reserves the right to not award the contract if it is felt that there
is no response to the tender that meets our requirements.