



Innovative Algorithms for Applications on European Exascale Supercomputer

D4.2 – Concept for Call support

WP4: Communication and Dissemination, Outreach Approach

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Executive Summary

This deliverable presents the plans for supporting the Open Call, including identified target groups and measures. The deliverable is an output of Work Package 4 – Communication and Dissemination, Outreach Approach.

The promotion of the Open Call will be supported through the CASTIEL 2/EuroCC 2 and PRACE networks, which will ensure outreach to both the well-established research communities and a wide variety of national research groups that otherwise would normally not participate in development activities like those targeted by the call. Researchers from such underrepresented communities will be encouraged to form “mini-consortia” with external HPC experts (for example from NCCs or CoEs) in order to gain HPC expertise and submit highly qualified proposals.

The Open Call will be additionally promoted via social media channels (LinkedIn, Twitter, currently rebranding to X, and YouTube), webinars, and media relations to generate interest from additional research groups. These social media channels and the Inno4scale project website will be continuously updated in line with the project’s progress. To efficiently assure the quality of the communication work, several KPIs and target values are defined.

List of Abbreviations

AI	Artificial Intelligence
CoEs	Centres of Excellence
CSA	Coordination and Support Action
HPC	High Performance Computing
HPC3	HPC CoE Council
HLRS	High Performance Computing Centre Stuttgart
KPIs	Key Performance Indicators
NCCs	National Competence Centres
WP	Work Package



List of Tables

Table 1: Target values of Open Call promotion..... 12
Table 2: Open Call promotion metrics 14

List of Illustrations

- Figure 1: Paid content via LinkedIn 16
- Figure 2: Target groups of LinkedIn campaign 17
- Figure 3: Audiences 18
- Figure 4: Audience Attributes..... 18
- Figure 5: Interests and Traits..... 18
- Figure 6: Members Interests 18
- Figure 7: General Interests..... 19
- Figure 8: Product Interests..... 19
- Figure 9: Service Interests 20

Table of Contents

1. Introduction.....	8
2. Open Call promotion	8
2.1. European HPC-experienced research communities.....	8
2.2. Underrepresented research communities	10
2.3. Paid content via LinkedIn	11
2.4. KPI's and target values	11
3. Conclusion	12
References.....	13
Appendix.....	14

1. Introduction

The overall objective of the Inno4scale project is to enable the development of novel algorithms for the upcoming European Exascale supercomputers. The **Open Call** is an invitation to both HPC-experienced and research communities underrepresented in HPC and will target studies to develop proof-of-concept implementations running on real large-scale HPC hardware, including meaningful benchmark data that demonstrates significant superiority compared to existing solutions. The studies should include an impact assessment on the reduction of resource consumption (either time or energy) considering the present usage pattern and potential use cases of the algorithms, as well as the documentation for the technical implementation of the new algorithms.

A communication campaign is essential for the Open Call dissemination to reach European HPC communities and to recruit high-quality, relevant proposals. This deliverable addresses the planned communication and dissemination strategy for the Open Call. In general, this is designed to ensure that information about the Call reaches the best-suited institutions and individuals to work on the studies to develop new and innovative algorithms (hereinafter, innovation studies) across a broad base of application areas and underrepresented research communities will be encouraged to participate. In particular, interaction with EuroCC 2 and its accompanying CSA, CASTIEL 2, will be sought to exploit its broad network of HPC-interested organisations, and in doing so also provide it with material to offer added value to members of its network.

2. Open Call promotion

The Open Call will be widely promoted by all Inno4scale partners using a variety of mechanisms and formats which are adapted to the HPC experience of research communities.

2.1. European HPC-experienced research communities

Researchers in HPC-experienced research communities such as Computational Fluid Dynamics, Climate and Weather modelling, High-Energy Physics, Astrophysics, Artificial Intelligence, Big Data, Material Engineering, or Drug Discovery already see key challenges posed by the increased scale, heterogeneity, and complexity of new exascale systems. They may have already developed new innovative algorithms to solve key challenges such as

scalability, energy efficiency or increased heterogeneity or they have developed new numerical algorithms to substantially improve the time-to-solution or energy-to-solution.

The Open Call will be promoted using a variety of mechanisms and formats which European research communities have already successfully addressed in previous open calls, such as those used by the FF4EuroHPC project [5]:

- Inno4scale website [1] containing the complete Open Call documentation and Call presentations
- Special briefing of the EuroCC 2, CASTIEL 2 networks (targeting both the CoEs and NCCs) about the Open Call
 - Direct mailing, Slack announcements, newsletter
 - Webinars for CoEs and NCCs on the Open Call
- Public webinars for proposers on the Open Call
- Direct networking via project partners' networks, e.g., to ETP4HPC and PRACE
- Direct contact to active European research projects and consortia (cf. Table 2) that may be related to the objectives of the Inno4scale Open Call
- Press release in a specialized trade press for high performance computing and users, about the Open Call targeted to novel algorithms on European Exascale supercomputers
- LinkedIn [2] campaign (partially paid, cf. Section 2.3) aiming at creating interest about Inno4scale and the Open Call
 - Promotion of the Open Call and referring to the project website [1] for more details
 - Special Call announcement within HPC experienced groups such as "Exascale Computing", "HPC & AI (Europe)", and more general groups such as "Applied Mathematics", "Computation Science", and "Computational Physics"
 - Continuous posting of messages and text snippets on progress of the Inno4scale project

- Promotion of the Open Call and continuous tweets on Twitter, currently rebranding to X, [3] aiming to create interest in additional user groups
- Promotion of the Inno4scale project and publishing of videos on YouTube [4]
- Announcements and links to the Open Call and to the webinars from other European HPC activities

2.2. Underrepresented research communities

Exascale computing traditionally draws expertise from disciplines mentioned in the previous section. However, there are other disciplines that can benefit from exascale computing but have limited representation. For example, cybersecurity, environmental and social sciences, humanities, and interdisciplinary fields such as network traffic profiling, modelling of renewable energy sources, conflict resolution, and analysing large-scale social networks can benefit from the computational power of exascale systems but have fewer researchers involved in the development and utilization of HPC technologies.

In these non-classic HPC communities, not only should innovative algorithms of users who already use HPC resources be funded, but also new application areas and exascale users should be acquired by the Inno4scale project. This should be accomplished by bringing together (probably HPC-inexperienced) researchers from untypical domains and external HPC researchers forming “mini-consortia”. Inno4scale will support potential proposers in establishing connections to appropriate HPC experts (such as experts from European HPC projects) for proposal development. In this way, underrepresented research groups will gain valuable experience and have a greater opportunity to succeed in the Open Call.

Additional actions and promotions are proposed to address underrepresented research communities:

- Invitation to CoEs and NCCs – collaboration with CASTIEL 2/EUROCC 2 projects – to contact already known researchers of underrepresented research communities in order to promote the Inno4scale project and to highlight the possibility of building mini-consortia with these centres
- Promotions in LinkedIn science-related groups of underrepresented research communities including the special indication to contact and create joined proposals

with European NCCs, CoEs, HPC centres, or HPC experts if additional HPC expertise is required

- Open Call announcement within groups such as "Cyber Security #Europe", and "Horizon Europe", and in general Big Data and AI groups.

2.3. Paid content via LinkedIn

The promotion of the Open Call should include the distribution of paid content via LinkedIn. There should be three paid promotion ads with a total budget of 1500 EUR. Each of them should run for 5 days and consume a budget of 500 EUR. All these posts should start and end in August 2023 (Month 2). The first ad should promote the Open Call itself (cf. Figure 1), while the other two ads should promote public webinars on the Open Call (cf. Section 2.1).

The paid promotion ad is targeted to the member groups given in Figure 2. The matched audience is given in Figure 3. The "Member Interests" categories of the audience attribute "Interest and Traits" are listed in the figures beginning with Figure 6 till Figure 9. The category "Member Traits" was left out, because it concerns the current job situation, which is irrelevant for targeting of the Inno4scale project.

2.4. KPI's and target values

To monitor the effectiveness of the communication work to reach HPC-experienced as well as underrepresented research groups, the consortium has defined a number of KPIs and target values:

Table 1: Target values of Open Call promotion

Activities	KPIs & Target Values
LinkedIn Channel	Total #Followers: 50 #Posts: weekly
Twitter Channel	Total #Followers: 60 #Tweets: weekly
Communication Campaign for Calls	#Campaigns: 1
Network Leverage	#Entities (e.g., universities/institutes) Contacted: 40
Website	#Visitors: 1400
Webinars	#Public: 2 #Invited (CoEs and NCCs): 2
Events	#Participation in events: 1
Press	#Press releases: 1 #Press clippings: 6

3. Conclusion

The Open Call has to be promoted by all Inno4scale project partners to attract a sufficiently large set of high-quality proposals with a broad range of potential applications. Hence, the ability to reach established European HPC communities will help to recruit high-quality, relevant proposals. This aim shall be accomplished by a variety of proposed mechanisms and formats which have already been used successfully in previous calls to the EuroHPC communities.

Underrepresented research groups with no or little prior exascale exposure require significantly more endeavour to recruit and additional support of outside HPC resources to develop innovative algorithms for European exascale systems. A set of additional communication channels is proposed to promote the Open Call. Mini-consortia with HPC experts are proposed to gain experience and to create high-quality proposals for underrepresented researchers.

References

- [1] Inno4scale Open Call Website, URL <https://www.inno4scale.eu>
- [2] LinkedIn account, URL <https://www.linkedin.com/company/inno4scale/>
- [3] Twitter account, URL <https://twitter.com/Inno4scale>
- [4] YouTube channel, URL <https://www.youtube.com/channel/UC5tRN2-JcOJX-ACGFoHPYg>
- [5] FF4EuropeHPC Website, URL <https://www.ff4eurohpc.eu/>

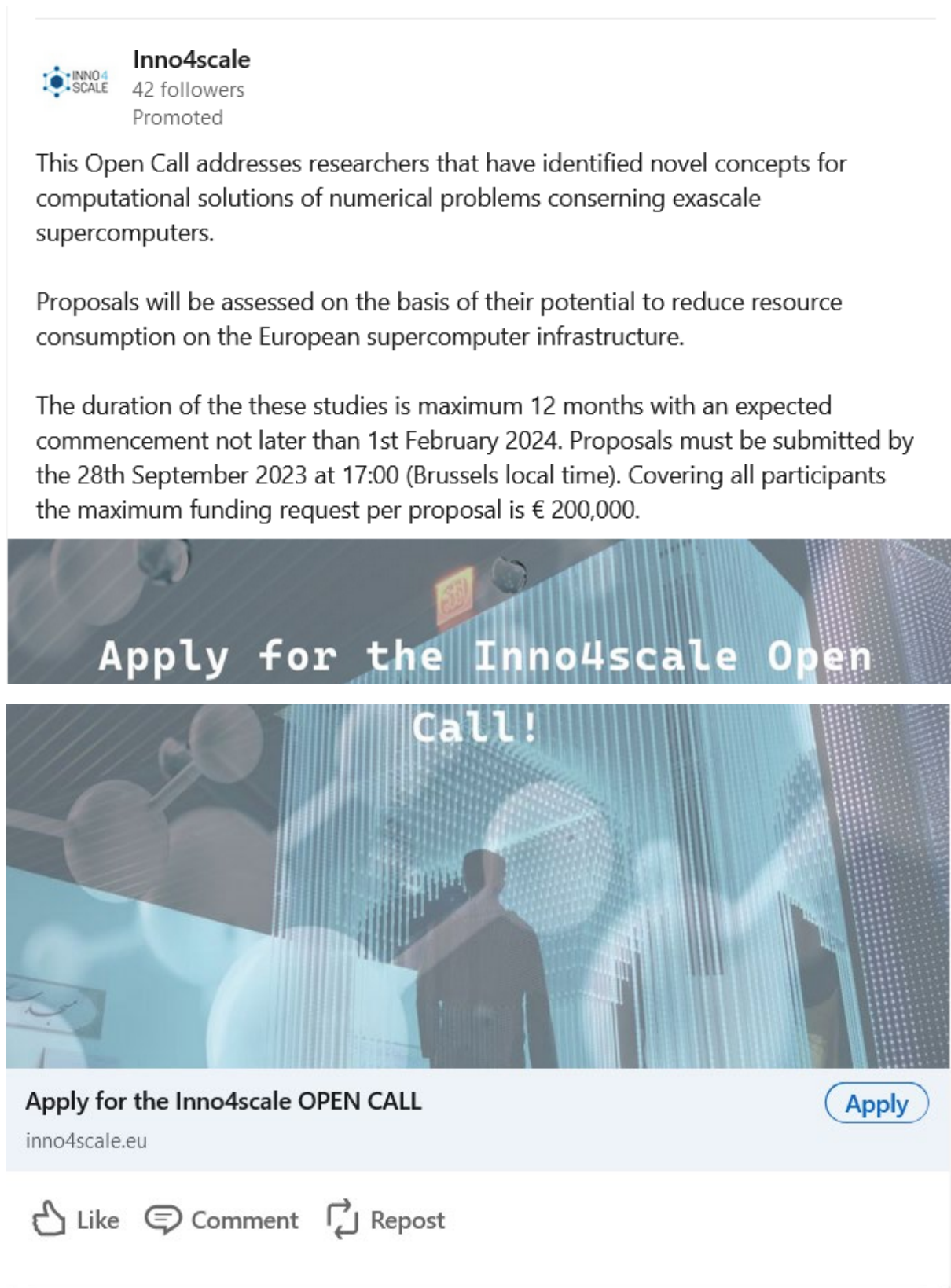
Appendix

Table 2: Open Call promotion metrics

Project acronym	Way of contact
-	HLRS Training newsletter
ADMIRE	Direct mailing to coordinator
BioExcel-3	via CASTIEL 2 champions mailing lists & direct mailing
CASTIEL 2	castiel2-workpackage2@lists.projects.hlrs.de
CASTIEL 2	castiel2-workpackage4@lists.projects.hlrs.de
CEEC	via CASTIEL 2 champions mailing lists & direct mailing
ChESEE-2P	via CASTIEL 2 champions mailing lists & direct mailing
CoEC	Direct mailing to coordinator & HPC3 mailing list
CompBioMed	via HPC3 mailing list
DComEX	Direct mailing to coordinator
DEEP-SEA	Direct mailing to coordinator
e-cam	via HPC3 mailing list
EMC2	Direct mailing to coordinator
EoCoE	via HPC3 mailing list
eProcessor	Direct mailing to coordinator
ESiWACE3	via CASTIEL 2 champions mailing lists
EUMaster4HPC	Direct mailing to coordinator
EuroCC NCCs	All NCCs were reached via following CASTIEL 2 mailing lists: Champions 1 (NCCs Competences Champions of WP2) Champions 3 (NCCs Industry Interaction Champions of WP4)
exaFOAM	Direct mailing to coordinator & exaFOAM mailing list
EXCELLERAT P2	via CASTIEL 2 champions mailing lists & EXCELLERAT P2 main mailing list
FTHPC	Direct mailing to coordinator
HiDALGO2	via CASTIEL 2 champions mailing lists & direct mailing
HPCQS	Direct mailing to coordinator
inEXASCALE	Direct mailing to coordinator
IO-SEA	Direct mailing to coordinator
LIGATE	Direct mailing to coordinator
MaX	via CASTIEL 2 champions mailing lists
MICROCARD	Direct mailing to coordinator
MultiXScale	via CASTIEL 2 champions mailing lists
NextSim	Direct mailing to coordinator
NOMAD CoE	Direct mailing to coordinator & HPC3 mailing list
PerMedCoE	via HPC3 mailing list
Plasma-PEPSC	via CASTIEL 2 champions mailing lists & direct mailing
POP3	via HPC3 mailing list

RAISE	Direct mailing to coordinator & HPC3 mailing list
RED-SEA	Direct mailing to coordinator
SCALABLE	Direct mailing to coordinator
SPACE	via CASTIEL2 champions mailing lists & direct mailing
SPARCITY	Direct mailing to coordinator
TEXTAROSSA	Direct mailing to coordinator
TIME-X	Direct mailing to coordinator
TREX	Direct mailing to coordinator & HPC3 mailing list

Figure 1: Paid content via LinkedIn



Inno4scale
42 followers
Promoted

This Open Call addresses researchers that have identified novel concepts for computational solutions of numerical problems concerning exascale supercomputers.

Proposals will be assessed on the basis of their potential to reduce resource consumption on the European supercomputer infrastructure.

The duration of the these studies is maximum 12 months with an expected commencement not later than 1st February 2024. Proposals must be submitted by the 28th September 2023 at 17:00 (Brussels local time). Covering all participants the maximum funding request per proposal is € 200,000.

Apply for the Inno4scale Open Call!

Apply for the Inno4scale OPEN CALL
inno4scale.eu [Apply](#)

Like Comment Repost

Figure 2: Target groups of LinkedIn campaign


Member Groups
Software Challenges to Exascale Computing (SCEC), Software Developer, HPC & AI (Europe), Software Testing and QA , Information Technology Infrastructure Architects, Computational Physics, HPC Geeks Worldwide, HPC-AI Advisory Council, Software Development Jobs - Powered by IvyExec.com, Information Technology Specialists, Information Technology Specialist Network, Information Technology Managers (IT), HPCcloud, Information Technology: Developer, Engineer, Analyst, Technician, Scientist | Blockchain | Metaverse, CSSC - Computational Science & Scientific Computing, Exascale Computing, HPC Today, Software Artificial intelligence Cloud Technology Engineer Defense CyberSecurity Healthcare HR Jobs, Theoretical Physics, HPC LAW - HIGH PERFORMANCE COUNSEL #HIPCOUNSEL, Software Architecture Special Interest Group, Supercomputing for the masses (GPU/Cuda/OpenCL programming), Applied Mathematics, Information Technology, AI Engineer | Data Scientist | Data Analyst | Big Data Engineer & Architect | Python Developer | RPA, Supercomputing & HPC, Supercomputing, Storage, AI and Big Data in Europe, High Performance Computing (HPC), Information Technology (IT) Learning Group - LinkedIn Learning

OR Company Industries
Nanotechnology Research, Computer and Network Security, Biotechnology Research, IT System Design Services, IT System Custom Software Development, IT System Data Services, Higher Education, Environmental Services

OR Member Interests
Databases, Deep Learning, Data Modeling, Operating Systems, Computer Programming, Data Architecture, Blockchain Technology, Design Software, Data Hosting, Data Science, Big Data, Information Technology, Computing Software, Data Science Software, Application Software Development Services, IT Services, Software Development Services



Member Groups
Software Challenges to Exascale Computing (SCEC), Software Developer, HPC & AI (Europe), Engineering in Motion, Advanced Analytics (Data Science, Big Data Analytics, AI, ML, Algorithms), HPCareer.Net for Professionals in Health Promotion Related Fields, Data Structures and Algorithms, Cyber Security & IT Architecture (Study Group) , Information Technology Infrastructure Architects, Computational Physics, Data Mining (Algorithms), Horizon Europe, Framework Programme for Research and Innovation, HPC Geeks Worldwide, HPC-AI Advisory Council, Software Development Jobs - Powered by IvyExec.com, Information Technology Specialists, Algorithms (O), Software Development Management Professionals, Information Technology Specialist Network, Information Technology Managers (IT), Horizon Europe, Industry 4.0 and Digitalisation, HPCcloud, Information Technology: Developer, Engineer, Analyst, Technician, Scientist | Blockchain | Metaverse, CSSC - Computational Science & Scientific Computing, Exascale Computing, HPC Today, Algorithms and Data Structures Development, Theoretical Physics, HPC LAW - HIGH PERFORMANCE COUNSEL #HIPCOUNSEL, " HORIZON EUROPE " Framework Programme for Research and Innovation, Supercomputing for the masses (GPU/Cuda/OpenCL programming), Algorithms & Optimization, Computational plasma physics, Computational Materials Science, Engineering Talks, Applied Mathematics, Information Technology, Software Development - Open Source, Linux, Cloud, AI/ML/DL, Software Developer, Programmer and Architect (Java | Python | PHP | C# | C++ | GO | Swift), Supercomputing & HPC, Evolutionary algorithms, Supercomputing, Storage, AI and Big Data in Europe, Cyber Security #Europe | European CyberSecurity News by Cyber-Consult.org, Software Developers & Freelancers, DevOps engineers with Job offers, Cyber Security Convention Europe, High Performance Computing (HPC), Information Technology (IT) Learning Group - LinkedIn Learning, Bioinformatics & Computational Biology (B&CB) : The emerging science, Algorithms



OR Job Functions
Engineering, Information Technology

Figure 3: Audiences

<p>Audiences Use your data to retarget website visitors or reach known contacts and accounts</p>	<p>List upload</p>
<p>Audience attributes Add targeting criteria like job title, industry, or skills</p>	<p>Lookalike</p> <p>Retargeting</p> <p>Third party</p> <p>Other</p>

Figure 4: Audience Attributes

<p>Audiences Use your data to retarget website visitors or reach known contacts and accounts</p>	<p>Company</p> <p>Demographics</p> <p>Education</p>
<p>Audience attributes Add targeting criteria like job title, industry, or skills</p>	<p>Job Experience</p> <p>Interests and Traits</p>

Figure 5: Interests and Traits

<p>Company</p> <p>Demographics</p> <p>Education</p> <p>Job Experience</p> <p>Interests and Traits</p>	<p>Member Groups</p> <p>Member Interests</p> <p>Member Traits</p>
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Figure 6: Members Interests

<p>Member Groups</p> <p>Member Interests</p> <p>Member Traits</p>	<p>General Interests</p> <p>Product Interests</p> <p>Service Interests</p>
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Figure 7: General Interests

General Interests >	<input type="checkbox"/> Arts and Entertainment
Product Interests	<input type="checkbox"/> Business and Management
Service Interests	<input type="checkbox"/> Careers and Employment
	<input type="checkbox"/> Finance and Economy
	<input type="checkbox"/> Health

<input type="checkbox"/> Marketing and Advertising
<input type="checkbox"/> Politics and Law
<input type="checkbox"/> Sales and Retail
<input type="checkbox"/> Science and Environment
<input type="checkbox"/> Society and Culture
<input type="checkbox"/> Technology

Figure 8: Product Interests

General Interests	<input type="checkbox"/> Administrative Support
Product Interests >	<input type="checkbox"/> Software
Service Interests	<input type="checkbox"/> Business Strategy Software
	<input type="checkbox"/> Computing Software
	<input type="checkbox"/> Content Management Systems (CMS)

<input type="checkbox"/> Content Management Systems (CMS)
<input type="checkbox"/> Customer Support Software
<input type="checkbox"/> Data Science Software >
<input type="checkbox"/> Education Software
<input type="checkbox"/> Engineering Software

Figure 9: Service Interests

General Interests	<input type="checkbox"/>	Application Software Development Services	
Product Interests	<input type="checkbox"/>	Architectural Services	
Service Interests	>	<input type="checkbox"/>	Business Analytics Services
		<input type="checkbox"/>	Business Consulting Services
<input type="checkbox"/>	Career Development Coaching Services		
<input type="checkbox"/>	Environmental Consulting Services	<input type="checkbox"/>	IT Services
<input type="checkbox"/>	Financial Management Services	<input type="checkbox"/>	Insurance Services
<input type="checkbox"/>	Health Insurance Services	<input type="checkbox"/>	Interior Design Services
<input type="checkbox"/>	Human Resources Management Services	<input type="checkbox"/>	Interview Preparation Services
		<input type="checkbox"/>	Legal Services
<input type="checkbox"/>	Management Consulting Services		
<input type="checkbox"/>	Marketing Services	<input type="checkbox"/>	Software Development Services
<input type="checkbox"/>	Project Management Services	<input type="checkbox"/>	Translation Services
<input type="checkbox"/>	Real Estate Services	<input type="checkbox"/>	Web Design Services
<input type="checkbox"/>	Resume Writing Services	<input type="checkbox"/>	Web Development Services