

Will web-enabled AI chatbots be a way to build a place-based regional applied science innovation strategy?

By Christian Saublens – EURADA founder and former Director

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INTRODUCTION

At a time when AI is increasingly seen as a key source of information, it was natural to test different chatbots on their knowledge in the field of regional innovation strategies, as a follow-up to the working paper on the idea of using data and an AI approach to turn regional policy into an applied science. The use of AI in public administration is growing, as shown in a recent report published by the JRC entitled: The potential of generative AI for the public sector: current use, key questions and policy considerations. <https://publications.jrc.ec.europa.eu/repository/handle/JRC139825>.

WARNING. This is just a test and there is no ambition behind the exercise.

I. THE CHATBOTS AND THE QUESTIONS

I have ask the following set of questions to 6 English AI well-known free of charge chatbots: ChatGPT, Claude, Copilot, AI chatbot, HIX Chat and Google Gemini and 3 French one: Perplexity, Mistral and IA Chat.

Question 1. What are the different steps to design a regional innovation strategy?

Question 2. Which regional innovation strategy design should I look at as a benchmark?

Question 3. Which data should be used to design a regional innovation strategy?

Question 4. If I have a budget of 50 million € to implement a regional innovation strategy how should I spend that money?

Question 5. Stakeholders' involvement in the delivery of support services
-Question 5.1. Which intermediary organisations should be involved in the provision of the support services that you have recommended?
-Question 5.2. What could be the selection criteria for Intermediaries?
-Question 5.3. Which are the most efficient intermediary organisation in accordance to those section criteria?
Question 6. What do you know about a logic intervention approach to design and implement a regional innovation strategy?
Question 7. Can you provide a reference regarding the literature in relation to data and AI tools for regional innovation strategy

II. ANSWERS' ASSESSMENT

The quality of the answers is good, without reaching a top level of expertise. The information has a fairly broad common core, but some of the bots have some interesting suggestions that show a slightly higher level of expertise.

All the chatbots provide information on implementation steps and metrics to track success. BUT none offer tips on how to improve the commercialisation of research results, the scaling up of innovative start-ups or the means to promote the adoption of innovation solutions in the regional ecosystem. As is all too often the case, high or deep tech innovation seems to be the panacea when, objectively, the vast majority of regions do not have the resources to match their ambitions, which are described on paper in relation to the reality of the resources and capacity at their disposal.

Unsurprisingly, the English chatbots don't mention any 'inspiring practices' from French-speaking countries, whereas the French chatbots do, even though some of them probably don't seem to be as efficient as those recommended by their colleagues.

There seems to be a fairly pronounced cultural effect or national mindset when it comes to allocating the financial volume to be devoted to the different types of support services. The Anglo-Saxon Chatbots suggest devoting 60% to direct financial services (equity, loans, etc.), whereas the French-speaking Chatbots recommend much less (20%).

It's interesting to note that the majority of chatbots make recommendations, suggest further questions and provide sources or references to help you find out more about the answers they give. One French chatbot does not refer Silicon Valley!

P.S. Ignorance or lucidity answer: an acknowledgement that no European region will ever be able to reach this level of good practice!!!

The details given in the scrolls vary, of course, from one scroll to another and sometimes from one answer to another.

The French chatbots answers have been translated into English using artificial intelligence via the Deepl translator!

III. A SNAPSHOT OF THE ANSWERS

Question1. What are the different steps to design a regional innovation strategy?

ChatGPT	Claude	Copilot
<ol style="list-style-type: none"> 1. Initial Preparation 2. Regional Analysis (Mapping the Ecosystem) 3. Stakeholder Engagement 4. Vision and Goal Setting 5. Strategy Formulation 6. Implementation Framework 7. Monitoring and Evaluation 8. Communication and Dissemination 9. Continuous Learning and Adaptation 	<ol style="list-style-type: none"> 1. Conduct a Comprehensive Regional Assessment 2. Engage Stakeholders and Build Collaborative Partnerships 3. Define Clear Strategic Objectives 4. Design Supporting Infrastructure and Ecosystem 5. Develop Human Capital and Skills Development 6. Establish Funding and Resource Allocation Mechanisms 7. Create Monitoring and Evaluation Frameworks 8. Foster International Collaboration and Connectivity 9. Implement and Continuously Adapt the Strategy 	<ol style="list-style-type: none"> 1. Assessment and Analysis 2. Stakeholder Engagement 3. Goal Setting 4. Identifying Priority Sectors 5. Promoting Collaboration and Partnerships 6. Supporting Entrepreneurship and Start-ups 7. Building Innovation Infrastructure 8. Measuring and Monitoring Progress

AI Chatbot	HIX Chat	Google Gemini
<ol style="list-style-type: none"> 1. Evaluation of the Existing Innovation Landscape 2. Identification of Key Stakeholders 3. Visioning and Setting Clear Objectives 4. Identify Gaps and Prioritizing Actions 5. Outlining specific initiatives and Identifying the necessary resources (financial, human, institutional) 	<ol style="list-style-type: none"> 1. Identify key stakeholders 2. Situational Analysis 3. Establishing a clear vision and setting specific goals that are aligned with the vision. 4. Identify Key Sectors and Priorities 5. Develop Action Plan 6. Build Innovation Ecosystem 7. Implement and Monitor 8. Evaluate and Iterate 	<ol style="list-style-type: none"> 1. Assess Regional Strengths and Weaknesses 2. Identify Regional Priorities 3. Develop Strategic Goals and Objectives 4. Design Implementation Strategies 5. Monitor and Evaluate

6. Implementing the Strategy	9. Communicate and Promote	
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IA Chat	Mistral	PERPLEXITY
1. Analysis of the regional context 2. Diagnosis of existing innovation and mapping of key players 3. Identification of sectoral or technological priorities 4. Development of strategic axes: thematic axes and incentive policies 5. Planning and budgeting 6. Establishing effective governance 7. Human capital development and training 8. Territorial attractiveness 9. Interregional and international collaboration 10. Strategy monitoring, evaluation and adjustment 11. Communication and awareness raising	1. Diagnosis and Initial Analysis 2. Definition of Objectives and Priorities 3. Stakeholder Consultation and Engagement 4. Action Plan Development 5. Implementation and Monitoring 6. Good Practice Sharing 7. Review and Adaptation	1. Stakeholder consultation 2. Analysis of the regional context 3. Identification of strategic areas of activity 4. Definition of objectives and challenges 5. Drawing up action programmes to accelerate time to market 6. Coordination with other policies 7. Setting up monitoring tools

Question 2. Which regional innovation strategy design should I look at as a benchmark?

ChatGPT	Claude	Copilot
Basque Country Flanders Silicon Valley Skåne Singapore Massachussetts, Bavaria Israel	Helsinki-Uusimaa Baden-Württemberg Silicon Valley Singapore Emilia-Romagna	The EU "Regional Innovation Strategy for Smart Specialisation

AI Chatbot	HIX Chat	Google Gemini
Silicon Valley Bavarian Innovation Strategy Finland's S3 Strategy Danish Innovation System Singapore Innovation Ecosystem Catalonia 22@Barcelona Ontario	Silicon Valley The Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) Bavaria Singapore Innovation Ecosystem Greater Manchester Catalonia	Baden-Württemberg Emilia-Romagna Singapore

IA Chat	Mistral	PERPLEXITY
Silicon Valley Bristol & Bath Science Park Estonie Innovation Open Source Sophia Antipolis Lombardie Berlin Copenhagen Ljubljana Shenzhen Stockholm	Silicon Valley Boston Barcelona	Île-de-France Bruxelles-Capitale Stockholm Helsinki Göteborg Hamburg Köln Berlin

Most chatbots are providing information regarding the reasons why they are mentioning a look to the strategies that they have listed. Often the info provides an overview and key elements.

Mistral has reply buy suggesting models: Triple or Quadruple Helix, Cluster, Regional Innovation System, 'Innovation Ecosystem and Open Innovation

Question 3. Which data should be used to design a regional innovation strategy?

ChatGPT	Claude	Copilot
1. Regional Economic Profile 2. Research and Development (R&D) Capacity 3. Innovation Ecosystem 4. Human Capital and Skills 5. Technological Trends	1. Economic Data 2. Innovation and Research Metrics 3. Human Capital and Education Data 4. Infrastructure and Ecosystem Data 5. Comparative and Benchmarking Data	1. Economic Indicators 2. Innovation Performance 3. Research and Development (R&D) Activity 4. Education and Skills 5. Infrastructure 6. Entrepreneurship and Start-ups

6. Regional Challenges 7. Stakeholder Input 8. Benchmarking and Comparative Analysis 9. Funding and Policy Landscape 10. Metrics for Innovation Potential	6. Stakeholder Feedback	7. Patent and Intellectual Property (IP) Data 8. Collaboration and Networks
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AI Chatbot	HIX Chat	Google Gemini
1. Economic Data 2. Innovation Performance Indicators 3. Education and Human Capital 4. Start-up and Business Landscape 5. Infrastructure and Technological Capabilities 6. Policy and Regulatory Frameworks 7. Social and Cultural Factors 8. Collaboration and Networking 9. Benchmarking Data 10. User and Market Data	1. Economic Data 2. Innovation Metrics 3. Education and Skill Levels 4. Infrastructure Data 5. Market Data 6. Social and Demographic Data 7. Policy and Regulatory Data 8. Networking and Collaboration Data 9. Benchmarking Data 10. Technology Trends: Emerging Technologies and Sector-Specific Innovations	1. Economic Data 2. Innovation Data 3. Infrastructure Data 4. Social and Demographic Data 5. Population demographics 6. Social indicators 7. Cultural factors

IA Chat	Mistral	PERPLEXITY
1. Demographics 2. Institutional and political framework 3. Dominant sectors of activity 4. Infrastructure 5. Human capital 6. Technological environment 7. Available financing 8. Data on innovative companies 9. Socio-economic and environmental impact 10. Qualitative data	1. Economic data 2. Innovation Data 3. Business Data 4. Infrastructure 5. Skills and Human Capital 6. Partnerships and Networks 7. Policies and Regulations 8. Socio-Cultural Data 9. Environmental data	1. Macro-economic indicators of innovation 2. Profiles of innovative companies 3. Data on support services 4. Specific performance indicators 5. Data on digital skills 6. Information on strategic sectors 7. Data on internationalisation 8. Environmental indicators 9. Contextual data

ChatGPT: Leveraging this data ensures the regional innovation strategy is evidence-based, tailored to specific context, and aligned with broader goals like sustainability, digitalisation, and economic growth. **Claude:** Comprehensive and multi-dimensional data collection ensures a nuanced, context-specific innovation strategy. **Copilot:** By analysing these data points, you can identify strengths, weaknesses, opportunities, and threats, which will help in crafting a comprehensive and effective regional innovation strategy. **Gemini:** By leveraging data-driven insights, regions can create more effective and sustainable innovation strategies.

Question 4. If I have a budget of 50 million € to implement a regional innovation strategy how should I spend that money?

ChatGPT	Claude	Copilot
<p>Financial support 25M€ (50%)</p> <ul style="list-style-type: none"> -5M€ R&D grants -2M€ vouchers -3M€ proof of concept -5M€ Innovation loans -5M€ commercial procurement <p>Non-financial support 15M€ (30%)</p> <ul style="list-style-type: none"> -5M€ for business incubator and accelerator -4M€ for networking and clusters -3M€ for capacity building in the form of workers upskilling and entrepreneurship -3M€ for Technology transfer <p>Ecosystem enablers 10M€ (20%)</p> <ul style="list-style-type: none"> -3M€ to digital platforms - 5M€ to infrastructure such as co-working spaces, innovation hubs and testing labs -2M€ for policy and regulatory support (sandbox). 	<p>Financial- investments 30M€ (60%)</p> <ul style="list-style-type: none"> -15M€ grants -10M€ for equity -5M€ for low interest innovation loans <p>Innovation infrastructure 12.5M€ (25%)</p> <ul style="list-style-type: none"> -4M€ for technology transfer -4M€ for business incubators and accelerators -4.5M€ for shared research facilities <p>Capacity building 5M€ (10%)</p> <ul style="list-style-type: none"> -2M€ training -2M€ innovation management consulting -1M€ international management <p>Monitoring & strategy development 2.5M€ (5%)</p> <p>i.e. performance tracking, impact assessment and planning support</p>	<p>Financial supports 30M€ (60%)</p> <ul style="list-style-type: none"> - 12M€ grants - 6M€ low interest loans -3M€ tax incentives -2M€ for PPP collaborative projects <p>Non-financial supports 20M€ (40%)</p> <ul style="list-style-type: none"> -8M€ business incubators and accelerators -4M€ networking opportunities -4 M€ training & education -2M€ regulatory supports -2M€ access to research facilities <p>-</p>

AI Chatbot	HIX Chat	Google Gemini
<p>Financial Support 20M€ (40%) -8M€ Grants and Subsidies for SMEs and start-ups. -5M€ Low-interest loan to finance for innovative projects. -5M€ Venture Capital/Equity Financing for setting up a public venture fund to co-invest with private investors in start-ups. -2M€ Tax Incentives</p> <p>Non-Financial Support 15M€ (30%) -6M€ Business Incubators and Accelerators -3M Innovation Hubs and Networks -1.5M€ Networks of experienced mentors and advisors for start-ups - 2.5M€ Market Research and Intelligence</p> <p>Capacity Building and Training 7.5M€ (15%) - 3M€ Training Programs and Workshops -3M€ Collaborative Research Programs 1.5M€ Skills Development Initiatives targeting at skill enhancement in key industries relevant to the regional economy.</p> <p>Awareness and Outreach 2.5 M€ (5%) -1M€ Conferences and Networking Events - 1.5M Marketing and Promotion of Services</p>	<p>Financial Support 20M€ (40%) -7.5 M€ Grants and Subsidies - 5M€ Low-Interest Loans - 5M€ Equity Financing</p> <p>Non-Financial Support 15M€ (30%) -5M€ Incubators and Accelerators -2.5M€ Training and Capacity Building - 2.5M€ Networking and Collaboration Platforms - 2.5M€ Research and Development Support</p> <p>Innovation Advisory Services 5M€ (10%) -2.5M€ Consultancy and Support -2.5M€ Policy and Regulatory Support</p> <p>Public Procurement for Innovation 5M€ (10%) -2.5M€ Innovation Procurement Programs -2.5M€ Showcases and Demonstration Events</p> <p>Impact Assessment and Reporting 2.5M€ (5%)</p>	<p>Financial Support 15M€ (30%) - R&D Grants and Incentives - Innovation Vouchers - Seed Funding - Tax Incentives</p> <p>Infrastructure Development 10M€ (20%) - Technology Infrastructure - Research Facilities - Innovation Hubs and Accelerators</p> <p>Ecosystem Building 15M€ (30%) - Talent Development - Education and Training - Public-Private Partnerships - International Cooperation</p> <p>Monitoring and Evaluation 5M€ (10%) - Performance Metrics - Data Collection and Analysis - Evaluation and Adjustment</p>

<p>Monitoring, Evaluation, and Administration €5M€ (10%) -2M€ Monitoring and Evaluation Framework -3M€ Administrative Costs</p>		
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IA Chat	Mistral	PERPLEXITY
<p>Financial support 10M€ (20%) - Seed capital - Target grants - Tax Incentives</p> <p>Planification & structuration 5M€ (10%) - Strategic development - Feasibility and impact studies - Project governance</p> <p>Infrastructures 15 M€ (30%) - Incubators/Accelerators - Digital and technological infrastructures</p> <p>Human capital & training 10M€ (20%)</p> <p>Networking & marketing 5M€ (10%)</p> <p>Monitoring, assessment and fine-tuning 2,5M € (5%)</p> <p>Reserve 2,5M€ (5%)</p>	<p>Financial support 5M€ (10%) - Equity -Loans & guarantees - Prize</p> <p>Funding R&D projects 20 M€ (40%) -Grants -PPP projects -Infrastructure</p> <p>Skills &Human capital 10M€ (20%) - Training - Talent Attraction & Retention - Incubators & Accelerators</p> <p>Infrastructure & Innovation Ecosystem 10M€ (20%) -Science parks & Clusters - ICT -Co-working space</p> <p>Promotion & Communication 2M (4%)</p> <p>Gouvernance & Coordination 2 M€ (4%) - Monitoring & Evaluation - Manager training</p>	<p>Funding R&D projects 20 M€ (40%)</p> <p>Support to innovative firms 10M€ (20%)</p> <p>Strengthening the innovation ecosystem (8M€) (16%)</p> <p>Human capital & skills 5M€ (10%)</p> <p>R&D Infrastructure 5M€ (10%)</p> <p>Fostering social innovation 2€ (4%)</p>

	Pilot Projects & Experimentation 1M€ (2%)	
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Gemini: Identify key sectors with high growth potential and focus resources on them. By carefully allocating resources and implementing a well-rounded strategy, you can create a vibrant innovation ecosystem.

Mistral stresses that: it is important to maintain a degree of flexibility in budget allocation, so as to be able to adjust allocations according to emerging needs and the results achieved. Regular assessment of progress and impact will enable priorities and investments to be readjusted over time.

Perplexity mentions that this distribution of funding enables the main thrusts of a regional innovation strategy to be covered, with the emphasis on funding projects aligned with the region's strategic areas of innovation, while strengthening the innovation ecosystem as a whole.

Question 5 Stakeholders involvement in the delivery of support services

Question 5.1 Which intermediary organizations should be involved in the provision of the support services that you have recommended?

ChatGPT	Claude	Copilot
<p>FINANCIAL SUPPORT</p> <ol style="list-style-type: none"> 1. Research and Technology Organizations (RTOs) 2. Innovation Agencies 3. Public Investment Funds 4. Private Venture Capital Firms <p>PUBLIC PROCUREMENT FOR INNOVATION (PPI)</p> <ol style="list-style-type: none"> 1. Public Procurement Agencies 2. Cluster Organizations <p>NON-FINANCIAL SUPPORT</p> <ol style="list-style-type: none"> 1. Startup Incubators and Accelerators 2. Universities and Research Parks 3. Industry Clusters 4. Chambers of Commerce 5. Training Providers 	<p>UNIVERSITIES AND RESEARCH CENTERS</p> <ol style="list-style-type: none"> 1. Technology transfer offices 2. Research collaboration platforms 3. Applied research capabilities <p>BUSINESS SUPPORT ORGANIZATIONS</p> <ol style="list-style-type: none"> 1. Chambers of Commerce 2. Regional development agencies 3. Business innovation centres 4. Cluster management organizations <p>SPECIALIZED INNOVATION INTERMEDIARIES</p> <ol style="list-style-type: none"> 1. Technology parks 2. Innovation brokers 	<ol style="list-style-type: none"> 1. Technology and Innovation Advisory Services 2. Business Incubators and Accelerators 3. Research and Development (R&D) Consortia 4. Knowledge Transfer Partnerships (KTPs) 5. Regional Development Agencies 6. Industry Clusters and Networks 7. Financial and Investment Organizations 8. Financial and Investment Organizations

<p>6. Universities and Technical Institutes 7. Technology Transfer Offices (TTOs): 8. Innovation and Technology Centres</p> <p>ECOSYSTEM ENABLERS</p> <p>1. Regional Development Agencies 2. Private Tech Providers 3. Innovation District Managers 4. Public-Private Partnerships (PPPs) 5. Policy Think Tanks and Advisory Groups 6. Business Associations</p>	<p>3. Intellectual property support centres 4. Digital innovation hubs</p> <p>FINANCIAL INTERMEDIARIES</p> <p>1. Regional investment banks 2. Venture capital networks 3. Credit guarantee institutions 4. Public-private investment funds</p> <p>NETWORKING AND COORDINATION BODIES</p> <p>1. Innovation councils 2. Cross-sector collaboration platforms 3. International partnership facilitators</p>	
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AI Chatbot	HIX Chat	Google Gemini
<p>1. Business Incubators and Accelerators 2. Innovation and Research Centres 3. Sector-Specific Industrial Associations 4. Venture Capital and Investment Firms 5. Local Economic Development Agencies and other Government Agencies 6. Vocational Training Institutes, Universities and HEI 7. Consulting Firms 8. Regional Development Agencies 9. Networking Platforms and Co-working Spaces 10. Applied Research Organizations and Economic Think Tanks</p>	<p>1. Innovation Hubs and Technology Transfer Offices 2. Business Incubators and Accelerators 3. Chambers of Commerce 4. Industry Associations 5. Research Institutions and Universities 6. Economic Development Agencies 7. Venture Capital Firms and Angel Investor Networks 8. Consulting Firms and Advisory Services 9. Non-profits and Foundations 10. Public Sector Agencies 11. Networking Platforms and Collaborative Networks</p>	<p>1. Technology Transfer Offices (TTOs): 2. Business Incubators and Accelerators 3. Regional Development Agencies 4. Chambers of Commerce 5. Clusters and Industry Associations 6. Financial Institutions 7. Consulting Firms</p>

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IA Chat	Mistral	PERPLEXITY
1. Public institutions i.e. RDA 2. Academic and research organizations 3. Industry clusters and associations 4. Incubators/Accelerators 5. Training organizations 6. Investment funds and investors 7. Entrepreneurs' associations and networks 8. Non-governmental organizations 9. Cross-border/international partnerships 10. Consultants 11. Technological and digital platforms	1. Institutions de Recherche et Universités 2. Chambres de Commerce et d'Industrie 3. Incubateurs et Accélérateurs 4. Agence de Développement Économique 5. Fonds de Capital-Risque et Business Angels 6. Centres de Transfert de Technologie 7. Clusters 8. Training centres 9. Associations et Réseaux d'Innovation 9. Orgasmes de Financement et de Subvention 10. Consultants et Experts en Innovation 11. Organismes de Normalisation et de Certification	1. Regional innovation agencies 2. Knowledge transfer units 3. Clusters 4. Incubators and accelerators 5. Innovation networks 6. Approved research centres carrying out applied research projects

Question 5.2 What could be the selection criteria for Intermediaries

ChatGPT	Claude	Copilot
1. Proven Expertise: Prior experience in delivering similar programs. 2. Regional Presence: Established networks and deep understanding of local dynamics. 3. Collaboration Capacity: Ability	1. Proven track record in innovation support 2. Strong regional ecosystem connections 3. Demonstrated capacity for knowledge transfer 4. Ability to bridge academia-industry gaps 5. Clear performance-based selection	1. Experience and Expertise 2. Resource Availability 3. Network and Partnerships 4. Institutional Capacity 5. Alignment with Regional Goals 6. Flexibility and Adaptability 7. Track Record of Success

<p>to work with government, academia, and industry stakeholders.</p> <p>4. Track Record: Demonstrated success in achieving measurable outcomes.</p> <p>5. Scalability: Capacity to expand operations as the program grows.</p>	<p>6. Transparent evaluation mechanisms</p> <p>7. Regular performance monitoring</p> <p>8. Competitive reappointment process</p>	<p>8. Innovation and Creativity</p>
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AI Chatbot	HIX Chat *	Google Gemini
<p>1. Expertise and Experience</p> <p>2. Network and Connectivity</p> <p>3. Understanding of Regional Needs</p> <p>4. Capacity and Resources</p> <p>5. Strategic Vision</p> <p>6. Flexibility and Adaptability</p> <p>7. Performance Metrics and Evaluation Capability</p> <p>8. Innovation Culture</p> <p>9. Sustainability</p> <p>10. Inclusivity and Diversity</p>	<p>1. Quantitative Metrics</p> <p>2. Qualitative Metrics</p> <p>3. Impact Assessment</p> <p>4. Performance Benchmarks</p> <p>5. Collaboration and Networking Evaluation</p>	<p>1. Core Competencies</p> <p>2. Track Record</p> <p>3. Human Resources</p> <p>4. Financial Stability</p> <p>5. Network and Partnerships</p> <p>6. Implementation Capacity</p> <p>7. Stakeholder Engagement</p> <p>8. organization's capacity to build strong relationships and collaborate with various stakeholders</p> <p>9. Community Engagement</p>

IA Chat	Mistral	PERPLEXITY
<p>1. Impact on local innovative companies</p> <p>2. Satisfaction of start-ups/beneficiary companies</p> <p>3. Effectiveness of the partnership with other</p>	<p>1. Expertise and Skills</p> <p>2. Network and Partnerships</p> <p>3. Mobilisation and Coordination Capacity</p> <p>4. Alignment with regional objectives</p>	<p>1. Ability to contribute to achieving the targets of the result indicators</p> <p>2. Contribution to achieving the specific objective</p> <p>3. Proof of impact</p>

structures (universities, funders) 4. Retention and job creation rates induced by their actions	5. Resources and Infrastructure 6. Transparency and Governance 7. Impact and Results 8. Adaptability and Flexibility 9. Community Involvement 10. Access to finance 11. Efficiency in the management of available resources	4. Encourage collaboration between SMEs 5. Capacity to manage large-scale projects
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* Criterias regarding the effectiveness of intermediary organisations was suggested by the Chatbot to base the selection instead of criteria of selection.

Copilot: These criteria can help ensure that the selected intermediary organization is well-equipped to effectively implement the regional innovation strategy and drive economic growth and development in the region.

5.3 List of good practices for the different support organizations

Note from **ChatGPT**: Fraunhofer Institutes (Germany), TNO (Netherlands), Innovate UK (UK), Enterprise Ireland (Ireland), European Investment Fund (EIF), Bpifrance (France), GovTech Singapore, UK Crown Commercial Service, CLEAN (Denmark), Basque Energy Cluster (Spain), Y Combinator (global), Station F (France), Cambridge Science Park (UK), Sophia Antipolis (France), Silicon Saxony (Germany), BioValley (France-Switzerland-Germany), EIT Digital Academy (EU), TU Delft (Netherlands), MIT Fab Labs (global), Oxford University Innovation (UK), KU Leuven TTO (Belgium), VTT Technical Research Centre (Finland), Scottish Enterprise (Scotland), 22@Barcelona (Spain), Knowledge Quarter (UK), EIT KICs (Knowledge and Innovation Communities, EU), Nesta (UK), Brookings Institution (US), FICCI (India), DigitalEurope (EU).

Copilot mentioned: Y Combinator, Techstars, Plug and Play, Sematech, Fraunhofer Society, MITRE Corporation, Innovate UK Business Connect, Enterprise Ireland, Invest Northern Ireland, Economic Development Board (EDB) Singapore, Silicon Valley, Boston's Route 128, Cambridge Cluster, Sequoia Capital and Andreessen Horowitz, Angel Investors.

AI chat: In Silicon Valley: Silicon Valley Leadership Group and Stanford University; in Eindhoven; Brainport Development and High Tech Campus Eindhoven; Flanders, Belgium: Flanders Innovation & Entrepreneurship (Vlaio) and Flanders Technology Transfer (FTT); Stockholm: Stockholm Business Region and KTH Royal Institute of Technology; Basque Country: Basque Technology and Innovation Network (RETI) and Innobasque; in Tartu: Tartu Science Park and University of Tartu; and in Melbourne, Australia: Melbourne Business Network and Victoria's Innovation and Technology Program.

Gemini Google: VTT Technical Research Centre of Finland; Fraunhofer-Gesellschaft; Singapore Economic Development Board Israel Innovation Authority and Massachusetts Institute of Technology.

Perplexity: Innoviris (Bruxelles-Capitale); Paris Region Entreprises; Innovation Norway Technology Transfer Interface (VUB, Bruxelles); ULB-Interface (Bruxelles); Interface R&D (UCL, Belgique); Cap Digital (Île-de-France); Systematic Paris-Region; Brainport Eindhoven; Fraunhofer-Gesellschaft; VTT Technical Research Centre (Finland); IMEC Leuven; Station F (Paris); Max Planck Institutes; INRAE (France) and TNO.

AI Chat: These organizations have demonstrated effectiveness in facilitating innovation through collaborative efforts, supporting entrepreneurship, and fostering networks that bridge research and industry, contributing significantly to their respective regions' innovation strategies.

Question 6. What do you know about a logic intervention approach to design and implement a regional innovation strategy?

CHABOT	ANSWERS
ChatGPT	<p>The intervention logic approach is a structured framework often used in the design, implementation, and evaluation of regional strategies, particularly within the context of policy-making and program development. This approach ensures that strategies are coherent, evidence-based, and effectively targeted to address specific challenges or objectives.</p> <p>Benefits:</p> <ul style="list-style-type: none"> - Clarity and Transparency: Provides a logical and evidence-based framework for decision-making. - Accountability: Establishes clear objectives and measurable indicators. - Adaptability: Facilitates adjustments based on monitoring and feedback.
Claude	<p>The logic intervention approach is a strategic methodology used in regional innovation policy and planning. It provides a structured framework for designing, implementing, and evaluating regional innovation strategies.</p> <p>Key characteristics of the logic intervention approach include:</p> <ul style="list-style-type: none"> • Systematic and evidence-based approach to strategy development • Emphasises logical connections between problems, interventions, and expected outcomes

	<ul style="list-style-type: none"> • Promotes a holistic view of the regional innovation ecosystem • Enables more precise and targeted policy interventions <p>This approach is particularly useful for</p> <ul style="list-style-type: none"> • Regional development agencies • Innovation policy makers • Economic development planners • Research and technology organizations
Copilot	<p>The intervention logic approach is a structured method used to design and implement regional strategies. This approach emphasizes a bottom-up methodology, encouraging collaboration among local and international actors to facilitate reflexive learning processes. It aims to connect top-down EU policies with place-based facts and ambitions, ultimately generating growth and jobs.</p> <p>A reference: the paper titled "An intervention-logic approach for the design and implementation of S3 strategies: from place-based assets to expected impacts".</p>
AI CHATBOT	<p>This approach emphasizes a systematic and rigorous analysis of the current state of innovation ecosystems within a region, with the objective of identifying key challenges, opportunities, and potential pathways for growth.</p> <p>Overall, the logic intervention approach provides a structured and evidence-based framework for designing and implementing regional innovation strategies, with a focus on fostering collaboration, building capacity, and driving sustainable economic development.</p>
HIX Chat	<p>The logic intervention approach in regional innovation strategy focuses on understanding and addressing the underlying mechanisms that drive innovation within a specific region. This approach is based on the premise that effective innovation strategies must be tailored to the unique characteristics, strengths, and challenges of a region.</p> <p>Overall, the logic intervention approach is about creating an enabling environment for innovation by understanding the specific context of a region and fostering collaboration among its key players. This tailored approach can lead to more effective and sustainable innovation strategies.</p>
Gemini Google	<p>A logic intervention approach is a structured framework used to design, implement, and evaluate regional innovation strategies. It helps to ensure that the strategy is well-defined, coherent, and effective in achieving its</p>

	<p>intended outcomes. This approach involves breaking down the strategy into a series of logical steps, from identifying the problem to implementing solutions and measuring impact.</p> <p>Benefits of a logic intervention approach:</p> <ul style="list-style-type: none"> -Clarity and Focus: Helps to ensure that the strategy is clear, focused, and aligned with the region's specific needs. -Efficiency: Enhances the efficiency of resource allocation and implementation. -Accountability: Improves accountability by setting clear goals and tracking progress. -Adaptability: Enables the strategy to be adapted to changing circumstances and emerging opportunities. -Learning and Improvement: Facilitates continuous learning and improvement through monitoring and evaluation. <p>By adopting a logic intervention approach, regional authorities can increase the likelihood of successful regional innovation strategies and achieve sustainable economic growth.</p> <p>A report: An intervention-logic approach for the design and implementation of S3 strategies published by the JRC.</p>
IA Chat	<p>This method is distinguished by its rigour and deep conceptual roots.</p> <p>Adopting the logic intervention approach offers the benefit from a rigorous and coherent structure for a regional innovation strategy. This method encourages effective planning and precise management of actions, and greatly facilitates the monitoring and evaluation process.</p>
Mistral	<p>Using the logical intervention approach allows formulate a well-structured, measurable and adaptable regional innovation strategy, which will increase the chances of success and lasting impact.</p> <p>Advantages of the Logical Intervention Approach:</p> <ul style="list-style-type: none"> - Clarity and Transparency: Clarifies objectives, activities and expected results. - Structured Planning: Facilitates structured and systematic planning. - Monitoring and Evaluation: Enables rigorous monitoring and evaluation of progress. - Risk Management: Helps identify and manage potential risks.
Perplexity	<p>A report entitled 'An intervention-logic approach for the design and implementation of S3 strategies' published by the European Commission's Joint Research Centre (JRC)</p>

	This report invites policy-makers to address the questions of 'why' (does the intervention respond to a problem?), 'who' (who is the target of the intervention?) and 'how' (are the financial and administrative resources available?)
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Intervention logic approach is seen as a powerful approach to design and implement a place-based strategy. All chatbots acknowledge great benefits of

Question 7. Advice on literature in relation to data and AI tools for regional innovation strategy.

AI CHATBOT

Data-Driven Regional Innovation Strategy: An Artificial Intelligence Approach by Jukka Huhtamäki, Sampo Suonsyrjä, and Satu Miettinen. Regional Studies, Regional Science. 2020.

Chat GTP & COPILOT

The Innovative Construction of Provinces, Regional Artificial Intelligence Development, and the Resilience of Regional Innovation Ecosystems: Quasi-Natural Experiments Based on Spatial Difference-in-Differences Models and Double Machine Learning. Ruiyu Hu, Zemenghong Bao, Zhisen Lin and Kun Lv. 2024. MDPI. China <https://www.mdpi.com/2071-1050/16/18/8251>

Chat GTP

Re-Thinking Data Strategy and Integration for Artificial Intelligence: Concepts, Opportunities, and Challenges. Abdulaziz Aldoseri, Khalifa N. Al-Khalifa and Abdel Magid Hamouda. 2023. MDPI. Qatar. <https://www.mdpi.com/2076-3417/13/12/7082>

COPILOT

Building an AI World: Report on National and Regional AI Strategies by Johnny Kung, PhD, and others. Canada https://cifar.ca/wp-content/uploads/2020/05/buildinganaiworld_eng.pdf

CLAUDE

Smart Specialisation Strategies and Digital Transformation: Regional Innovation through Artificial Intelligence. Technological Forecasting and Social Change. Komninos, N., Mora, L., & Panori, A. (2022)
Territorial Development and Artificial Intelligence: A Bibliometric Analysis of Emerging Research Trends. Capello, R., & Lenzi, C. (2021) Regional Studies, 55(10), 1637-1652.

IV COMPARISON BETWEEN CHATBOTS' BUDGET STRUCTURE AND ERDF OPs

On the basis of data from a sample of 13 regional OPs in 10 Member States (BE, DE, ES, FRIE, IT, NL, PL, PT and SE), it appears that for the priority 1: Developing and enhancing research and innovation capacities and the uptake of

advanced technologies, the managing authorities are focusing on grants as shown in the table below they represent 98.3% of the earmarked budget.

CHABOTS		OP SAMPLE
Actions suggested	Nb. having suggest the action (max 9)	Nb. Regions having dedicate budget in the priority related to INNOVATION (max 13)
Revolving finance (Equity, loans, ...)	8	2
Incubator, accelerator	8	3
Clusters	3	9
Skills	8	4
TTO	2	11
Advanced supports	3	2

The main disparities between the suggestions made by the chabots and the content of the sample of regional OPs are in the field of risk capital, incubators, skills and clusters.