

NATIONAL SWOT ANALYSIS ON ECO- INNOVATION – HUNGARY



WP3	Strategy for eco-knowledge
ACTIVITY 3.2	Analysing the environment for ecoinnovation in partner countries
DELIVERABLE 3.2.4	National SWOT analysis on Eco-innovation

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1.SWOT analysis: National (governmental) perspective

Internal factors	
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<p>STRENGTHS</p> <ul style="list-style-type: none"> - Central location in the Carpathian basin - Excellent transportation and logistics system especially compared to Hungary's southern, eastern and northern neighbours - Generally favourable ecological and environmental state, plenty of fresh water - Strong presence of eco-innovation related industries - Easily accessible venture capital - High amount of green early stage investment - Knowledge-intensive activities: manufacturing and services are widespread, high share in employment, in the total value added and in the exports. - Low greenhouse-intensity of energy consumption - Low energy consumption of households (? Disagree) - Low greenhouse gas emission per capita - High rate of governmental environmental investments - Recycling rate of packaging waste is higher than that in the Danube region - High rate of e-waste recycling - High total employment rate - Low unemployment rate - Low labour costs - High amount of government BERD spending - Higher GDP activity since the financial crisis than peer European countries - Tax allowances encourage eco-innovation related investments - Relatively low percentage of domestic support funds are allocated to eco-innovation specifically - Substantial investments are being made to improve waste water treatment, waste treatment and drinking water quality 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> - Low overall eco-innovation performance - Low visibility of eco-innovation, the expression is virtually unknown, low level of related media coverage and scientific publications, only sporadic presence of events - Very low number of eco-innovation related patents - Low amount of doctorate graduates per year compared to the EU and the Danube region average - Relatively low levels of environmental protection expenditures - Low resource productivity - High share of potable water not suitable for drinking - Large-scale agriculture is a major polluter and monocultures reduce biodiversity - Building new windmills is virtually banned at the moment - Centrally regulated public energy tariffs - High job vacancy rate - Migration in(to) western countries could potentially have a serious brain-drain effect - Increasing corruption perception index - Decreasing expenses on education (I think this is not true, re-allocation of resources for education) - Employment policies does not favour training and employment incentives - Eco-innovation related trainings are scarce - Lack of comprehensive business incubation network - 'Jungle of support' - Eco-innovation related events are scarce

External factors	
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<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> - Increasing number of R&D personnel and researchers - Increasing amount of available venture capital - Rapidly increasing primary production of renewable energy sources - Low energy prices - Increasing amount of foreign direct investment - Industrial and service confidence recovering quickly after the 2008 financial crisis - The Growth Loan Scheme of the Hungarian National Bank offers sound financial instruments to boost business development - Private business incubators are growing in numbers, the Innovation Ecosystem programme funded by the NRDIO offers governmental support - Hackathons are more frequent and also increase the visibility of eco-innovation - Trade openness boost information flows 	<p>THREATS</p> <ul style="list-style-type: none"> - Increasing gap between Hungary and its peers regarding eco-innovation performance - Decreasing environmental and energy R&D appropriations and outlays - Relatively low share of renewables especially in electricity - The end of feed-in tariff could potentially have a detrimental effect on smaller power plant mostly focusing on district heating - Eco-innovation is still not considered as an important topic, gains ground really slowly - Half-hearted approach to National Environmental Technology Innovation Strategy - Job vacancies in innovative sectors - Still confusing and convoluted legal environment, slow legislative response to new challenges - The domestic market is too small and underdeveloped to stimulate innovation and the emergence of new technologies, requiring businesses to be “born-global”

2.SWOT analysis: National business perspective

Internal factors	
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<p>STRENGTHS</p> <ul style="list-style-type: none"> - Strong presence in eco-innovative industries - Clustering of environmental industries (KEXPORT Klaszter for example) - Strong export activities, high share in the total employment - Low labour costs - Recent environmental investments caused the accumulation of experienced workforce and state-of-the-art knowledge in certain fields, such as environmental protection - High amount of ISO 14001 registered organisations - The share of opportunity-driven entrepreneurship is growing fast - High share of employment if fast growing companies - Most companies are well-embedded to the international market by being a subcontractor of bigger companies - R&D expenses are mostly made by private companies (subsidized by government) - Industry recovered relatively fast after the 2008 economic crisis based on the industry and service confidence indicators - Thriving startup community, high and continuously increasing amount of venture capital available - Emergence of new, eco-innovative startups starting even from crowdfunding sites - Increasing number of coworking offices - Cheap and fast broadband and mobile internet connection (amongst the fastest in Europe) 	<p>WEAKNESSES</p> <ul style="list-style-type: none"> - Shortage of skilled workforce (low amount of PhD graduates (what does PhD graduates offer? Whats the correlation between innovation and PhD graduates?), unfortunate decisions regarding tertiary education) - Low percentage of companies providing training to develop ICT skills (where is the evidence?) - Lack of major players in eco-innovation and environmental industry internationalization opportunities therefore are limited - Being part of an international supply chain somewhat constrains the need to produce in-house innovations - The percentage of SMEs doing in-house innovation is relatively low

External factors	
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<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> - Open international markets give opportunity to born-global, innovative firms, such as start-ups with a social goal - High international embedding of Hungarian companies can lead to the spread of eco-innovation - Hungarian market – while being somewhat small – is more and more open to ecological products - Tax incentives provide plenty of options to improve energy efficiency, to invest in new, eco-innovative methods and processes (the process is partly a correlation of energy prices.) - Innovation, energy efficiency and environmental protection are well supported by Operative Programmes (the process is partly a correlation of energy prices.) - Recent emergence of opportunity-driven entrepreneurship promoted by new, innovative support forms - Opportunity of social cause for energy efficiency and innovation through the use of media and push pull effect. May not necessarily be a direct economic effect. 	<p>THREATS</p> <ul style="list-style-type: none"> - The high employment rate accompanied by labour shortage could hinder expansion plans especially in knowledge-intensive fields - Legislation is lagging behind especially in state-of-the-art industries - Environment and energy is considered to be very important by the state; certain governmental interventions are not rare which can distort market processes - Hungary – apart from its capital – is a relatively small and somewhat poor market, expansion options require immediate internationalization especially on niche markets