

**How effective is the Welsh Government’s approach to attracting inward investors to Wales, and what are its main strengths and weaknesses? How should any perceived weaknesses be addressed?**

*Without having access to hard data, anecdotally, based on our own involvement related to the semiconductor sector, the sectorial approach is broadly working. There is strength in the focus on a relatively small number of sectors where Wales has a credible advantage. Our experience is that there are pockets of WG FDI framework where there is a robust level of sectorial expertise and focus. We (CSconnected) work closely to complement the WG FDI team to offer further sector and industrial expertise.*

*We have had very positive experiences- the recent Welsh Investment Summit was an excellent showcase for the Welsh semiconductor industry. We see WG prepared to engage early in inward investment discussions which helps establish credibility and demonstrates seriousness. We also know that when important operations/companies are at risk, WG are prepared to intervene where possible to support.*

**Opportunities for improvement**

*The link between sector specialisation and the broader inward investment infrastructure has room for improvement: e.g. improved sector education for country specialists and wider WG domestic infrastructure (skills, physical infrastructure, innovation functions).*

*The ‘customer journey’ can be far from smooth, sometimes involving unnecessary hand-offs, bureaucracy and a lack of transparency between stakeholders. This could be improved by increasing coherency with other inward investment stakeholders (e.g. CJs, UK DBT, trade bodies) including e.g. co-ordination of sector themes, sharing of leads, and joint approaches/resourcing of targeted FDI.*

*More targeted approach – proactive rather than reactive – CSconnected are working with WG to target appropriate semiconductor FDI themes/subsectors/markets that will intelligently ‘fit’ with the expansion of the South Wales Semiconductor Cluster.*

**To what extent does the Welsh Government’s approach to attracting inward investment target areas of strength within the Welsh economy? How successfully it is taking opportunities in emerging sectors with the potential to play a key role in the future economy?**

*FDI Resources are limited and hence should be prioritised on sectors that offer highest growth potential for the Welsh Economy based on existing capability, competitive uniqueness and identified (existing) strengths. This is happening within WG (nine sectors are present in inward investment collateral), but there is little transparency on the decision-making process and evidence base in the public domain- there is an opportunity for improvement here.*

*It's clear that WG does not have the resources to pump-prime completely new high potential industries/sectors. Hence 'emerging sectors' should be defined as those that will complement and underpin the existing prioritised sector growth to ensure that investment is additive, realistic and built on solid foundations to increase the potential and scale of economic return.*

*There should also be some resources focussed on the areas of economy that are clearly in decline - foundation industries, tier-one manufacturing etc. to establish how facilities, skills, expertise and knowledge can be translated to priority sectors in longer term transitional plans to mitigate economic shocks such as major site closures e.g. Ford, Bridgend, Tata Port Talbot.*

*We have no visibility of the emerging sector policy, but we would expect a strong link between future Innovation, Skills and Infrastructure policy and emerging FDI themes.*

### **How well do the different layers of government work together to bring inward investment into Wales, and are there any improvements that could be made?**

*We work with DBT, Welsh Government, CCR and other appropriate stakeholders during efforts to bring inward investment – we are often in the same room with the potential inward investor. Sometimes structural issues seem to restrict collaboration:*

- *Lack of clarity on 'ownership' of the lead*
- *Sharing of information between different agencies*
- *Differing views on sectorial focus and priorities*
- *Differing KPIs driving behaviour*
- *Lack of appreciation that the investor cares little about internal priorities*

*Solutions should be based on identifying common priorities and delivery mechanisms rather than attempting to force increased collaboration- ultimately a successful outcome will be driven by focussing on the 'customer journey' and not our own internal limitations or goals.*

### **How effectively does the Welsh Government provide ongoing support to inward investors, and to what extent does this support existing investors to expand or safeguard their operations in Wales?**

*We are not best placed to answer this question compared to industrial respondents who have direct experience. However, we have observed that WG has intervened with key existing semiconductor companies to both ensure and safeguard operations, as well as co-invest in expansion. Projecting the perception of support at different points in the economic cycle is critical to delivering positive inward investment decisions.*

*The Welsh semiconductor industry is dominated by US multinationals, and hence decisions on retention and expansion are often not made locally. Hence local management teams require ongoing clarity on long term commitment and support mechanisms to champion their case. There is also always a desire to improve the speed and simplification of decision-making processes – improving the speed of decision would improve Wales’s attractiveness.*

*There is also an opportunity to increase proactivity - WG should be working with the semiconductor anchor companies to develop a long-term roadmap that develops individual company expansion AND contribution to the wider regional ecosystem (skills, infrastructure, RD&I, supply chain etc).*

## **What are the key barriers Wales faces in attracting and retaining inward investment, and how should these be tackled?**

### **Key barriers**

*There are some issues that are specific to the semiconductor industry, which has seen unprecedented global investment because of post-covid semiconductor chip shortages, geopolitical tensions between the US and China over Taiwan, and an increasing race for technology supremacy due to trends such as AI adoption, NetZero and Defence infrastructure expansion.*

*Wales (or indeed the UK) cannot compete on semiconductor manufacturing expansion subsidies and incentives with the US, EU and Asia, and there is nothing unique about our real estate.*

*That said, we are operationally competitive (UK energy prices aside) in several semiconductor subsectors (compound materials and chip manufacturing, capital equipment, chip integration and specialist electronics module manufacture), we have skilled people, and we have invested in upgrading our semiconductor RD&I infrastructure to be truly world class over the last decade as a result of our Industry-led Cluster proposition launched in 2015.*

### **Progress over the last decade**

*The economic return on this investment has been exceptional: since 2018 there has been a private investment commitment of the order of £600M in the expansion of manufacturing capacity in the core industrial base (IQE, KLA, Vishay, Microchip).*

*In addition, we have seen new semiconductor companies and start-ups attracted to the region as the reputation and infrastructure has grown: E.g. MaxPower Semiconductors, Microlink UK, Kubos, Siemens, SpaceForge, Cadence. The core Cluster industrial activity is driving increased expansion in the upstream Welsh manufacturing supply chain benefiting companies such as Mollart, Photronics, RAM innovations, Philtronics and Pegasus Chemicals.*

*The total direct employment supported by the Cluster has increased from ~900 (2015) to an estimated 2748 (2024) highly skilled jobs spanning research, engineering, and high-value manufacturing. More than 20% of the workforce is engaged in R&D and innovation-intensive activities, reflecting the sector's emphasis on technological advancement. Industry partners within the Cluster generate a collective turnover approaching £600M per annum, with over 90% of manufacturing output classified as exports—primarily to non-EU markets. The Cluster directly contributes £381M per year to Welsh GVA. The sector is characterised by high productivity, wages above the national average, and GVA per job more than twice the Welsh average.*

*The reputational return is equally impressive. Wales is globally recognised as the UK's premier integrated centre for advanced semiconductor science and manufacturing, and is supporting UK wide-efforts in emerging vertical sectors such as Power Electronics for Electric Mobility (Driving the Electric Revolution Centre of Excellence in Materials), Quantum Technologies (UK National Quantum Component Foundry), High-value add manufacturing (Centre for semiconductor capital equipment manufacturing, EPSRC Future Semiconductor Manufacturing Hub) and low-loss electronics (communications and sensing) for NetZero.*

*The Cluster is regularly used as a national case study for the power of aligning industry, academic and government economic interests, and is now globally recognised as the Fifth European Semiconductor Cluster alongside Eindhoven, Dresden, Leuven and Grenoble. Wales is now part of a truly exclusive group of countries which can claim global leadership in key areas of semiconductor design and manufacturing; this is a tradeable commodity which is already facilitating international collaboration and investment.*

*However, we cannot be complacent in an environment in which the order of international trade is being redefined. Recent US-China geopolitics has resulted in a once-in-a-generation global investment worth \$100Bs in re-shoring semiconductor manufacturing and innovation. This has triggered the creation of totally new supply chains, and is underpinning the separation of US, European and Asian semiconductor markets as sovereign economic security is prioritised over free-market economics. This trend has been in play as a response to post covid semiconductor shortages since 2022, but the voracity and scale of change is accelerating because of the Trump US administration trade policy, and the introduction of punitive tariffs for US imports. The long-term impact of such a trend on the Welsh Cluster is currently uncertain in such a dynamic environment.*

*There are likely to be positive opportunities to penetrate new global markets as a new status quo settles, but there will also be new competitors, restrictions to certain national markets, and uncertainty affecting the investment decisions from our multinational company HQs. The global demand for talent is increasingly an issue, and Wales must be able to attract, grow and retain highly skilled workers to fuel ongoing expansion of semiconductor activity.*

*Hence, we must double down on support for the Cluster to send a signal that WG is committed for the long term to both the expansion of our core industry partners, and the ecosystem that supports them.*

### **Recommendations:**

*CSconnected has been working Welsh Government and our core Industry Partners to develop a support package which addresses domestic barriers to accelerating further growth and acknowledges the emerging geo-political realities which will challenge inward investment success. Our vision for future Cluster development is focussed on:*

- (i) Building a more robust regional supply chain to service the core of the Cluster;*
- (ii) Developing a more comprehensive skills and talent pipeline;*
- (iii) Energising the research and innovation ecosystem to deliver the products and services of the future;*
- (iv) Stimulating a start-up culture in semiconductor related areas;*

*We believe focussing on these areas will accelerate the rate of FDI to increase diversity and reduce the external economic risks. In consultation with our Industry Partners, we believe such a programme has the potential to deliver, by 2030:*

- Protection of an existing 2748 direct and indirect jobs in South Wales*
- Creation of an additional ~3000 jobs*
- A further >£500M investment in RD&I, industrial and manufacturing activity*
- A doubling of semiconductor regional GVA contribution to over £800M pa*

*We feel it is absolutely critical to both continue to invest in the core of the semiconductor Cluster, and to seek opportunities to extend and strengthen the value chain that is underpinned by our specific semiconductor related economic activity.*

*This requires a holistic approach which delivers the required innovation infrastructure, targeted skills and workforce development, increased local value capture, and builds on the collaborative Culture that has delivered considerable success to date.*

### **Which examples of best practice from beyond Wales could the Welsh Government learn from in relation to attracting inward investment and providing ongoing support to inward investors?**

- 1. Ireland's proactive approach to the semiconductor industry comes to mind <https://enterprise.gov.ie/en/publications/publication-files/silicon-island-a-national-semiconductor-strategy.pdf> - clear ambitions on how they can capitalise on the global semiconductor opportunities by leveraging expertise and investment pathways available across the whole of government influence.*

2. *There are four recognised Semiconductor Clusters in Europe (Eindhoven, Leuven, Dresden and Grenoble) and it would be useful to engage resource at WG to focus on:*
  - *Understanding the dynamics of success in inward investment policy development in these Clusters*
  - *Exploring strategic overlaps between these Clusters and South Wales including engaging with Welsh Semiconductor industry to drive proactive targeting*
  - *Look at opportunities to leverage investment e.g. EU Chips Act to drive early-stage relationships which can seed future inward investment opportunities.*
  
3. *Global Clusters: there are many sector-specific trade bodies which have successful, persistent models of inward investment and opportunities to share best practice. Examples that spring to mind in the semiconductor space is the growth of the Taiwan Semiconductor Industry, the development of SiliconSaxony, Germany etc.*

**To what extent does the available data provide a clear and comprehensive picture of inward investment into Wales, and are there any improvements that should be made?**

*Inward investment data in the public domain tends to be top level and driven by investment events or press releases. Whilst this is useful in understanding relative scale and direction of travel, detailed assessments tend to be hard to find, and there is rarely any narrative connecting the detail of policy and strategy to results- so we feel there an opportunity for improvement here.*

*CSconnected commissions the Welsh Economy Research Unit at Cardiff University to collate annual data on key metrics such as job creation, GVA growth, exports and RD&I investment, which we share with Welsh Government and other key stakeholders. We also look at specific qualitative case studies to contextualise the drivers of growth – e.g. impact of collaborative research and innovation, impact of skills deficits, international benchmarking etc.*

*It would be interesting to see if this approach can be translated to other sector areas and complemented with wider economic data collected by Welsh Government in order to strengthen the case for investment in the semiconductor sector at the UK level.*

Yours sincerely,



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The evidence listed includes direct input from Camille Colombier (Marketing Manager, CSconnected), Wyn Meredith (Chairman of the board of CSconnected) and Chris Meadows (NED, CSconnected). It also reflects multiple discussions with the semiconductor cluster partners including people we regularly work with on FDI activities within the Welsh Government and CCR.