

# **Background Note**

#### 1. Introduction

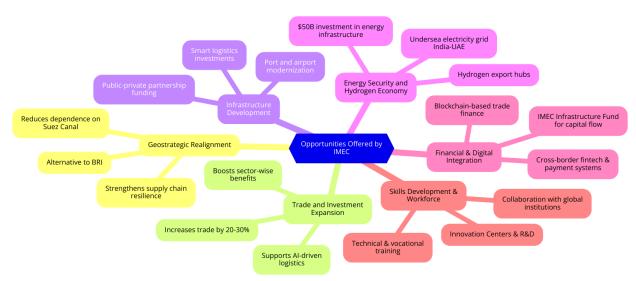
The India-Middle East-Europe Economic Corridor (IMEC) is a transformative initiative launched at the G20 Leaders' Summit in New Delhi on September 9, 2023. A Memorandum of Understanding (MoU) was signed by leaders from India, the United States, Saudi Arabia, UAE, France, Germany, Italy, and the European Union, marking a historic collaboration to enhance connectivity and economic integration across continents. It is envisioned as a multi-modal economic corridor integrating railways, ports, highways, energy networks, digital infrastructure, and workforce development to enhance trade, investment, and connectivity across three continents. The IMEC includes plans for two distinct corridors: an eastern corridor linking India to the Arabian Gulf and a northern corridor connecting the Arabian Gulf to Europe. This involves developing a railway network designed for efficient ship-to-rail transportation. Plans include the installation of infrastructure for electricity and digital connectivity, as well as pipelines for clean hydrogen export. These efforts aim to secure regional supply chains and improve trade accessibility.

Key agreements supporting the IMEC have been signed at major global forums, including COP28, the World Economic Forum, G7 and G20 meetings and various bilateral Summits, including the most recent Modi-Trump Summit in Feb 2025. These political agreements highlight the commitment of participating nations to invest in infrastructure development, smart logistics, and digital trade integration. The IMEC has gained strong diplomatic backing from India, the United States, Saudi Arabia, the United Arab Emirates, France, Germany, Italy, Israel, Greece, and the European Union through multiple bilateral and plurilateral joint statements.

However, achieving the IMEC's ambitious objectives requires addressing geopolitical complexities, infrastructure financing challenges, security risks, regulatory barriers, and workforce development gaps. This paper explores economic opportunities, key challenges, and a strategic path forward to ensure the IMEC's success.

# 2. Opportunities Offered by IMEC

With an estimated investment requirement of over \$500 billion<sup>1</sup>, the IMEC aims to reduce transportation time by 40% and logistics costs by 30%<sup>2</sup>, providing an alternative to congested routes such as the Suez Canal, which currently handles 12% of global trade. The IMEC is expected to boost trade volumes significantly, with estimates suggesting an increase of up to 20-30% in trade between participating nations over the next decade. It aims to create millions of jobs through infrastructure development and enhanced economic activities. By addressing supply chain inefficiencies, fostering renewable energy cooperation, and promoting financial and digital integration, the IMEC has the potential to reshape global commerce.



**Exhibit 1: Opportunities offered by the IMEC** 

# 2.1. Geostrategic realignment

The IMEC can potentially reshape global trade routes while fostering economic cooperation among diverse nations. It could be a strategic alternative to China's Belt and Road Initiative (BRI), offering a secure and efficient trade route integrating railways, ports, highways, energy networks, digital infrastructure, and workforce development. IMEC's synergies with the International North-South Transport Corridor (INSTC) further enhance global trade connectivity. A key advantage of the IMEC is its potential to strengthen global supply chain resilience by reducing overdependence on the Suez Canal and the Strait of Hormuz, which currently handles significant portions of global

<sup>&</sup>lt;sup>1</sup> What is India-Middle East-Europe Corridor and how will it benefit India? - India Today

<sup>&</sup>lt;sup>2</sup> India charts its IMEC path to global trade influence

trade. The corridor aims to cut transportation time by 40% and logistics costs by 30%, positioning it as a viable alternative for global commerce.

### 2.2 Trade and Investment Expansion

The World Bank estimate that infrastructure investments of this scale could increase trade by 20-30% between India, the Middle East, and Europe over the next decade<sup>3</sup>. The IMEC is expected to facilitate trade volumes worth \$200 billion annually within its first decade, significantly boosting economic integration across these regions. The corridor will enhance supply chain resilience, enabling a more efficient and secure trade route for manufacturing, e-commerce, energy, and logistics sectors.

The IMEC presents a lucrative opportunity for the private sector in innovative logistics and trade facilitation. Companies specializing in AI-driven supply chain solutions, digital freight forwarding, and blockchain-based customs clearance will benefit from IMEC's digitized trade infrastructure. Additionally, investments in warehousing, inland container depots (ICDs), and bonded logistics parks at key locations—Mundra (India), Jebel Ali (UAE), Haifa (Israel), and Gioia Tauro (Italy)—will optimize trade efficiency.

The IMEC is poised to deliver significant sector-wise benefits across various industries. In manufacturing, IMEC is expected to enhance automobile exports from India, facilitate heavy machinery trade from Germany, and boost luxury goods trade from Italy, thereby strengthening global supply chains. In the e-commerce and logistics sector, the rapid growth of e-commerce in the Middle East and Europe will benefit major firms like Amazon, Alibaba, and Flipkart through improved logistics that promise faster and more secure delivery options. Furthermore, Saudi Arabia and the UAE are positioned to increase their oil and LNG exports in energy trade. At the same time, Europe seeks alternative energy imports to reduce its reliance on Russian supplies. This multifaceted approach aims to enhance trade efficiency and foster economic growth and stability across the involved regions.

# 2.3 Infrastructure Development and Private Sector Investment

The IMEC presents substantial multi-billion-dollar investment opportunities across various infrastructure sectors, including ports, airports, rail networks, and smart cities. The IMEC aims to modernize key ports such as Mundra, Jebel Ali, Fujairah, Haifa, and Piraeus in the ports and shipping sector by implementing automated cargo-handling systems and AI-driven logistics, thereby accommodating increasing trade volumes. The aviation and air cargo hubs will see expansions at Dubai International Airport, Dammam Airport, and Rome-Fiumicino Airport, enhancing air freight connectivity by adding bonded terminals and cold storage facilities for perishables and pharmaceuticals. Furthermore, the planned rail and road connectivity encompasses over 3,500 km of new rail lines that will link Gulf logistics hubs with European transport networks, facilitating efficient goods movement through high-speed freight

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<sup>&</sup>lt;sup>3</sup> World Bank Document

corridors and automated customs processes. The investment breakdown indicates an estimated \$100 billion dedicated to port expansion and logistics improvements. Additionally, IMEC will leverage innovative logistics technologies such as AI-driven predictive maintenance and IoT-based tracking to revolutionize the logistics landscape. Key multinational companies like DP World, Adani Ports, Maersk, MSC, and Siemens are anticipated to contribute significant capital and technological expertise to this transformative initiative.

#### 2.4. Energy Security and the Hydrogen Economy

The IMEC is estimated to represent a \$50 billion investment opportunity in energy infrastructure, positioning the corridor as a hub for electricity interconnection, renewable energy trade, and hydrogen production<sup>4</sup>. A key component of this initiative is the \$12 billion undersea electricity grid linking India and the UAE, which will facilitate real-time renewable energy trading by integrating solar and wind power into regional grids. Additionally, IMEC countries, particularly Saudi Arabia and the UAE, are heavily investing in green hydrogen development, focusing on creating hydrogen production and export infrastructure, including pipelines, electrolysis plants, and storage hubs to enable large-scale hydrogen exports to Europe and Asia. With the Middle East offering the world's lowest solar energy costs at \$0.013 per kWh, IMEC is well-positioned to emerge as a global leader in renewable energy exports. Saudi Arabia and the UAE are projected to invest over \$150 billion in green hydrogen initiatives. At the same time, India's National Hydrogen Mission aims to scale production to 5 million metric tons annually by 2030, further establishing IMEC as a leading hydrogen transport corridor. The undersea electricity cable will support crossborder power trading and enhance regional energy security, making IMEC a critical player in the global energy landscape.

# 2.5. Financial and Digital Trade Integration

IMEC aims to enhance cross-border transactions by integrating India's Unified Payments Interface (UPI), Europe's Single Euro Payments Area (SEPA), and various fintech platforms from the Middle East. This integration is expected to significantly lower transaction costs and improve financial efficiency for businesses. The corridor will streamline processes and reduce bureaucratic delays through automated customs clearance and smart contracts by adopting blockchain-based trade finance solutions, digital payment gateways, and AI-driven credit assessments. To support these initiatives, a proposed IMEC Infrastructure Fund will pool resources from sovereign wealth funds, including Saudi Arabia's Public Investment Fund (PIF), Abu Dhabi's Abu Dhabi Investment Authority (ADIA), India's National Investment and Infrastructure Fund (NIIF), and the European Investment Bank, ensuring sustainable capital flows for large-scale infrastructure projects. Public-private partnerships (PPPs) and infrastructure bonds will also play a critical role in financing these endeavours, fostering a robust economic environment within the corridor.

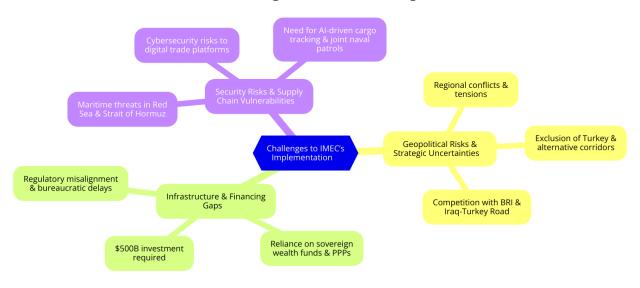
<sup>&</sup>lt;sup>4</sup> Phase 1 Feasibility Study- One Sun One World One Grid Initiative, International Solar Alliance

#### 2.6. Skills Development and Workforce Cooperation

The IMEC's success hinges on cultivating a highly skilled workforce to effectively operate its logistics, energy, and technology sectors. Collaboration in technical education and vocational training will ensure job readiness. With its robust technical and vocational education institutions, India can spearhead joint training programs with IMEC countries, equipping workers with essential skills in logistics management, AI-driven supply chains, digital trade, and clean energy solutions. Establishing the IMEC Innovation Centers in partnership with universities and research institutions will further promote research and development in renewable energy, artificial intelligence, and fintech. It is estimated that the IMEC will generate millions of direct and indirect jobs across the manufacturing, logistics, energy, and digital trade sectors. Additionally, collaboration with Indian Institutes of Technology (IITs), Gulf universities, and European research institutes will bolster R&D efforts in AI, fintech, and clean energy, ensuring a skilled workforce ready to meet the demands of future industries.

# 3. Challenges to IMEC's Implementation

The multifaceted challenges confronting the IMEC project, which must navigate significant geopolitical risks—including conflicts like the Russia-Ukraine war, Israel-Hamas tensions, and instability in the Red Sea—as well as competition from alternatives such as Turkey's Iraq Development Road and China's Belt and Road Initiative. It also highlights a substantial funding gap, with over \$500 billion required through a blended finance approach involving sovereign wealth funds, multilateral banks, and private-public partnerships while grappling with regulatory and bureaucratic hurdles. Additionally, the corridor faces serious security and supply chain vulnerabilities from maritime threats, piracy, and cyberattacks, necessitating collaborative measures like joint naval patrols and advanced, AI-driven security systems to ensure its resilience and success.



**Exhibit 2: Challenges to IMEC's implementation** 

#### 3.1. Geopolitical Risks and Strategic Uncertainties

The IMEC faces significant challenges due to its traversal of politically sensitive regions, particularly in light of ongoing conflicts such as the Russia-Ukraine war, tensions between Israel and Hamas, and instability in the Red Sea. The exclusion of Turkey from IMEC has prompted the development of alternative trade corridors, such as the Iraq-Turkey Development Road, which could undermine IMEC's competitiveness. A comparative analysis reveals that IMEC's risks must be evaluated alongside China's Belt and Road Initiative (BRI), particularly regarding debt sustainability issues and the impact of the Ukraine conflict on European logistics. Turkey's Iraq Development Road and China's BRI expansion in Africa also present competitive alternatives that could further challenge IMEC's viability<sup>5</sup>. Addressing these geopolitical dynamics is essential for ensuring the corridor's success and fostering regional cooperation amidst rising tensions.

#### 3.2. Infrastructure and Financing Gaps

The IMEC is estimated to require more than \$500 billion in investment, necessitating the adoption of innovative and blended finance models incorporating various funding sources and mitigating financial and political risks. Sovereign wealth funds from the Middle East and Europe IMEC countries could contribute approximately 30% of the total investment, reflecting the significant financial resources available in countries like Saudi Arabia and the UAE. Multilateral banks, including the World Bank Group (WBG) and the Asian Development Bank (ADB), could provide around 20%, ensuring institutional support bolsters the project's financial foundation. The remaining 50% could come from private equity and public-private partnerships (PPPs), which are crucial for engaging private sector expertise and capital.

However, regulatory misalignment and bureaucratic delays threaten the realization of IMEC's ambitious goals, which could impede project execution. Policy harmonization across IMEC nations is essential to mitigate these risks, facilitating smoother operations and reducing administrative bottlenecks. The corridor's potential is further underscored by the need for substantial investments in infrastructure, including greenfield railway projects and logistical enhancements, which are critical for fostering connectivity between India, the Middle East, and Europe.

# 3.3. Security risks and supply chain vulnerabilities

The IMEC faces significant security risks and supply chain vulnerabilities that could jeopardize its operational continuity. Maritime security threats, including piracy and geopolitical instability,

 $<sup>^5</sup> https://www.icwa.in/show\_content.php?lang=1\&level=1\&ls\_id=12119\&lid=7393\#: \sim : text=The \% 20 increase \% 20 in \% 20 demand \% 20 and d, prices \% 20 (Siddiqa \% 2C \% 20 20 23).$ 

pose serious challenges, particularly in key routes such as the Red Sea and the Strait of Hormuz, which are susceptible to blockades and attacks. Recent incidents, such as Houthi operations targeting shipping lanes, highlight the urgent need for enhanced maritime security measures. To address these threats, establishing joint naval patrols among India, the UAE, and EU nations is essential for safeguarding maritime trade routes.

In addition to maritime risks, cyberattacks on digital trade platforms present a growing concern for supply chain integrity. Implementing AI-powered predictive threat detection systems can enhance cargo safety by identifying potential risks before they materialize. Furthermore, developing robust cybersecurity frameworks is crucial to protecting the corridor's digital infrastructure from breaches that could disrupt operations or compromise sensitive information.

The corridor's success hinges on a comprehensive approach integrating maritime and cybersecurity measures. This includes deploying AI-driven cargo tracking systems and forming dedicated cybersecurity task forces to respond swiftly to threats. By fostering collaboration among participating nations and investing in advanced technologies, IMEC can mitigate these vulnerabilities and ensure a resilient supply chain capable of withstanding geopolitical tensions and emerging security challenges.

### 4. Path Forward: Strategies for IMEC's Success

The strategy for IMEC's success centers on establishing robust multilateral partnerships and institutional frameworks—including an IMEC Secretariat and Economic Forum—to harmonize diplomatic and strategic priorities among key nations. It aims to mobilize infrastructure financing through dedicated funds and green bonds supported by international financial institutions, positioning IMEC as a competitive alternative to the Belt and Road Initiative. Simultaneously, it enhances security and cyber resilience with AI-powered and blockchain-enabled technologies, reinforced by joint naval patrols to secure vital trade routes. Finally, the plan emphasizes expanding skills development and research collaboration via cross-border training initiatives and global innovation hubs to foster a diverse, resilient workforce and drive sustainable economic growth.

# 4.1. Strengthening Diplomatic Cooperation

To strengthen diplomatic cooperation for the IMEC, it is essential to institutionalize the initiative within key multilateral platforms, including the G20, Indo-Pacific Economic Framework (IPEF), Gulf Cooperation Council (GCC), and the EU-India Strategic Partnership. Establishing an IMEC Secretariat with representatives from India, the EU, the GCC, and the United States will facilitate coordinated efforts and enhance corridor governance. Furthermore, launching an IMEC Economic Forum will provide a platform for annual trade and infrastructure planning, ensuring sustained momentum and alignment of strategic priorities among participating nations. These initiatives will foster collaboration and address potential challenges by promoting dialogue on regulatory harmonization and investment strategies. By engaging in regular ministerial summits and economic forums, stakeholders can better navigate geopolitical dynamics and enhance the corridor's resilience against external pressures. India could also leverage its leadership at the

International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI) to assess and mitigation geopolitical and technical risks. This structured approach is vital for realizing IMEC's potential as a transformative economic corridor that improves connectivity, boosts trade efficiency, and strengthens regional partnerships in an increasingly interconnected global landscape.

#### 4.2. Mobilizing Infrastructure Financing

To mobilize infrastructure financing for the IMEC, a dedicated IMEC Infrastructure Fund, supported by institutions such as the International Monetary Fund (IMF), World Bank, and Asian Development Bank (ADB), is essential for accelerating investments in port modernization, energy projects, and logistics infrastructure. One effective strategy to attract private capital is the issuance of IMEC Infrastructure Bonds, including the proposed IMEC Green Bonds, which specifically target sustainable infrastructure initiatives. These bonds can appeal to environmentally conscious investors while funding projects that enhance connectivity and promote green energy solutions.

Furthermore, the Islamic Development Bank (IsDB) and the European Investment Bank (EIB) are expected to play pivotal roles in financing clean energy and digital infrastructure projects within the IMEC. Their involvement can facilitate significant investments in renewable energy technologies and digital connectivity, aligning with global sustainability goals. Establishing this infrastructure fund will streamline capital allocation and enhance the corridor's viability as a competitive alternative to China's Belt and Road Initiative (BRI). By leveraging blended finance models that combine public and private resources, the IMEC can effectively address the substantial funding gaps needed for its ambitious infrastructure projects, ultimately fostering economic growth and regional integration across participating nations.

# 4.3. Enhancing Security and Cyber Resilience

To enhance the security and cyber resilience of the IMEC, it is imperative to strengthen maritime security, bolster cybersecurity frameworks, and implement AI-driven risk mitigation strategies to protect physical and digital trade networks. Maritime threats, such as piracy and geopolitical instability, necessitate robust measures, including AI-powered cargo security systems that utilize anomaly detection technology in ports and customs clearance processes to identify suspicious activities in real time. Additionally, deploying blockchain-powered smart contracts can significantly reduce fraud and enhance transparency throughout the supply chain by ensuring that all transactions are securely recorded and verifiable.

Joint naval patrols among India, the UAE, and EU nations will enhance maritime security by fostering collaboration and intelligence-sharing to monitor and respond to potential threats effectively. These patrols will also facilitate joint exercises that improve readiness against piracy, trafficking, and terrorism, particularly in volatile regions like the Gulf of Aden and the Red Sea. By integrating advanced technologies with collaborative security efforts, the IMEC can establish a resilient framework that safeguards its trade routes and builds trust among participating nations, ultimately contributing to a more secure global trading environment.

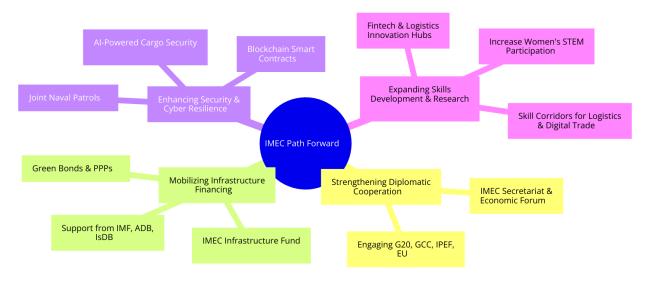
Strengthening maritime security, cybersecurity frameworks, and AI-driven risk mitigation strategies will protect the IMEC's physical and digital trade networks. AI-Powered Cargo Security: AI-based anomaly detection in ports and customs clearance. Blockchain-powered smart contracts to reduce fraud and enhance supply chain transparency.

#### 4.4. Expanding Skills Development and Research Collaboration

To effectively expand skills development and foster research collaboration within the IMEC, it is crucial to establish cross-border skill corridors and partnerships focused on renewable energy, digital trade, and logistics technology. This initiative should include promoting joint vocational training programs that enhance technical skills and prioritise women's increased participation in STEM fields, thereby supporting workforce inclusivity and diversity.

Establishing global research centres, such as logistics and fintech innovation hubs in key cities like Dubai, Mumbai, and Frankfurt, will be pivotal platforms for collaborative research and development. These centres can facilitate knowledge exchange and innovation among academia, industry stakeholders, and government entities, driving advancements in critical areas. By integrating efforts across nations, the IMEC can leverage diverse expertise to address common challenges and enhance competitiveness.

Moreover, initiatives to increase women's participation in STEM and digital trade education are essential for building a more equitable workforce. The IMEC can empower women to take on leadership roles in these rapidly evolving sectors by providing targeted training programs and mentorship opportunities. This comprehensive approach to skills development and research collaboration will strengthen the workforce and position the IMEC as a leader in innovation and sustainable economic growth across the regions it connects.



**Exhibit 3: Path Forward: Strategies for IMEC's Success** 

#### 5. Conclusion

The IMEC represents one of modern history's most ambitious cross-continental infrastructure projects. By integrating diplomatic cooperation, private sector investment, clean energy solutions, digital trade, and workforce development, the IMEC can emerge as a flagship global economic corridor, driving long-term prosperity and economic resilience across Asia, the Middle East, and Europe. The IMEC must be conceptualized and built as a Sustainable & Digital Trade Corridor. The IMEC's emphasis on clean energy, AI-driven logistics, and financial digitization will distinguish it as a modern, resilient trade corridor.

To realize its full potential, the IMEC countries must agree on a comprehensive policy roadmap that outlines clear objectives and a structured timeline for implementation, with a target of full operationalization by 2035. This roadmap should encompass strategies for enhancing infrastructure connectivity, promoting renewable energy initiatives, and fostering digital trade frameworks. Establishing joint research centres and vocational training programs will further support workforce inclusiveness, ensuring that the region is equipped with skilled professionals capable of navigating the demands of a rapidly evolving global economy.

Moreover, addressing geopolitical challenges and aligning regulatory standards across participating nations will facilitate smooth operations and minimize disruptions. By fostering collaboration among diverse stakeholders, including governments, private enterprises, and civil society—the IMEC can create a robust framework that enhances trade efficiency and strengthens regional partnerships.

In conclusion, the IMEC represents a transformative opportunity to redefine economic cooperation and connectivity in an increasingly interconnected world. By focusing on sustainable development and digital innovation, the IMEC can position itself as a vital player in global trade networks, ultimately contributing to a more prosperous and resilient future for all participating nations.

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