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Hotel Hills Sarajevo, Bosnia and Herzegovina

# Sustainable Digital Traceability for Halal Food Safety and Supply Chain Resilience

Muhammad Abubakar

Contech Group



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In the future halal economy, trust will increasingly travel through data before it travels through products.

# Why This Matters

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- Global halal supply chains
- Multi-country sourcing
- Increasing consumer expectations
- ESG reporting requirements
- Food safety incidents
- Supply-chain disruptions

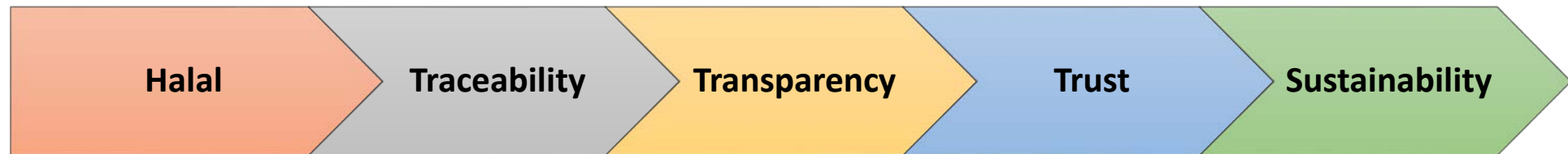
Traditional traceability systems were designed for compliance.  
*Future systems must be designed for trust, transparency and resilience.*

# The New Question

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Instead of asking:  
Is the product halal?

We must ask:  
Can the halal status be verified continuously, transparently and sustainably?



# Current Gaps in Existing Systems

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1. Fragmented records

Delayed verification

Limited interoperability

Weak sustainability measurement

**Compliance alone is no longer enough.**

# Introducing the SDTF

www.congress.halal.ba

## Sustainable Digital Traceability Framework (SDTF)

•Blockchain secured verification

IoT based monitoring

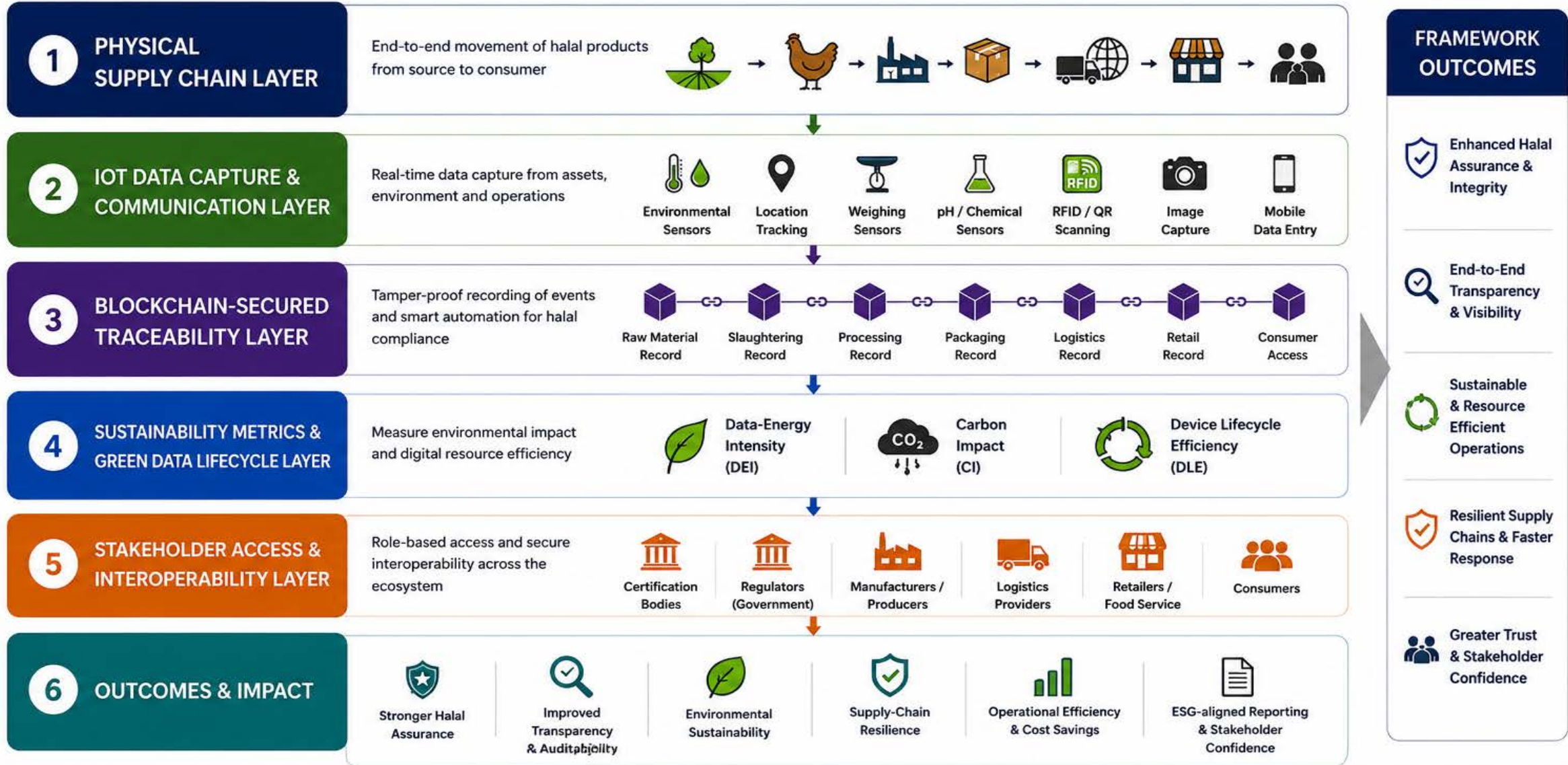
Sustainability Metrics

For Halal Food Supply Chain Resilience

The SDTF moves halal traceability from record keeping to intelligent governance.

# Sustainable Digital Traceability Framework (SDTF)

Integrating Blockchain, IoT and Sustainability Metrics for Halal Food Supply-Chain Resilience



# Sustainability Integration

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## Beyond Compliance

Three indicators:

- Data-energy intensity
- Carbon impact
- Device lifecycle efficiency



This is **our moment**  
to lead with service, ethics and sustainability, for generations to come.

# Comparative Assessment

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<b>Indicator</b>	<b>Current</b>	<b>SDTF</b>
Verification Time	Higher	Lower
Audit Burden	Higher	Lower
Visibility	Partial	End-to-End
Resilience	Limited	Enhanced

# Strategic Benefits

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## **For Certification Bodies**

- Faster audits
- Greater transparency
- Better interoperability

## **For Industry**

- Lower verification costs
- Better traceability
- Improved market confidence

## **For Regulators**

- Enhanced oversight
- Digital assurance
- Cross-border harmonization

# Future of Halal Governance

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**The next generation of halal systems will not simply certify products. They will continuously verify integrity.**

# Practical Constraints

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Initial  
implementation  
costs

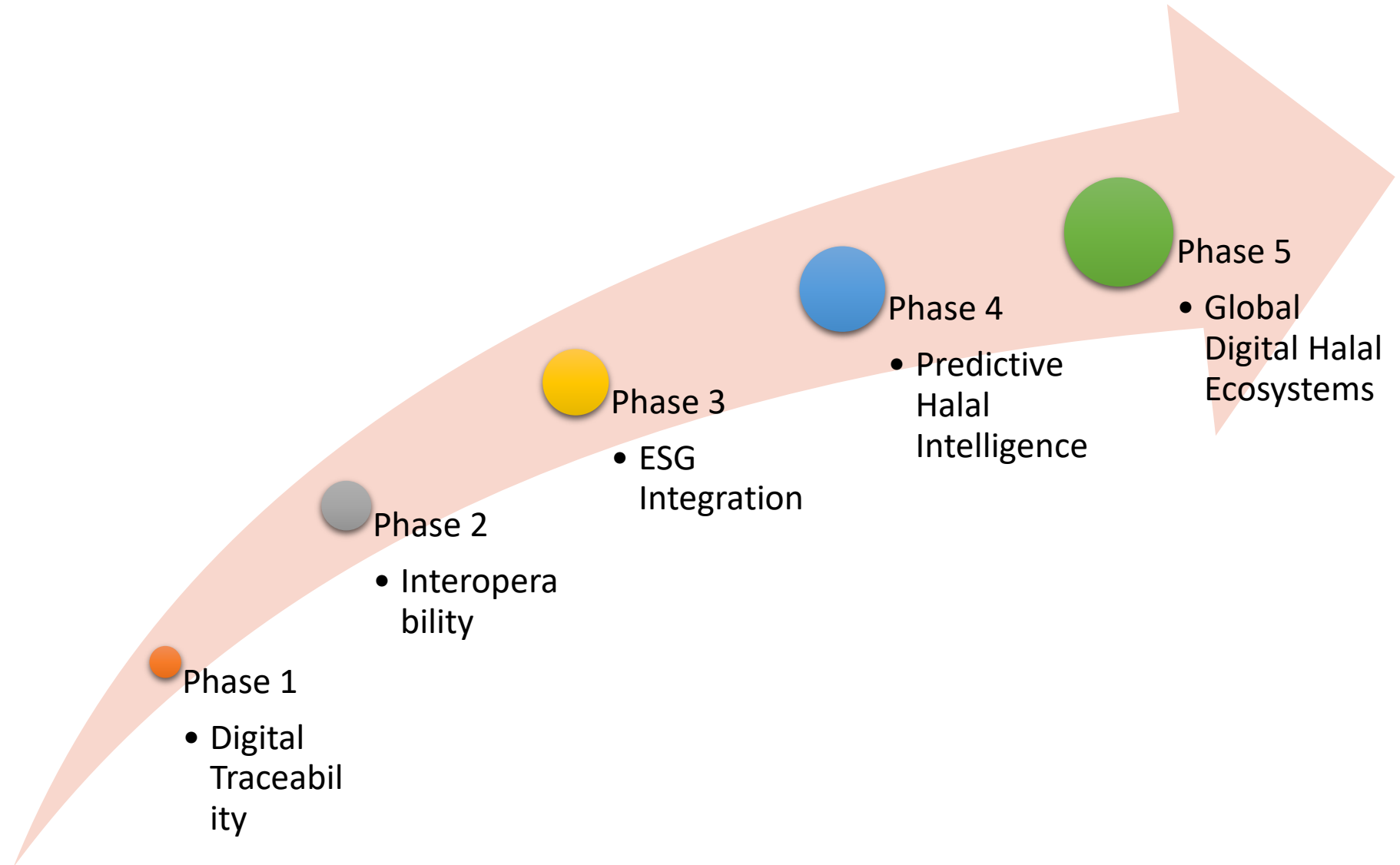
Digital capability  
gaps among  
stakeholders

Interoperability  
limitations between  
certification systems

Need for  
cybersecurity  
controls  
Certification

Adoption should be ***phased and supported by training, standards alignment and institutional coordination.***

# Roadmap 2035



# Key Takeaways

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- Digital Traceability is becoming strategic.
- Blockchain and IoT can strengthen halal assurance.
- Sustainability must be embedded into digital verification.
- SDTF serve as an applied governance model for future halal ecosystems.
- Future halal ecosystems require resilient digital governance.



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**"The future of halal assurance lies at the intersection of trust, technology and stewardship."**

# THANK YOU FOR ATENTION



[engr-abubakar@hotmail.com](mailto:engr-abubakar@hotmail.com)



Phone contact: +92-3002091639



Institution: Contech Group



M. Abubakar - Cert.Dir, MBA, M.BDI, M.CGI  
Governance Futurist | Board Member &  
Advisor | Speaker | Standards Council Me...



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