

The logo for APQP 4 Wind features the text "APQP 4 Wind" in a white, sans-serif font. The number "4" is highlighted with a green circular outline. Several thin green lines radiate from the center of the "4" towards the top and bottom edges of the dark blue background.

**APQP 4 Wind**

# **How to Get Started with APQP4Wind and How It Benefits Your Company**

Afternoon Webinar, October 30<sup>th</sup>, 2020

# Agenda

## 1. Welcome & Webinar Instructions

## 2. OEM Perspective – Vestas Wind Systems

## 3. How to Start Implementation and Ensure Benefits

- Strategy and policy for APQP4Wind - Commitment to customer focus, quality management and strategic objectives
- System gap analysis, project planning, implementation and monitoring to meet the strategy, objectives and ensure benefits
- APQP4Wind supports your company's journey to global excellence

## 4. Supplier Perspective – FT Technologies

## 5. Q&A Session

## 6. Thank you!

# Webinar Instructions

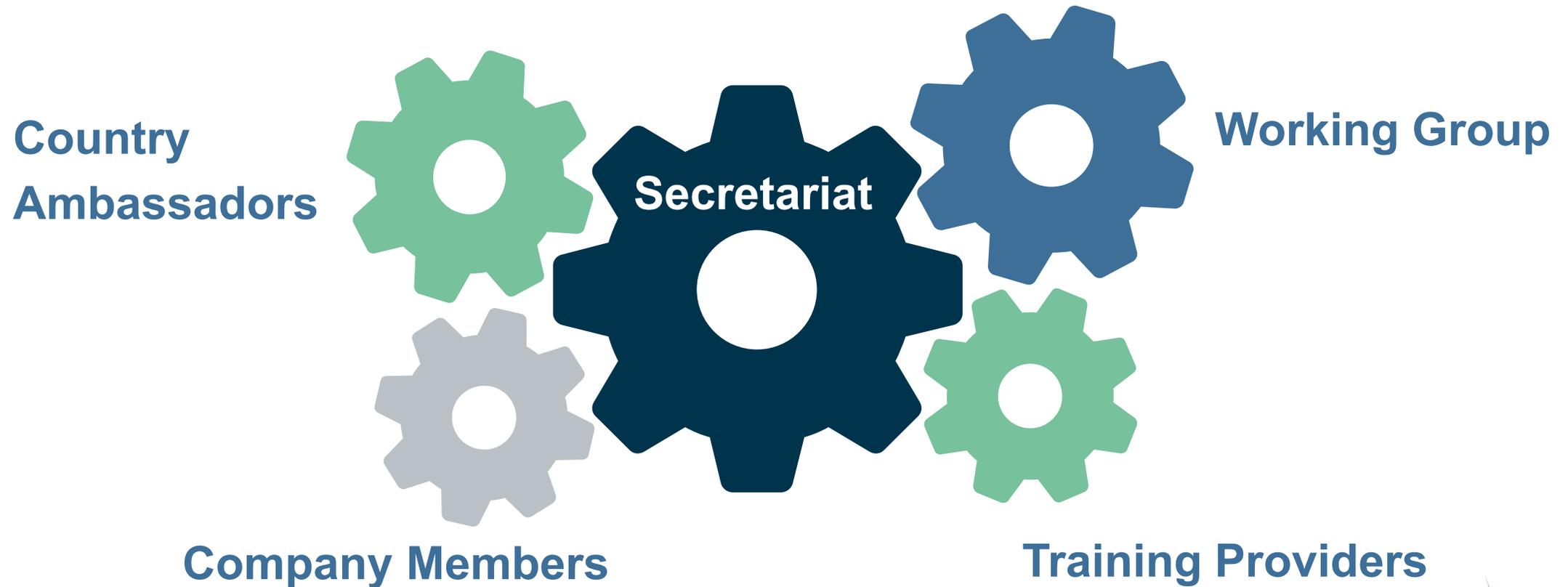
- Duration: ca. 60 minutes incl. surveys and Q&A Session
- You are welcome to write questions in the chat during the presentation
- Questions will be answered in the Q&A Session
- The webinar will be recorded and published on the APQP4Wind website along with the presentation material
- You will receive an e-mail with links to the recordings and presentation material after the webinar

# How much experience do you have with APQP4Wind?

- Expert (I have solid experience, can lead the process, and understand advanced concepts)
- Intermediate (I have some experience, can contribute, and understand the concepts fully)
- Beginner (I have limited experience, can contribute, and understand the basic concepts)
- I have no experience with APQP4Wind
- I do not know

# Welcome by the General Manager of APQP4Wind

# APQP4Wind Community



# Country Ambassadors



**Brazil**  
**Irineu Costa**  
Aeris Energy



**Brazil**  
**Jideon Vaz Rodrigues**  
Vestas Wind Systems



**China**  
**Jiqiang Ye**  
Goldwind



**China**  
**Wendan Ding**  
Vestas Wind Systems



**China**  
**Zhenming Yang**  
LM Wind Power



**Germany**  
**Henning Hecker**  
Siemens Gamesa  
Renewable Energy



**India**  
**Range Gowda MR**  
KK Wind Solutions



**India**  
**Vinayan EP**  
Vestas Wind Systems



**Poland**  
**Karolina Ziełńska**  
KK Wind Solutions



**Spain**  
**Raquel Izuriaga**  
LM Wind Power

# Country Ambassadors



**UK**

**Arefeh Taghikhani**  
FT Technologies



**UK**

**Neil Pearson**  
Cooper & Turner



**USA & Canada**

**Ike Anyanwu-Ebo**  
Vestas Wind Systems

# Board of Directors



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**Chairman**  
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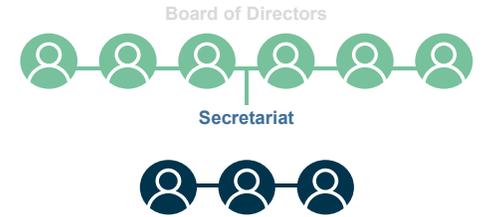


**Erik Dom**  
ZF Wind Power



**Jan Hylleberg**  
**Observer**  
Wind Denmark

# APQP4Wind Secretariat



**Kim Nedergaard Jacobsen**  
General Manager



**Sisse Vejen Storgaard**  
Head of Secretariat



**Marie-Louise Köllner**  
Communications and  
Marketing Consultant



**Ida Marie Gaarden Prochnow**  
Communications and  
Marketing Consultant



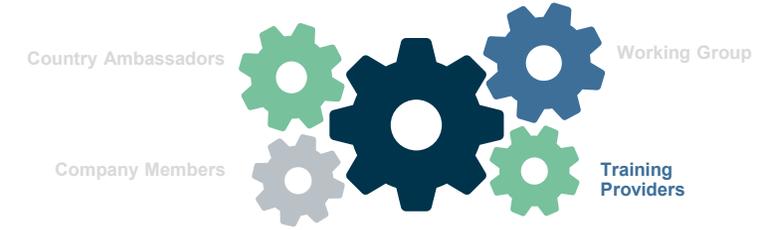
**Xi Jingchen (Christina)**  
Administrative Assistant

# Company Members



Read more about the Company Membership on [www.apqp4wind.org](http://www.apqp4wind.org)

# Training Providers

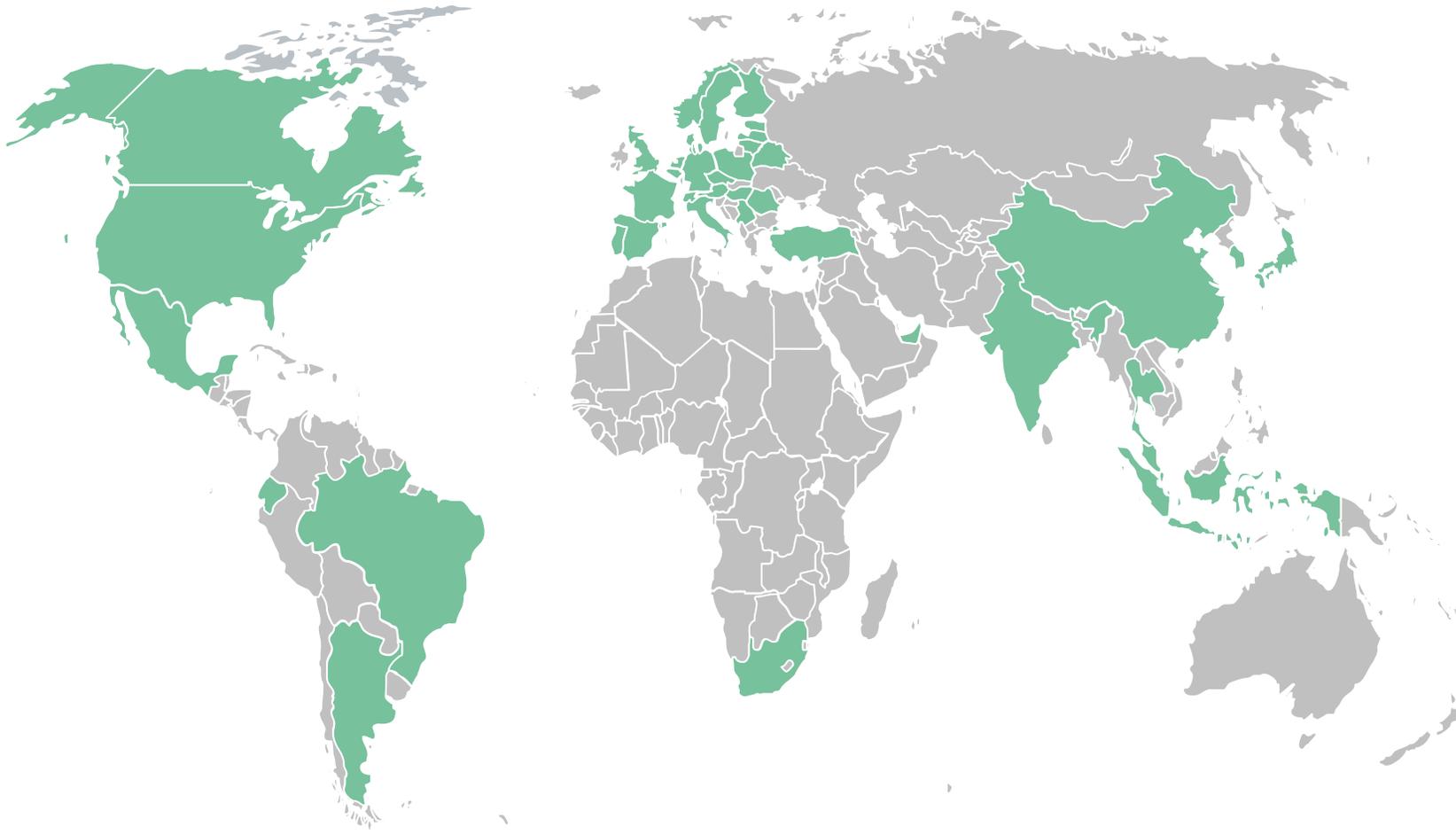


- World-wide training setup
- Carefully selected Training Providers
- Mandatory training courses to become an approved APQP4Wind Supplier
- Seller of APQP4Wind Manual



Contact our Training Providers [here](#)

# Global training deployed in 37 countries



- Argentina
- Austria
- Belgium
- Brazil
- Canada
- China
- Czech Republic
- Denmark
- Ecuador
- Estonia
- Finland
- France
- Germany
- Hungary
- India
- Indonesia
- Italy
- Japan
- Lithuania
- Malaysia
- Mexico
- Netherlands
- Norway
- Poland
- Portugal
- Serbia
- South Africa
- South Korea
- Spain
- Sweden
- Switzerland
- Thailand
- Turkey
- United Arab Emirates
- United Kingdom
- USA
- Vietnam



# OEM Perspective

## – Vestas Wind Systems

# Presenter



## **Ike Anyanwu-Ebo, QSE - Global SME Quality Chief Specialist at Vestas and APQP4Wind Country Ambassador in USA and Canada**

With a background of more than 20 years of experience within Product Development and Quality Management from the automotive and wind turbine industry, I am passionate about working with cross-functional, international teams in bringing a new product from design and manufacturing to the end customer and increasing customer satisfaction while lowering cost through continuous design and manufacturing process improvements.

# Background: Quality Assurance Methodology for the Global Wind Industry

**APQP4Wind is the common frame of reference to be used in the industry to strengthen the cooperation between Manufacturers and Suppliers and to ensure that parties on all levels communicate at eye level when it comes to quality assurance processes**

APQP4Wind aims to make the process of product quality assurance demands (APQP) as well as the product release process (PPAP) as clear as possible and have a vision to:

- align and mature the global wind industry supply chain with low cost of poor quality
- be the quality assurance methodology used by the entire global wind industry supply chain from design to end-user
- Inspired by and based upon successfully proven implementation in automotive industry through Automotive Industry Analyst Group (AIAG) within Ford, GM, Chrysler)

# Justification: What APQP4Wind means to Vestas

- Increased EBIT / Profitability / Business Case Certainty through lower Levelized Cost of Energy (LCOE)
- Lower LCOE through lower CoPQ (Cost of Poor Quality)
- Lower CoPQ through QA (risk prevention/mitigation) and vs. QC (inspection and re-work)

# Demands: Vestas' expectations within the APQP4Wind Framework

- High maturity and competency level in QA tools in identifying, quantifying and mitigating risks
- Structured Continuous Improvement (CI) planning, management and execution resulting in Quality improvements and CoPQ reductions
- Complete transparency and high maturity and competency level in QC tools in identifying, containing and correcting issues

# Deployment status: Driving changes in Vestas

- Alignment between APQP4Wind and Vestas Product development and QMS frameworks
- Integration of APQP4Wind into complete value chain, including design, production and site & construction/service
- Monetizing APQP4Wind benefits by identifying CoPQ reduction and avoidance opportunities

# Closing: What does it mean for the Wind Industry?

- CoPQ reduction and increased EBIT enabled by Customer, OEM and Supplier alignment at the start of an RFQ
- Acceleration of complete Customer, OEM and Supplier integration throughout the value chain to provide energy services
- No one can “go it alone”, Customers, OEMs and Suppliers must be aligned to meet Safety, Quality, Delivery and Cost requirements

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1. Welcome & Webinar Instructions
2. OEM Perspective – Vestas Wind Systems
- 3. How to Start Implementation and Ensure Benefits**
  - Strategy and policy for APQP4Wind - Commitment to customer focus, quality management and strategic objectives
  - System gap analysis, project planning, implementation and monitoring to meet the strategy, objectives and ensure benefits
  - APQP4Wind supports your company's journey to global excellence
4. Supplier Perspective – FT Technologies
5. Q&A Session
6. Thank you!

# How to Start Implementation and Ensure Benefits

– BV and DNV GL



# Presenters



## **Bent Weibel, Senior Lead Auditor, DNV GL**

With a background of more than 30 years of international experience in management and quality functions in automotive, renewable energy, medical device and certification, I have a solid knowledge and experience base to assess, support and lead the development of quality in product-, process- and business-related processes.



## **Ivan Mikkelsen, Lead Auditor and Product Manager, Bureau Veritas**

With a background in a business and statistical education, more than 30 years of experience in quality and management functions in automotive, renewable energy, packaging and certification, and many years experience in providing training, I am focused on how systems and risk management help companies to develop competence and meet their strategies in a global market.

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# How to Start Implementation and Ensure Benefits

Strategy and policy for APQP4Wind - Commitment to customer focus, quality management and strategic objectives

# APQP4Wind – stakeholders' benefits

## Who are the winners

- SOCIETY: Efficient and sustainable power supply based on innovation - boosted by world class methodology on a global basis
- INVESTORS: Reduced risk and improved profitability
- DEVELOPER: Speed, efficiency, and predictability
- THE SUPPLY CHAIN: Basis for effective working with OEM's and partners globally

## The Goldmine - cost of poor quality

- Warranty cost for repair and monitoring
- Retrofit
- Not living the intention of DMATS(\*)
- Control and inspection cost based on low confidence
- Delays due to non-aligned processes and structures across companies

# APQP4Wind – a strategic decision

## ”A strategic decision” means

- FIT: Considered to fit to the market position and intention of the company
- ALIGN: Will be aligned with the company’s management system, its “DNA”, and its organizational development intention
- COMMITMENT: Management provides resources and follows implementation
- BELIEF: In handling questions and dilemmas, the direction is persistently kept

## And does not mean

- Delegate a workbook to the Q-department
- Pay lip service and forget it
- Allow internal disagreements to persist and distract the efforts
- Accept departmental overload as a reason for ignorance

# Implementation decision and policy

## Implementation decision should involve

- PROJECT PLAN and TIMING: Some key steps will be elaborated
- IDENTIFYING PURPOSES: From a strategic, organizational and leadership perspective - develop multiple purposes
- POLICIES: Consider updating Quality Policies and establishing objectives, targets and success criteria
- MONITORING: Progress against targets - handling constraints

## Examples of APQP4Wind Policies

- We will share relevant input and ask for early involvement of key suppliers
- We will acknowledge and respond to suppliers' concerns and proposals
- We will utilize proactive Risk Analysis with APQP4Wind tools
- We will ensure a timely cross-functional approach to new parts and technology to handle key risks and options  
and set objectives to track progress

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# In your organization, what is the most significant challenge for APQP4Wind deployment?

- The customer claims APQP4Wind, but does not live up to it
- The suppliers are reluctant or not capable to take the steps needed
- The internal structure and incitements do not support working cross-functionally (ex.: We are working towards “department goals”)
- The attitude in the company is protective (ex.: only share the absolutely needed information and not too early)

A man with short brown hair and a beard, wearing a blue button-down shirt, is looking intently at a document in a meeting. He is holding a green pen. The background is a blurred office setting with other people.

# How to Start Implementation and Ensure Benefits

System gap analysis, project planning, implementation and monitoring to meet the strategy, objectives and to ensure benefits

# Gap analysis for – APQP4Wind and organization

## The gap analysis shall address

The gap analysis shall not only identify gaps to quality-specific APQP4Wind requirements!

- Identify gaps in the processes of the current management system
- Identify competence gaps on quality management, quality tools and methods
- Identify resource constraints and gaps for specific project execution

## The analysis shall also address

Which gaps have the strategic decision, policies and goals left.

- Is the organization appropriate in relation to the project implementation
- What governance structure and management support is needed
- Is there competence and resource constraints for the implementation project

# Implementation – journey and project

The project plan shall be specific

Implementing APQP4Wind is a journey, it is a change consisting of projects, activities and adjustments.

- The project plan shall be time-framed and specific with action, target, resource and cost

Kotter's 8-Step Process for Leading Change could be principals to consider in the project.

## Kotter, 8-Step Process for Leading Change

8-Step Process for Leading Change

Over four decades, Dr. Kotter observed countless leaders and organizations as they were trying to transform or execute their strategies.

He identified and extracted the success factors and combined them into a methodology: 8-Step Process for Leading Change.



1) <https://www.kotterinc.com/8-steps-process-for-leading-change/>

# Implement, monitor, and harvest benefits

## We create value by driving actions

- Drive the actions and follow up on the target, resource and cost
- Verify effectiveness and efficiency of the actions and implemented processes



- Use PDCA principles

The PDCA Cycle, also known as the Deming Wheel is an essential systematic process for continual improvement.

## Monitor and harvest

To monitor, we shall consider:

- Measure if the objectives and target are met by relevant project KPI's
- Use your audit program to identify if APQP4Wind is implemented in the certified management system
- Use maturity assessment model to assess progress of the implementation

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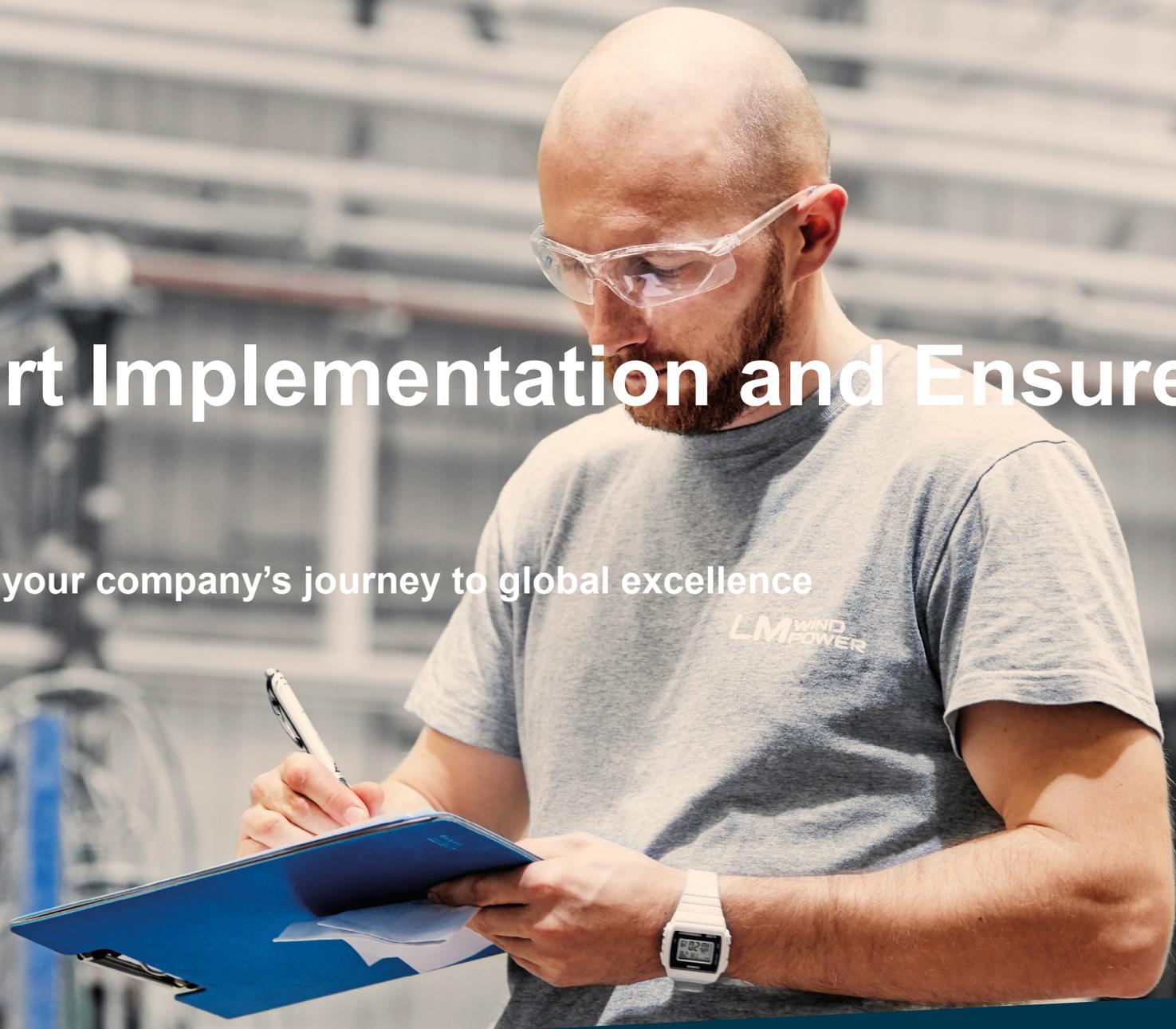
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# In your organization, is there a strategy and deployment plan for APQP4Wind deployment?

- There is no management decision or statement that has been communicated about APQP4Wind deployment
- There is a management decision and statement about APQP4Wind deployment, but no specific deployment plans have been communicated
- There is a management decision and some level of implementation plan to support deployment of APQP4Wind, but no progress monitoring
- The deployment of APQP4Wind is a company strategy, there are deployment plans, and progress is being monitored

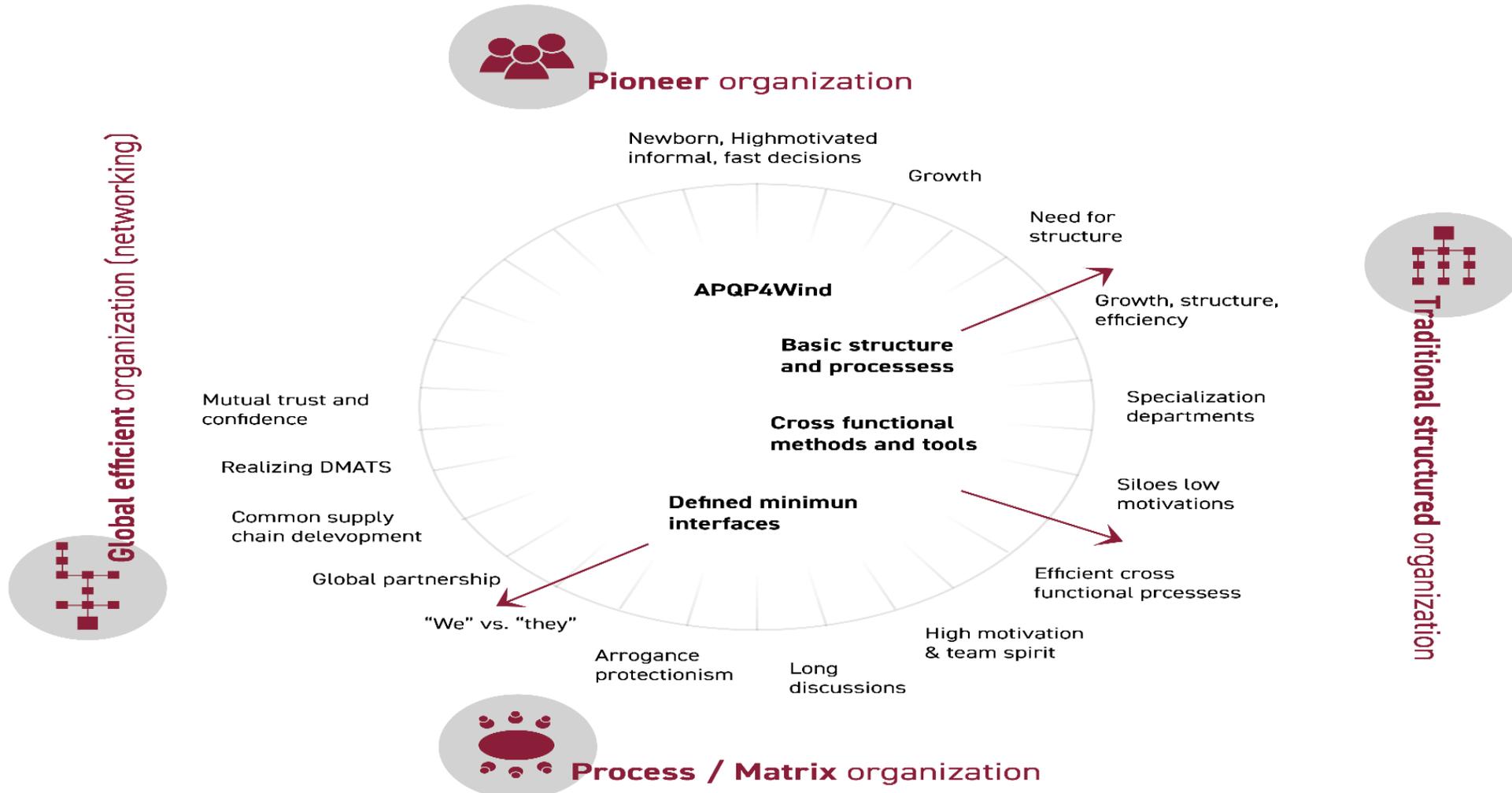
# How to Start Implementation and Ensure Benefits

– APQP4Wind supports your company’s journey to global excellence



# APQP4Wind supports your company's journey to global excellence!

## Company development



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FT TECHNOLOGIES

Courtesy of FT Technologies

# Supplier Perspective

– FT Technologies



# Presenter



## **Arefeh Taghikhani, Senior Quality Engineer at FT Technologies and APQP4Wind Country Ambassador in United Kingdom**

With an academic background of electronics and electrical engineering as well as 6 years of industrial experience in failure analysis and quality management in automotive and renewable energy, I am focused on risk management and continuous improvement of the processes to help the business to successfully maintain a very high level of quality standards and improve the design according to the industry needs.

# FT Technologies APQP4Wind Policy

## It's FT's policy to:

- Understand the needs and expectations of the customer and ensure product satisfies customer requirements
- Reduce product complexity
- Continuously improve alignment to the principles of Advanced Product Quality Planning
- Provide clear communication of Product Quality Requirements to suppliers and sub-suppliers
- Reduce the risk of defects and the costs of quality when introducing new designs and components
- Adopt a preventative approach to quality
- Support standardisation and simplification of processes to reduce time to market and increase efficiency
- Support profitable growth

# Changes introduced at FT as a result of APQP4Wind adaptation

- It has been a real cultural change with more focus on continuous improvement
- Structured work in the earlier stages of New Product and Process Design and Development
- Full review and gap analysis of the business landscape
- Better verification and validation procedures for both products and processes
- Having the customers engaged and more involved in the NPD processes

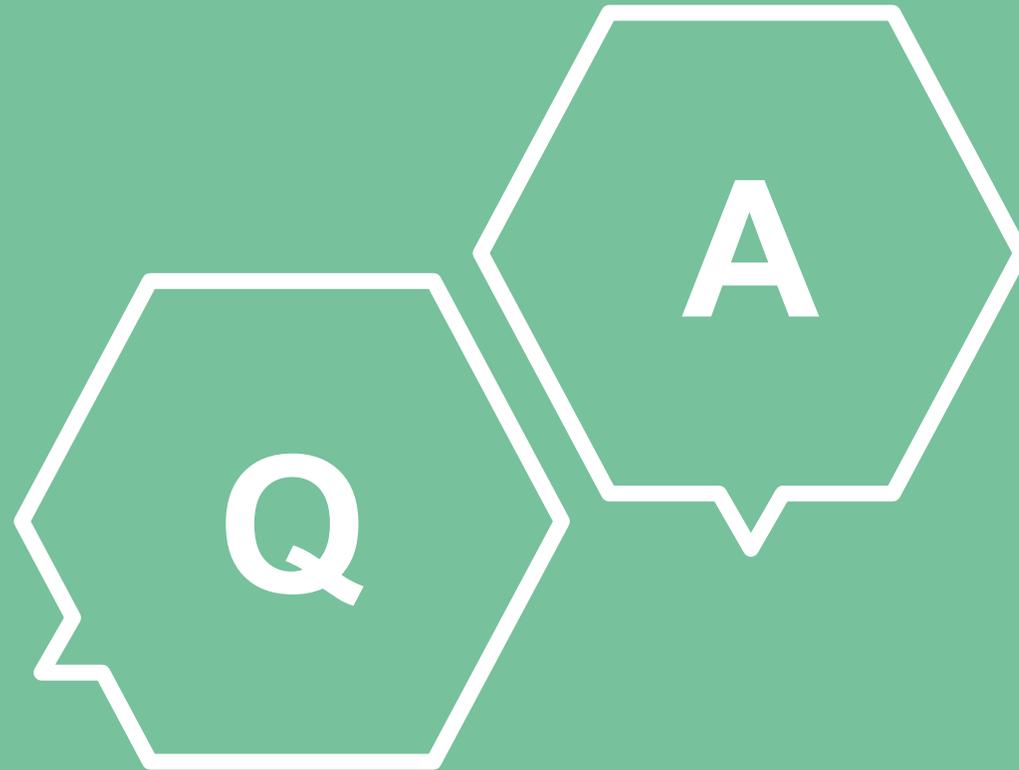
# How we did it?

- Held a “Supplier Conference” last year to engage the supply chain in this improvement
- Awareness training for all managers as well as R&D, QA and sales personnel
- An internal steering group meets at least once a month
- Assigned a quality rep for each stage of our production process to work on PPAP documentation

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# Time for Questions & Answers



# APQP4Wind Secretariat

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# How useful was this webinar: How to Get Started With APQP4Wind and How It Benefits Your Company?

Please rate the webinar on a scale from 1 to 5

- 5 (very useful)
- 4
- 3
- 2
- 1 (not useful at all)