

# IEC-61400-25

## Implementation considerations

DK- manufacture statements

Bonus, NEG Micon, Vestas

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## Business aspects - Customer requirement

- Complete wind power plants incl. overall Control & Monitoring
- Easy to integrate WTG's from various vendors
- Global operation – international std's required
- Easy to adapt in existing power plant systems
  - Gateways to other protocols
- High degree of scalability
- Increasing demands for monitoring data – off-shore
- Integration with substations, met masts etc.
- Integration of add-on equipment:
  - WEB cameras, radars, IP-Telephones, access control etc.
- Openness against management ERP systems
- Openness against new facilities in WPP's / WTG's
  - Power Control, Condition Monitoring etc.

Some of the reasons to establish IEC61400-25

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## Technical aspects -XML and WEB Services

- International maintained standard
- Structured and Self Describing data
- Highly Flexible and Extensible
- Well know standard and globally know how
- Cross Platform Technology

Some of the reasons to vote for WEB Services

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## XML - International Maintained Standard

- The XML standard is maintained and developed by several international working groups each focusing on specific issues
- Vendor independently maintained and developed
- Open standard thereby accessible for all parties
- Conformance testing software suites exists
- Firewall friendly technology

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## XML- Structured and Self Describing Data

- Mark-up language for documents containing structured information
- Richly structured data can be represented
- Self describing data structures thru DTD or XML Schema
- High degree of scalability
- Wide variety of applications support

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## XML- Highly Flexible and Extensible

- No preconceived semantics in XML
- Not limited in schematic, thereby extendable
- XML was designed to be compatible with existing standards
- XML support B2B info exchange / sharing

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## XML- Cross Platform Technology

- Platform-independent
- Supports internationalization by being Unicode compliant
- Not tied to any programming language, operating system or software vendor
- Wide proliferation of data sources already exists
- Accepted by multiple software integrators and vendors

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## WEB Services

- Often referred to as distributed computing on the Internet
- Exposes both functionality and interfaces to users thru standard protocols (SOAP & WSDL)
- Possibilities for embedding security and encryption
- Independent of platform and programming language
- Programming support and know how - globally available

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Addressing the customer needs for

- Flexibility, connectivity, openness, scalability
- Proven technology for the next step – XML/WEB services
- Easy integration of various WTG-manufacture products
- Integration with power plant management systems
- Open for future extensions

Some of the reasons to vote YES for IEC61400-25 unified modelling with WEB services mapping

Complied by  
Bonus, NEG Micon, Vestas

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Demo of WEB service applications