



Dragon Sourcing

Your Tailored Approach to Emerging Markets

**Strategic Sourcing Case Study – Windmill Industry
June 20th 2014**



Agenda

1. Objectives , work plan and time line

2. Approach

3. Results



Objectives

Context

Client overall objectives : Identify new potential competitive suppliers in China and India who can supply items at delivered prices 15-20% below current levels (maintain/improve safety, quality and delivery at lower cost)

Categories involved

- **Blades**
 - 1. Plastic injection moulded items
 - 2. Small plastic parts
 - 3. Covers
- **Electricals**
 - 4. LV-Cable / MV-cable
 - 5. Slip Ring Brush holder
- **Mechanical**
 - 6. Plate heat exchanger / Water cooler
 - 7. Blower and fan
 - 8. Internal crane
 - 9. Fasteners
 - 10. Machined + Sheet Metal components
- **Power train**
 - 11. Brake
 - 12. Shrink Disc
- **Towers**
 - 13. Tower flanges
 - 14. Steel plates
 - 15. Platform & Alu parts
 - 16. Steel parts and Magnets
 - 17. Access and Safety Equipment
- **WCS**
 - 18. Yaw Gears
 - 19. Yaw Motors
 - 20. Pipes, hoses and fittings
 - 21. Yaw Ring and Blade Bearing



Dragon Sourcing approach

- 1. Demand Analysis:** Work with Client to define and understand the products and requirements (specs, volumes, materials, production technology requirements)
- 2. Supply Market Analysis:** Identify long list of potential suppliers in China and India by leveraging B2B Websites, DS Database, Fair catalogues, Chamber of Commerce, Magazines, Network, References.
- 3. Telephone Pre-screening:** Selection of suppliers to be included in the RFI/RFP process by telephone pre-screening based on agreed simple criteria (e.g. capability to make the product, minimum company size, interest in participating)
- 4. Administer the NDA:** Administration and chasing for completion of the NDA with suppliers that have been preselected
- 5. Develop RFI/RFP & Scorecard template:** Prepare an RFI/RFP document, with an aligned Balanced Scorecard that has the objective to pre-qualify the capabilities of the suppliers, including: Background, Financials, Client and product experience, Quality certification & processes, Social Responsibility, Manufacturing/technology capability
- 6. Administer the RFI/RFP:** The RFI/RFP is distributed to the relevant suppliers who have signed NDA, with telephone follow-up to push for maximum participation.
- 7. Analyze RFI/RFP Responses:** Analysis of RFI/RFP responses to objectively rank the suppliers by capability and competitiveness, and to develop sense for price points



The project was carried out in 3 months

Steps		Who	3/10 - 3/14	3/17- 3/21	3/24- 3/28	3/31-4/4	4/7-4/11	4/14- 4/18	4/21- 4/25	4/28-5/2	5/5-5/9	5/12- 5/16	5/19- 5/23	5/26- 5/30	6/2-6/6	6/9-6/13
0	Kick off meeting	Client/ DS	Finished													
1	Demand Analysis:	Client/ DS	Finished	Finished	Finished	Milestone	Finished	Finished								
2	Supply Market Analysis:	DS	Finished	Phase 1	Phase 1	Phase 1	Phase 1	Phase 2	Phase 2	Phase 2	Phase 2	Phase 2	Phase 2	Phase 2		
3	Telephone Pre-screening:	DS		Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished		
4	Administer the NDA:	DS			Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished
5	Develop RFI/RFQ & Scorecard template:	Client/ DS		Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Milestone				
6	Administer the RFI/RFQ	DS				Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished
7	Analyze RFI /RFP Responses:	Client/ DS							Finished	Finished	Finished	Finished	Finished	Finished	Finished	Finished

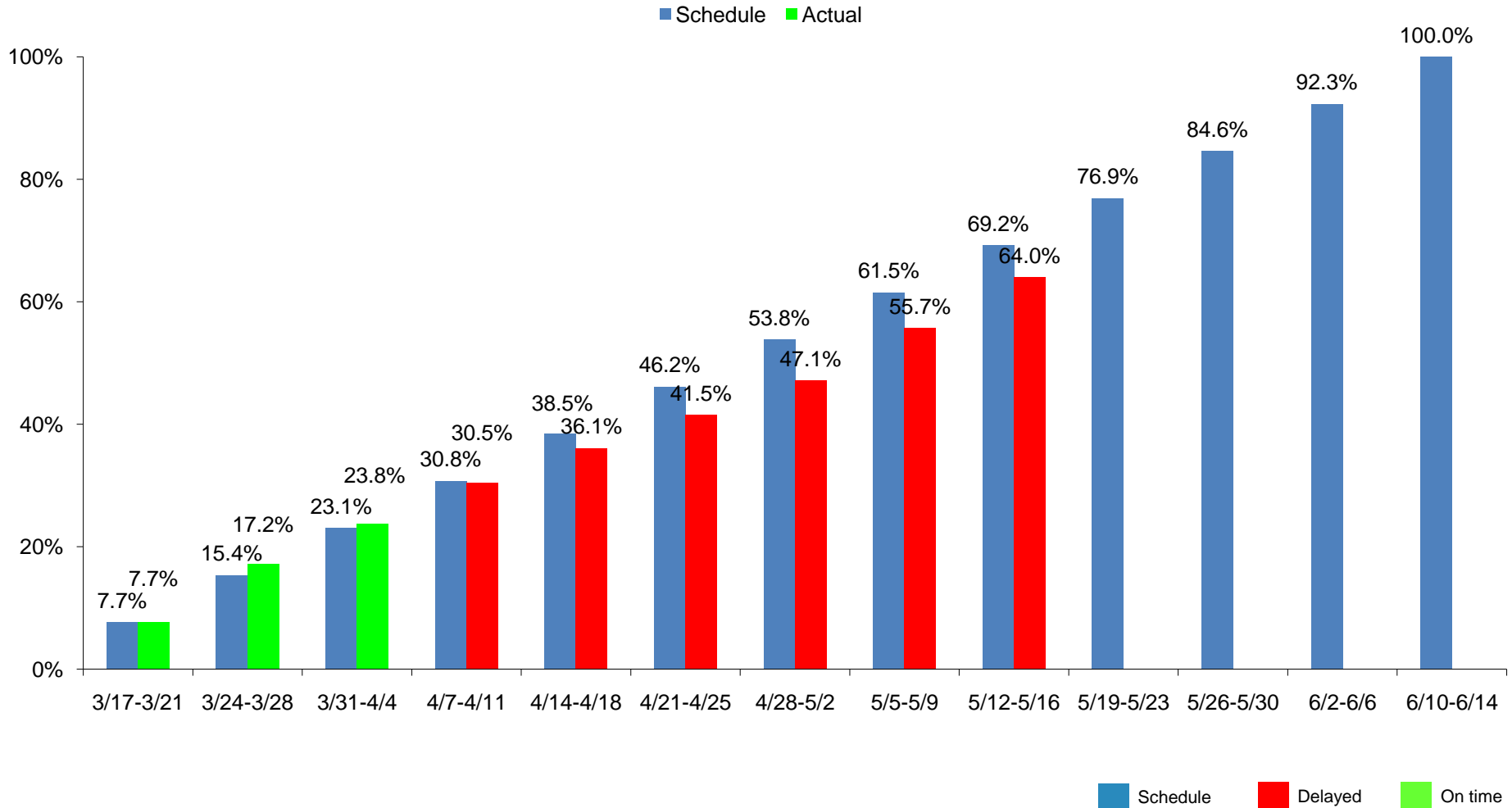
■ Not-started
 ■ Started
 ■ Delayed
 ■ Finished
 ▲ Milestones

TOP



Whole project progress was closely tracked.

Sourcing General Progress



Schedule Delayed On time



Agenda

1. Objectives , work plan and time line
- 2. Category Approach (Tower flange example)**
3. Results



The RFQ included 5 items representative of the total spend comprised of 19 items.

General description	Material	Mass Weight per pcs. (kg)	Annual quantity (pcs)	Current Unit Price in Euro	Annual spend in Euro
Tower Flange Dia4450/3850*110	S355NL	1733	260	€ 3,413	€ 1,109,124
Tower Flange Dia2316/2070*370	S355NL	1258	520	€ 2,139	€ 1,390,236
Tower Flange Dia4173/3793*115	S355NL	1213	520	€ 2,297	€ 1,493,144
Tower Flange Dia4167/3785*105	S355NL	1101	520	€ 2,166	€1,407,952
Tower Flange Dia3364/3032*90	S355NL	617	260	€ 1,247	€ 405,158
Current Total Annual Spend					€ 5,805,614



160 suppliers were initially identified, finally 12 suppliers submitted an RFI-RFQ response

Progress	China	India
Suppliers identified	91	69
Suppliers called	91	69
Suppliers passed pre-screening	14	10
Suppliers NDA sent	14	10
Suppliers NDA received	11	6
Suppliers RFI/RFQ received	6	3



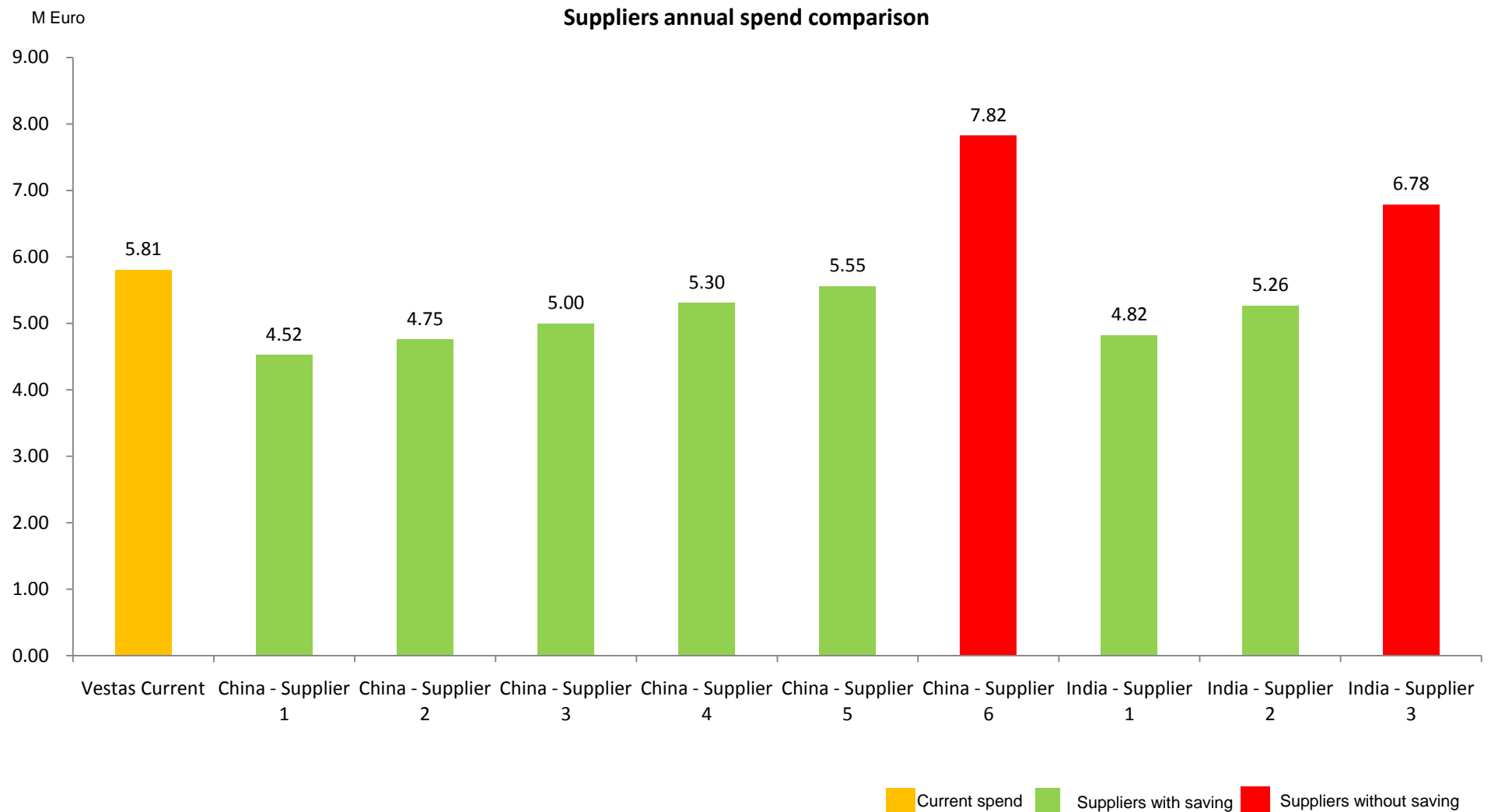
Balance Score card used to rank the suppliers

Business information	Weight of criteria	Scoring	Max Score per criteria	Section weight
Year Founded	10%	1=After 2010 2= >=Between 2006 to 2010 3= >=Between 2000 to 2005 4= >=Between 1995 and 1999 5=Before 1995	5	15%
Registered capital in USD	10%	1=Less than 5M 2= >=Between 5to 10M 3= >=Between 10 to 20M 4= >=More than 20M	4	
Turnover in 2013 in USD	20%	1=Less than 10M;2= >=10M-50M 3= >=50M-100M; 4= >=100-200M 5=Above 200M	5	
Export experience	10%	1=Less than 5 years;2=>=5-10 years 3=>=More than 10 years	3	
Profile of client in wind turbine industry	25%	0=Not provided ;1=Local customers 2=National customers 3=International customers as Client	3	
Profile of Top Customers	25%	0=Not provided ;1=Local customers 2=National customers 3=International customers	3	
Subtotal	100%			
Production	Weight of criteria	Scoring	Max Score per criteria	Section weight
Monthly production capacity of flange (diameter more than 2 m)	10%	1=Below 100pcs ; 2=100-500pcs 3=500-1000pcs;4=Above 1000pcs	4	35%
Global prodction facilities	10%	1=No; 2= Production facilities in two countries ; 3= More than two countries	3	
All production steps in house	10%	0=No 2=Yes	2	
Production with S355 NL EN 10025-3	10%	0= No 1= Yes	1	
Ring Rolling Mill - outer diameter up to 5000mm.	10%	0= No;1= 1-3 machines 2= 4-6 machines; 3= >=7 machines	3	
Forging Press above 3000 tons	10%	0= No; 1= 1-3 machines 2= 4-6 machines 3= >=7 machines	3	
CNC MACHINING CENTER	10%	0= No; 1= 1-5 machines 2=>=5-10machines; 3= >=10 machines	3	
Vertical turning	10%	0= No;1= 1-10 machines 2= 10-20 machines ; 3= >=20 machine	3	
Heat Treatment Furnace	10%	0= No;1= Yes	1	
Numbers of Employees	10%	0=less than 100;1= 100-300 2= 300-500 ; 3= above 500	3	

Quality system	Weight of criteria	Scoring	Max Score per criteria	Weight of the section
ISO 9001	20%	0= No ; 1= Yes	1	35%
ISO 14001	10%	0= No ; 1= Yes	1	
CE Certificate	10%	0= No ; 1= Yes	1	
OHSAS18001	10%	0= No ; 1= Yes	1	
IQC, IPQC, FQC report	10%	0= No ; 1= Yes	1	
Warranty term	10%	0= No description 1= Simple, not very clear 2= Detailed, clear	2	
3D measurement	15%	0= No ; 1= Yes	1	
ultrasonic inspection	15%	0= No ; 1= Yes	1	
Subtotal	100%			35%
Cooperation	Weight of criteria	Scoring	Max Score per criteria	Weight of the section
Cooperation during NDA,RFI/RFQ	50%	1= Poor 2= Satisfactory 3= Excellent	3	5%
Completeness of RFI/RFQ	50%	1= Poor 2= Satisfactory 3= Excellent	3	
Subtotal	100%			5%
Price Competitiveness	Weight of criteria	Scoring	Max Score per criteria	Weight of the section
Quote all items	10%	1= Partial 2= All	2	10%
Each Item has saving or not	10%	0= No saving 1= Partial 2= All	2	
Payment term	20%	1= Don't accept Client payment term 2=Accept	2	
Saving of tower flange	60%	0=No savings 1=Savings less than 5% 2=Savings between 5% to 10% 3=Savings between 10% to 15% 4=Savings over 15%	4	
Subtotal	100%			10%



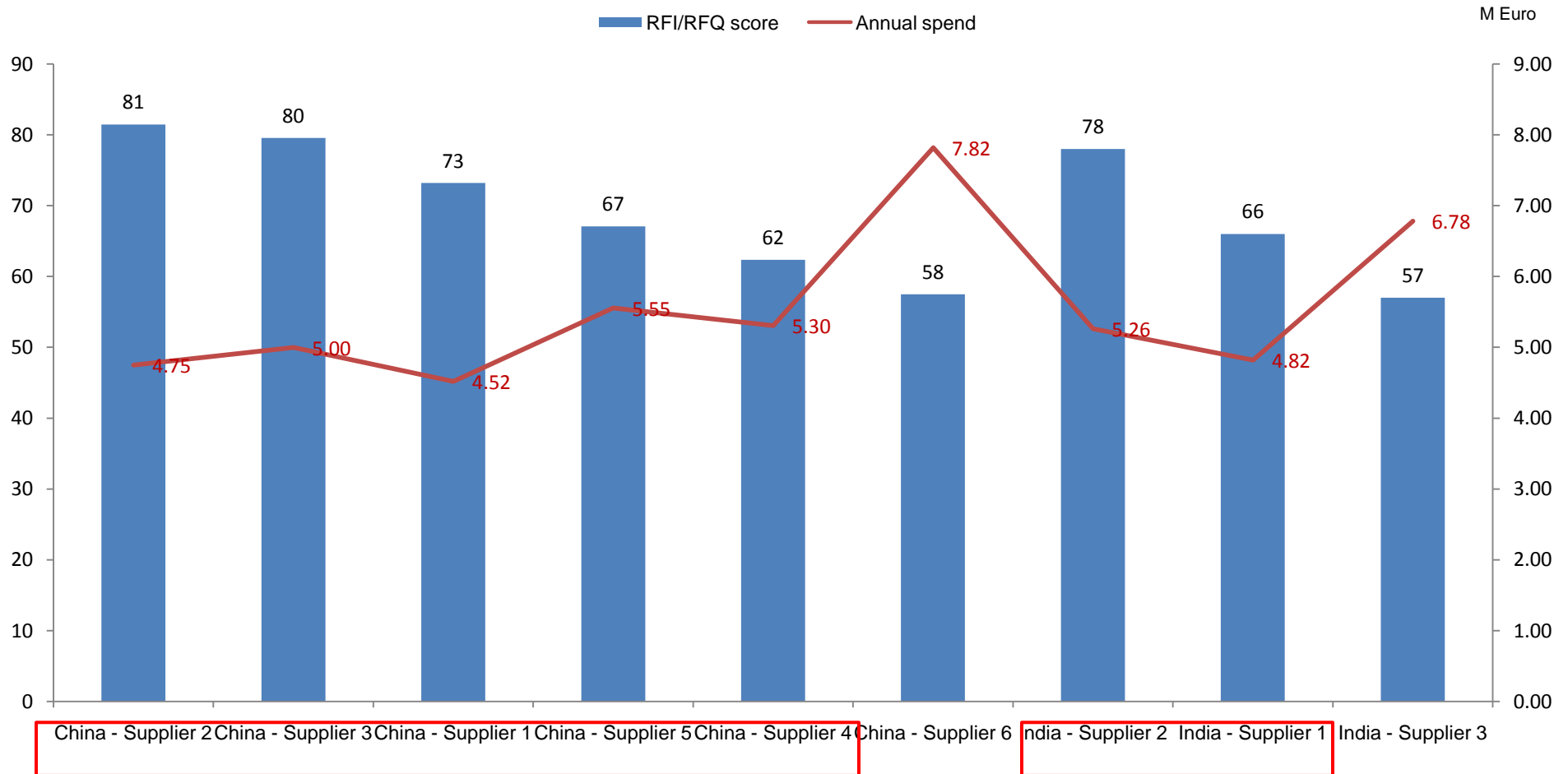
Savings were identified in both countries





..and 7 suppliers were recommended for auditing.

Tower Flange Supplier Scorecard and Annual Spend Overview





Company profile

XXXXXXX

RFI/RFQ score	81
Ranking	1

COMPANY INFORMATION	
Company Name	xxxxxxx
Address	xxxxxxx
Town	xxxxxxx
Province	xxxxxxx
Company Website	xxxxxxx
CONTACT PERSON INFORMATION	
Contact Person	xxxxxxx
Title	xxxxxxx
Email	xxxxxxx
Tel	xxxxxxx
Fax	xxxxxxx
Mobile phone	xxxxxxx

BUSINESS INFORMATION				
What date was your company founded?	1998			
How much is your registration capital (RMB)?	160million			
What's the nature of your company? (Private, state owned, joint venture, etc)	Joint Venture			
What is your turnover in million RMB ?	2014 (to date)	2013	2012	2011
	683.69	1356.33	1282.05	1452.93
How many square meters(m²) does your factory occupy ?	1100000			
How many employees do you have?	1100			
How many employees can communicate in English?	65			
Does your company have an export license?(yes or no)	Yes			
How many years of export experience do you have?	16			
What industry does your company mainly serve?	Power generation, electric power , transmission, environmental protection , pressure vessels and steel structure			
Do you have subsidiaries outside China? If yes, where?	No			
Do you supply products to wind turbine industry? If yes, how many years?	Yes, 11 years			
Percentage of you turn over coming from Wind Turbine Industry? (%)	30%			
Who is your main customer in wind turbine industry?	Datang, Longyuan, China Power Investment, Huaneng			
Do you have European / international customers? If yes, which ones? ?	No			

What is the percentage of turnover distributed to:	Domestic	Europe	US	Rest of the World
	97.6%	1.0%	1.0%	0.4%
Who are your top 3 Clients?	Clients	Industry	Country	% of sales
1	SGCC	Power Plant	China	55%
2	Datang	Wind Power	China	13%
3	Huaneng	Wind Power	China	7%

CORPORATE RESPONSIBILITY	
Shortly describe your policy to cover environment and conservation.	ISO14001
Shortly describe your policy to cover health and safety.	OHSAS18001
Shortly describe your policy to cover human rights.	Respect human rights & object discrimination to staff
Shortly describe your policy to cover business ethics and anti-Bribery.	follow the principle of fair competition, no bribery, respect the objective facts

PRODUCTION						
What's your main products?	Tower Flange					
	Tower Flange	Dia. 2-5m Tower Flange	Dia. Over 5m Tower Flange			
Monthly production capacity(pcs)	2000	1500	500			
What is current free monthly production capacity (pcs)?	1400	1050	350			
How many production facilities does your company have worldwide?	1					
If you have more than 1 production facility worldwide, please list their address and production capacity.	Address					
	Monthly capacity	1666				
Does your company do all production steps in house?	Yes					
Does your company produce right listed products fow wind power industry in house? (Yes/No)	Yaw ring	Blade bearing	Tower flange	Yaw gear	Big machined parts	Metal parts (stamping,p unching,etc)
	N	N	Y	N	Y	Y



Company profile

XXXXXX

Equipment list (If you have more than three kind, please insert needed row)							Quality, Environmental and Product Certification				
Equipment description and brand	Max processing dimension mm (X,Y,Z)		Quantity				Do you have below certificates ?	Yes / No	Date of Certificate	Certifying Org.	
CNC MACHINING CENTER	CNC Drill Lathe	5000x5000x400		2			Manufacturing QMS	ISO 9001	Yes	2013.2.5	CQM
	High speed CNC Drill Lathe	5000x5000x400		2				ISO 14001	Yes	2013.2.5	CQM
						OHSAS18001		Yes	2013.2.5	CQM	
Vertical turning	CNC Drill Lathe	5000x5000x1200		6			What international/domestic product certification do you have?	Gamesa	Yes	2012.8	Gamesa
	Vertical Lathe	3500x3500x1200		2				CE	Yes	2013.5..24	TUV NORD
	Vertical Lathe	5000x5000x1500		10				BV	Yes	2012.4.26	BV
						Pressure piping components		Yes	2013.9.30	AQSIQ	
Does your company have right listed processing in house?	Forging	Casting	Stamping	Welding	Heat treatment		Do you have incoming material inspection and report? ?				
	N	Y	Y	Y	Y		Yes				
Do you have production equipment list?	Yes		If yes, please provide equipment list.				Do you have daily on line quality inspection(Y/N)? How often do you have these inspection as well as on which production stages the inspection to be conducted? ?				
	Worker	Engineer	R&D	Quality Control	Management	Sales	What type of inspection to be conducted(100% or sample inspection)?				
How many people do you have in these positions?	56	22	5	9	5	2	100% inspection				
How many of those speak and write english?	0	4	5	3	3	2	Do you have final products inspection and report?				
How long does your employee work in your company in average?	8 years						Yes				
How many shift does your company work? How many hours one shift?	8h/shift, 2 shifts						What performance do you achieve on average in out going quality measures (% rejected)?				
							1.20%				
							What's the warranty term of your Tower Flange?				
							3.1 certificate				
							What is your internal rule regarding maximum reaction time of quality claim?				
							24h				
							Do you accept 3rd party QC?				
							Yes				
							How long do you keep the QC records?				
							1-20 years				
							Which test does yor company corporate with an external supplier?				
							No				
Please list quality control equipment that you have in-house	Test	Yes / No	Equipment brand	Quantity							
	Ultrasonic inspection	Yes	Jinan Shidai	2							
	Magnetic particle detector	Yes	Jinan Shidai	3							
	spectrometer	Yes	Belec	1							
	infrared thermometer	Yes	Xi'an	3							
	Hardness Tester	Yes	Laizhou	1							
	Metallurgical microscope	Yes	Chongqing Optical	1							
Impact Tester	Yes	Jinan Kehui	1								



Company certificate and picture XXXXXXX

Business registration	Tax registration	Organization Code certificate
Factory entrance	Workshop	Machinery
		
Machinery	Warehouse	Office
		



Agenda

1. Objectives , work plan and time line
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- 3. Results**



In total, nearly 3000 suppliers were identified resulting in 147 suppliers to be audited

#	FG	Category	China sourcing					India sourcing				
			Supplier list	# of supp pass Tel Pre-screen	NDA received	RFI/RFQ received	Suppliers to be audit	Supplier list	# of supp pass Tel Pre-screen	NDA received	RFI/RFQ received	Suppliers to be audited
1	Blades	Plastic Injection moulded parts	58	17	11	4	1	67	4	4	2	2
2		Small plastic parts	47	30	11	7	4	58	Cancel			
3		Covers	46	12	10	8	5	64	10	5	2	2
4	Electricals	LV-Cable / MV-cable	159	36	10	6	4	91	23	13	5	5
5		Slip Ring Brush holder	68	18	15	3	3	25	13	8	1	1
6	NLE	Plate heat exchanger / Water cooler	170	43	30	13	11	136	38	22	5	3
7		Blower and fan	80	28	22	5	5	58	21	12	2	2
8		Internal crane	63	11	7	4	4	54	13	5	3	3
9		Fasteners	77	25	14	5	5	63	18	8	3	3
10		Machined + Sheet Metal components	78	18	13	7	4	106	30	22	5	6
11	Power train	Brake	61	23	14	9	6	70	8	5	2	2
12		Shrink Disc	37	13	12	6	5	25	5	4	2	2
13	Towers	Tower flanges	91	14	11	6	5	71	10	6	3	2
14		Steel plates	51	7	7	6	6	57	9	7	4	4
15		Platform & Alu parts	41	7	7	2	2	52	16	11	1	1
16		Steel parts and Magnets	96	42	Cancel			46	18	12	6	6
17		Access and Safety Equipment	60	20	18	10	6	67	10	3	2	2
18	WCS	Yaw Gears	56	16	13	6	4	62	21	9	3	3
19		Yaw Motors	83	27	20	15	8	69	15	9	4	4
20		Pipes, hoses and fittings	140	45	15	2	2	71	15	8	2	2
21		Yaw Ring and Blade Bearing	38	Cancel				64	10	8	2	2
Total			1600	452	260	124	90	1376	307	181	59	57



Lessons learned: don't make the NDA too stringent and have precise drawings and specs available; in this programme 10% of identified suppliers were lost in the process for these reasons

#	FG	Category	China sourcing		India sourcing	
			Supplier would not sign NDA	Spec were not sufficient to make reliable quote	Supplier would not sign NDA	Spec were not sufficient to make reliable quote
1	Blades	Plastic Injection moulded parts	6	1	0	0
2		Small plastic parts	19	0		
3		Covers	2	1	5	
4	Electricals	LV-Cable / MV-cable	26	0	10	3
5		Slip Ring Brush holder	3	6	5	5
6	NLE	Plate heat exchanger / Water cooler	13	0	16	0
7		Blower and fan	6	2	9	0
8		Internal crane	4	0	8	0
9		Fasteners	11	1	10	0
10		Machined + Sheet Metal components	5	0	8	0
11	Power train	Brake	9	0	3	0
12		Shrink Disc	1	1	1	2
13	Towers	Tower flanges	3	0	4	0
14		Steel plates	7	0	2	0
15		Platform & Alu parts	0	0	5	0
16		Steel parts and Magnets			6	0
17		Access and Safety Equipment	2	3	7	0
18	WCS	Yaw Gears	3	0	12	7
19		Yaw Motors	7	0	6	0
20		Pipes, hoses and fittings	30	1	7	0
21		Yaw Ring and Blade Bearing			2	0
Total			157	16	126	17



Most categories offered potential savings, especially in China

#	FG	Category	China saving summary		India saving summary	
			% Min saving	% Max saving	% Min saving	% Max saving
1	Blades	Plastic Injection moulded parts	-	-	-	-
2		Small plastic parts	64%	80%	-	-
3		Covers	-	-	-	-
4	Electricals	LV-Cable / MV-cable	24%	24%	5%	5%
5		Slip Ring Brush holder	21%	71%	81%	81%
6	NLE	Plate heat exchanger / Water cooler	9%	33%	-	-
7		Blower and fan	16%	52%	4%	7%
8		Internal crane	7%	47%	22%	41%
9		Fasteners	9%	52%	47%	80%
10		Machined + Sheet Metal components	6%	17%	0.1%	4%
11	Power train	Brake	15%	75%	3%	21%
12		Shrink Disc	3%	32%	4%	9%
13	Towers	Tower flanges	4%	22%	8%	14%
14		Steel plates	6%	25%	-	-
15		Platform & Alu parts	6%	54%	0.5%	0.5%
16		Steel parts and Magnets	Not done		-	-
17		Access and Safety Equipment	15%	42%	-	-
18	WCS	Yaw Gears	-	-	-	-
19		Yaw Motors	1%	53%	-	-
20		Pipes, hoses and fittings	19%	33%	22%	30%
21		Yaw Ring and Blade Bearing	Not done		-	-
Total			7%	29%	5%	9%