Appendix A Example of Filling Out a Profit Increase Diagnosis Sheet

Profit Increase Diagnosis Sheet					
Company / Factory Name	*ABC Corporation*				
Filled out by	*Kuniyoshi Takahashi*			Filled out on	*2003/07/10*
Tel	*+81-3-5498-7071*	FAX	*+81-3-5498-7072*	E-mail	*info@asprova.com*

■ Products to which you are planning to apply the system

Bolt

■ Process flow for the products

Item name	*Bolt*	*Cap*	*Bolt*
Item code	*A, B, C*	*X*	*AX, BX, CX*
Item type	*Intermediate item*	*Intermediate item*	*Finished item*
# of items	*3*	*1*	*3*
Monthly production	*50,000*	*50,000*	*50,000*
Process 1	*Cutting (CT)*	*Molding (PR)*	*Assembly (CK)*
Process 2	*Processing*	*Inspection2*	*Inspection3*
Process 3	*Inspection1*		*Packing*

*In the packing process, finished items are packed by 100 or 200 pieces depending on the type of packing.

■ Equipment, workers, and outsourcing for each process

Process name	Type of machine (number of the machine), Number of workers, Name of outsourced company	Shift
Cutting	*Cutter (CT1, CT2), Workers (CTS: 2), Outsourcing (Takahashi Mfg. Co.)*	*Day shift (S1) Outsourcing*
Processing	*NC machine (PR1, PR 2, PR 3), Workers (PRIN: 2)*	*Day shift (S1)*
Inspection1	*Inspection machine (CK1), Workers (CKR: 2)*	*Day shift (S1)*
Molding	*Molding machine (IJ1)*	*Day shift (S1)*
Inspection2	*Inspection machine (CK2), Workers (2)*	*Day shift (S1)*
Assembly	*Assembly machine (KD1), Workers (2)*	*Day shift (S1)*
Inspection3	*Inspection machine (CK3), Workers (2)*	*Day shift (S1)*
Packing	*Packing machine (PK1), Workers (2)*	*Day shift (S1)*

■ Shifts

Day shift (S1)	*8:00 - 12:00; 13:00 - 17:00*	*Every day*
Overtime work (S2)	*8:00 - 12:00; 13:00 - 20:00*	
Outsourcing	*All day*	

Process(es) considered to be a bottleneck	*Assembly process because it takes time.*

■ Order status and order processing method

Type of production	☐ Make-to-stock ☐ Make-to-order ■ Mixture of Make-to-stock and Make-to-order	
Sales orders	*5000* orders /month	Orders from customers counted by shipping.
Manufacturing orders	*1500* orders /month	Orders of finished items or intermediate items counted by production at the factory.
Purchase orders	*300* orders /month	Orders for placing orders to suppliers for materials.
Method of creating manufacturing orders for finished items (*Multiple answers allowed)	☐ Creating from sales forecast / demand forecast ☐ Creating from MPS (master production schedule) system output ■ Creating from unofficial information from customers ■ Creating from sales orders ☐ Creating manually on MS Excel or other tool ☐ Other _____.	
Method of creating manufacturing orders for intermediate items (parts) (*Multiple answers allowed)	☐ Creating manufacturing orders for intermediate items (parts) from MRP system output ☐ Creating manually on MS Excel or other tool ■ Other *Calculating by our own production management system.* .	
Method of creating purchase orders (*Multiple answers allowed)	☐ Creating from MRP system output ☐ Creating based on sales orders ☐ Creating based on (forecast) manufacturing orders ☐ Placing advance order for items with long-term due date ■ Creating manually on MS Excel or other tool ☐ Provided by customers ☐ Other _____.	
Rush orders	■Yes ☐No	
Trial product orders	■Yes ☐No	
Average delivery lead time	*7* days	If available, please attach data for each item.
Average production lead time	*5* days	If available, please attach data for each item.
On-time delivery rate # of orders base Quantity base Monetary base	 *73* % *80* % *80* %	Rate at which due dates were met. If available, please attach data for each item.

■ Inventory status

Finished item inventory	Turnover period *10* days, *15000* 00,000 yen
Intermediate item inventory	Turnover period *20* days, *12000* 00,000 yen
Purchased item inventory	Turnover period *40* days, *4400* 00,000 yen

■ Production scheduling method

Scheduling cycle	*1* time(s) *1* week(s)
Scheduling period	*1* week(s)
Scheduling method	*Backward*

■ Existing production management system

	System developer, package name	Date of introduction	Computers used	Person in charge	Future plans for system development
Master data management	*None*				*Want to systemize immediately.*
Order management	*Developed in-house*	*June 1995*	*Office computer R3000*	*Takanori Ogita*	
Rough scheduling	*None*				*Want to systemize immediately.*
Detailed scheduling	*None*				*Want to systemize immediately.*
MRP	*MRP-Pro (manufactured by US MRP-Pro)*	*June 1996*	*PC*	*Takanori Ogita*	★*The existing system is currently not in operation and want to introduce a new system.*
Work instructions	*None*				*Want to systemize immediately.*
Gathering of results	*None*				*Want to systemize immediately.*
Shop floor control	*None*				
Inventory management	*None*				
Shipping management	*None*				
Purchase management	*None*				

■ Method of managing master and other data

Location of master data	■ Host ☐ PC ☐ On paper ☐ Other_____.
Location of order data	■ Host ☐ PC ☐ On paper ☐ Other_____.
Method of distributing work instructions	■ Hand-written directives ☐ Computer-output directives ☐ Other_____.
Use of bar codes in work instructions	☐ Yes ■ No
Method of gathering results	■ Hand-written reports ☐ Manually entered into computer ☐ MES system ☐ Other_____.

■ Issues and their severity

Issue	Severity	Target value
Shorten lead times	High	
Reduce inventory	Medium	
Increase on-time delivery rate	Medium	

■ Please describe problems causing bottlenecks in production schedules.

1. *We cannot make an accurate judgment on whether we can meet a due date of an order received from a customer.*
2. *We want to reduce the production lead time by half.*
3. *We want to increase the on-time delivery rate to 100%.*
4. *We want to decrease the inventory of intermediate items.*

Appendix B Profit Increase Diagnosis Sheet

Profit Increase Diagnosis Sheet					
Company / Factory Name					
Filled out by				Filled out on	/ /
Tel		FAX		E-mail	

■ Products to which you are planning to apply the system

■ Process flow for the products

Item name			
Item code			
Item type			
# of items			
Monthly production			
Process 1			
Process 2			
Process 3			
Process 4			
Process 5			
Process 6			
Process 7			

* Please increase or decrease rows as necessary.

■ Equipment, workers, and outsourcing for each process

Process name	Type of machine (number of the machine), Number of workers, Name of outsourced company	Shift

* Please increase or decrease rows as necessary.

■ Shifts

Process(es) considered to be a bottleneck	

■ Order status and order processing method

Type of production	☐ Make-to-stock ☐ Make-to-order ☐ Mixture of Make-to-stock and Make-to-order	
Sales orders	orders /month	Orders from customers counted by shipping.
Manufacturing orders	orders /month	Orders of finished items or intermediate items counted by production at the factory.
Purchase orders	orders /month	Orders for placing orders to suppliers for materials.
Method of creating manufacturing orders for finished items (*Multiple answers allowed)	☐ Creating from sales forecast / demand forecast ☐ Creating from MPS (master production schedule) system output ☐ Creating from unofficial information from customers ☐ Creating from sales orders ☐ Creating manually on MS Excel or other tool ☐ Other _____.	
Method of creating manufacturing orders for intermediate items (parts) (*Multiple answers allowed)	☐ Creating manufacturing orders for intermediate items (parts) from MRP system output ☐ Creating manually on MS Excel or other tool Excel ☐ Other _____.	
Method of creating purchase orders (*Multiple answers allowed)	☐ Creating from MRP system output ☐ Creating based on sales orders ☐ Creating based on (forecast) manufacturing orders ☐ Placing advance order for items with long-term due date ☐ Creating manually on MS Excel or other tool Excel ☐ Provided by customers ☐ Other _____.	
Rush orders	☐Yes ☐No	
Trial product orders	☐Yes ☐No	
Average delivery lead time	days	If available, please attach data for each item.
On-time delivery rate # of orders base Quantity base Monetary base	% % %	Rate at which due dates were met. If available, please attach data for each item.

■ Inventory status

Finished item inventory	Turnover period	days,	00,000 yen
Intermediate item inventory	Turnover period	days,	00,000 yen
Purchased item inventory	Turnover period	days,	00,000 yen

■ Production scheduling method

Scheduling cycle	time(s) week(s)	
Scheduling period	week(s)	
Scheduling method	Forward / Backward / Mixture of forward and backward	
Average production lead time	days	If available, please attach data for each item.

■ Existing production management system

	System developer, package name	Date of introduction	Computers used	Person in charge	Future plans for system development
Master data management					
Order management					
Rough scheduling					
Detailed scheduling					
MRP					
Work instructions					
Gathering of results					
Shop floor control					
Inventory management					
Shipping management					
Purchase management					

■ Method of managing master and other data

Location of master data	☐ Host ☐ PC ☐ On paper ☐ Other_____.
Location of order data	☐ Host ☐ PC ☐ On paper ☐ Other_____.
Method of distributing work instructions	☐ Hand-written directives ☐ Computer-output directives ☐ Other_____.
Use of bar codes in work instructions	☐Yes ☐No
Method of gathering results	☐ Hand-written reports ☐ Manually entered into computer ☐ MES system ☐ Other_____.

■ Issues and their severity

Issue	Severity	Target value
Shorten lead times	Low/Medium/High	
Reduce inventory	Low/Medium/High	
Increase on-time delivery rate	Low/Medium/High	

■ Please describe problems causing bottlenecks in production schedules.
