

###[######>###

#####

Ref_Capacity#0#{#Revenue_Reporting_Delay#####Price###
#####SalesForce_Adjustment_Time###0#Revenue#####DesiredCapacity#
###Capacity_Acquisition_Delay# #DeliveryDelay#
#"#Capacity_Transient_1#>#L#Rate_Capacity_Transient_1#>#K*EffectOfExpansionPressure
OnDesiredCapacity#(#B#\$Time_For_Company_To_Perceive_Backlog#
#)##Capacity_Utilization#0#wShipment_Rate#0#x!
ChangeInBacklogPerceivedByCompany#-#H#BacklogPerceivedByCompany#-
#D#PressureToExpandCapacityRatio#

#7#Company_Goal_For_Backlog#

#8##Const_SalesEffectivness#0#u#####slope_table_fn_1###0#Rate_Capacity_Transient_2#
B#Q#Capacity_transient_2#B#R
Rate_Capacity#B#S#Capacity#B#TVSWC###" '# #####' '# #####'###' '# #####' '# #VFTP###"###
#####VTYP###"#####VUNT###0#P
eople

People/Month#People#\$/Month#\$/Month/PeopleDimensionless#\$/Month
\$/Month/Month#Unit#Units/Month##Month#\$/Unit##\$/Month#Units/Month#Month#Month####Mo
nth####Dimensionless#Month#####NUM #####N@#####?#####@#@#0000000?
#####SA#####i@#####?#####@#@#####@#####00@#####2@#####2@000MbP?
#####@#@#####@#####?#####@#####?#####?#####i@#####?
#####i@#####@#0000000?#####@#####@#@#####@#####@#@DEF ###?##
#####\$#####\$#####?#\$#####?#####

#\$#####\$#####0#####\$#####\$#####0# ##0#####
#####\$#####\$#####0\$#

###0##### ##### ##### ##\$0###0\$#####0###
#####

#####

#\$#*###\$#####0#####\$#9###\$#####\$%###00#####
##0###

\$*###"##### \$#####\$#####\$# ##
#####\$5##\$-### #5###%##### #'#####)#####
##\$9###\$)#####\$ ##\$,###\$'#####+##### ##\$,#####
##\$,###\$.###-#####.#####0#####5#####\$##\$7###\$#
##6#####7#####\$7###\$9###\$ ## ##8#####
#####9###FDEF###\$#####\$#####

###\$#

###0#\$#*###0###

#####\$#\$###0#####\$#+###0###, #####\$#6###0###7#####\$#8###0###9###VDIM####VDP1
###\

####f#####2j###0B#####:0*#0#0f.##&0*##0#0#~#060V###0&0f#0#02&##020:####0^0#0#
##0f0#0^#CSEQ####"#####

#)9*## 0
#,. -5%# "#\$'+768#VOFS###"#####
#

#!#SIZE#####"FORM###SCTXSCNT#####FORM###XSCE
TIMS###)#####Y@#####?{#Gz?{#Gz?##RSLT#####SCL
###0#####@#@#####@#####N@#####Y@#####8#@#####
#####.A####WA#####@#####@#####Mb#X?B`"??
#####A#####j#####LA #####j@
#####L@###{#####~@#####@

#####00n#00#@>
γρ=#@#####V0@#####00@###0###R0#0001@0G0z#.2@#####v00A##
#####p0@ # # ###R0#0001@q=
02γ@"# #""###0000000?gffffff0?##>#L#####00@\$#>#K#####>@#####00@
%#(#B#####6@!# #)###00n#00#@>
γρ=#@)#0#w###0G0z#00?)\000(0?*0#x#####X0@+#-#H#####Y0#####P0@,#-
#D#####00@-#

#7#####0[@.#

#8#####h@#####@i@0#u###Gz#@R#Q#@5######Mb#X?B`"??
6#B#Q#####
@7#B#R#####@8#B#S#####z@9#B#T#####X@FORM###R
CDTRCE ########c##9 Sales Force
Sector#####"Arial#####)##v#o###o#####
#####S%RCE ########c##9 Perceived
Backlog#####"Arial#####)##v#o###o#####
#####S%RCE ###o#####c##

Sales Growth[#####"Arial#####)#{#|#, #'
C#####S%#RCE ###e#####c###R1#

#####"Arial#####,(##)##N#<1'
C#####S%#RCE ###w### ##c##Capacity
Acquisition#####"Arial#####(##)##v##o########
#####S%#RCE ###p###
##c##Capacity Goal[#####"Arial#####(##)##{#|#,#'
C#####S%#RCE ###e#####c##R##

#####"Arial#####,#)#)#N#<1'
C#####S%#FORM###RIDTRIE ###
#####R5RIE ###
#####R5RIE ###
#####R5RIE ###
#####R5RIE ###
#####R5RIE ###

##R5RIE ###
#####R5FORM## WSEDFORM## DGEDFORM###DGCPVWRD###+##

#####z##*@UVf0#mosw#T0#0#0#90Z0#0#0<0=#SDEF###V###60###(0###-0###)/0##0###/
0##0###*0###*1###8000###0.2 ##5000100###(0###-0###)/0

###200###1*00##*0####500###3###10000###18#0*##*0#

09##+0###*0%
##18+0.001#0 ##/0*###500###(0###-0###)/(0 ##/3)#05##*0-##+(1-
05##)###3###1###1*09##*0)###(0
##-0,##)/0'###200###1*0,##/0.###200###7.5###0.2###(0###-07##)/(0
##/3)###500###(07##-09##)/(0 ##/3)###500SDIM####SIDX####SDOC###02The firm's sales
force is increased by net hiring.0Net hiring is modeled as a first-order
adjustment to the target sales force. The sales force adjustment time represents
the average time required to alter the sales force, including hiring and training
delays.0The target sales force is determined by the sales organization's budget
and the cost per sales representative, including all overhead, benefits, and other
administrative costs.9The sales organization gets a fraction of recent
revenue.]Cost_Per_Sales_Representative
The fully loaded cost per sales representative is
\$8000/month.nFraction_Revenue_To_Sales
Twenty percent of the organization's budget is allocated to the sales
organization.7Recent revenue represents the firm's budgeting process.0Recent
revenue adjusts via first-order smoothing to actual revenue. The reporting delay
includes the time required for reporting and budget decision-making.#The backlog of
unfilled orders.0LOrders are determined by the sales force and sales force
effetiveness when the Switch for Endogenous Orders = 1. Setting the switch to 0
cuts the sales growth feedback for partial model testing
purposes.#VRevenue_Reporting_Delay
A one quarter-year delay is assumed in the budgeting process.(Average product
price, assumed constant.#.Revenue is recognized when product is shipped.0#Desired
capacity is anchored on current capacity, then adjusted up or down based on the
pressure for expansion the firm recognizes.pCapacity_Acquisition_Delay
The average time required to alter capacity. Symmetric for increases and
decreases.0#Delivery delay is the ratio of backlog to shipments. For model testing
purposes, delivery delay can be set to an exogenous
value.##jGRAPH(PressureToExpandCapacityRatio,0,0.5,
[0.3,0.75,1,1.2,1.4,1.6,1.8,2,2.1,2.17,2.2"Min:0;Max:2.2;Zoom"])-Time_For_Company_T
o_Perceive_Delivery_Delay
The average delay for the company to perceive the delivery delay for the
product.####0aPressure to expand capacity arises when the perceived delivery delay
is greater than the firm's goal for delivery delay. The Switch for Endogenous
Pressure allows expansion pressure to be made exogenous for testing
purposes.rCompany_Goal_For_Delivery_Delay
The average delay for the company to perceive the delivery delay for the
product.#####FLID#####DLDP###"#####FLST#####
#####ddddddd##dd#####FDEF###n###0T#####00#####
#00###
######0\$###+##00w##,
+#####\$#00w###\$#####6#00w##76#####8#00w##98#####FSTR#####FORM###0DGMD
CVT #####0`0`DFN #####G###(###
MCL1#####EAU #####GSU #####GRD #####FORM###,DGPRPTZ
#####0#05#DNM ###]X##'#winspool##QMS DeskLaser
1600P##LPT1:#####MDE ####0TMDN
####QMS DeskLaser 1600P#MSV ####0
MDV ####0#MFI #####s#MOR #####MPS #### #MPL #####MPW #####MSC #####MCP
#####MDS #####MPQ #####0XMCO #####MDX #####MYR #####0XMTT #####MDD
###0##A4#####

#0000#####00000000#####00#####00#####00#####00000000000000000000##00000000
0#####' #' #'###'#####13MD##0#p###PGZ #####0#0#0#0#0d0d#####FORM###rDGSTLHD
#####F#LHD #####,<#LHD ####)0P2##LHD #### #(#LHD #####LHD #####LHD
#####0&
##LHD ####:###LEV #####0-#####0!0####00□I
000000□□□#CLD ####
#####0P0 00□

#FLW ###!# ##&###0_0#0#0##0000□□####
+000000□□□#AUX #####□

#000□#AUX ####0#0#####07□####

0]####-)0000 0#AUX ####@#####0z0%####/-0000 0#CON #####z#####0#0
#####00,0000 0#CON ####w9#####0I0.####0 0.000000#LEV
####[0#####0#0#####000B#00000000 0#ILK ###\$0#B#####0X0^0i0i0v0k0
0i0000 0#@000FLW ###\$0P0###&####0.0#0#0##0000 0#####0P#0000AUX ####
0#####0e0#####E00000000 0LEV #####0E0=#####0 0 ## 0000 0##0 0dNOS ####FLW
###\$r0)##&###0#0
0#0|#0000 0#00##0)#000AUX #####m#####0 0C##
#0\0000000000CLD #####
#####0#0\$#000#FLW #####0)###&####0#0#0#0##0000 0#00####0000#ILK
###",0[#####0X0#0#0M0)0H0S0q#000zU00000CON #####s

#####&E##

#00 00000 #ILK ###\$0B0;#####0#050*010 0b0A0h0#000=U0 000CON ####

w#####NØX####00□#0000 □#NOS ####AUX ####U#####0"0W##*#C_0 □a#NOS ####NOS ####NOS
####NOS ####NOS ####NOS ####NOS ####NOS ####ILK ####0E#####0#0#0t0S0P0H0?
0*0000 □##0□0□#ILK ###!B#####0#0N0#060#080+0' (0 □

#000#CON ####9@#####0U0m####0 +0000 #ILK ##"0\#####0]0u0#0#00
%0F0")00*#000#ILK #####0"0#0-0z0.0h0#0b000#

000#ILK ###!_I#####000#0^0#0S000#0f,0 □

000#ILK \$\$\$SE\#####0?040)0B0#080#0.0000 0#0000ILK ###!
+_#####0z0u0e0g0c0N0r03.00#000#ILK #### `(#####0#0I0#0R0g0C0f0'0000 0##0000#NOS
####NOS ####NOS ####NOS ####ILK ####%0@Y#####0r0#0Q0j0'0#0#0 00000#T0000#NOS
####NOS ####NOS ####CON #####*#####0j0###000000#0\00#0 0RPT #####Z#####0#####

90M0_#NOS ####NOS ####NOS ####NOS ####NOS ####NOS ####AUX ####*#####0#0h####_E0000□□#NOS
####ILK #####)#####0#00 0#0<0!0U0#0/#000□#ILK \$\$\$\□ #####0g0Q0R0T0G0R020U0
0000E#0□0□NOS ####ILK ###!(.#####0#0W□ 0#0|0#0s0#B00□@#00□□#NOS ####NOS
####NOS ####ILK ###!-\#####0!0#0 0D0e0|0#0N00□(##00□□#NOS ####NOS ####NOS ####NOS
####NOS ####NOS ####NOS ####NOS ####NOS ####NOS ####NOS ####AUX
####0#s#####0{0+##+0#0/0000000 □AUX ####o#####0E0x#####v00□0 □#CON ####d[#####□
05## #0000B0000 □NOS ####NOS ####ILK ####\$50D#####0|0D□
0p0#0#0J0#0#00□[0#000□RPT #####0#:#####0#####0-0M□:#LEV
####V#####0x07##,00□Y00000□0#0 □#ILK \$\$\$SIC#####0K000#0Q0#0x0t0>0000 □0#0□□□□NOS
####NOS ####ILK ###!/-#####0#0L0#080I0C0!0^#00□#@00□□#ILK
###"080#####0r0#0^0p060m0#0sj00□af000□AUX ####f0#####0y0%##*#0 □`#00□NOS ####NOS
####LEV ####0ZV#####0+0V## 0000/0000 □#0 □NOS ####AUX #####0#a

###0#0v##"#`0000000 FLW ###09r##&###0s0D0#0D#000 m###r0#000#NOS ###NOS
###ILK ###%0[0/#####0%0I0#0#0>0s0p0u0000 df000#NOS ###ILK ###"
v#####0#0'0#0#0#0]0*0Xu000Vm0000AUX #####0E#####0:0U##\$gv00000000000NOS ###AUX
###0<U#####0q0N##%00(0[0#0000 NOS #####NOS ###CLD ####g#####0d0B0 g#CON
###T#####0E0###'000080000 NOS ###ILK ###&0;0#####0#000
0m0X0w0E0a0000000#m0000ILK ###"l0@#####050z0#0#0W0#0B0c10 Um0000CON
#####0S0###)0000 0000 NOS #####NOS ###CON #####0#####0Q00{#####0 #000000NOS
#####NOS ###NOS #####NOS ###LEV #####0#####0#0B###00000Cg0000000000NOS
#####NOS ###NOS #####NOS ###RPT #####0#Z#####0#####0#0k0d0 RPT
#####0#0#####0#####0#0R0A0#NOS #####NOS ###ILK ###CL#####0G0'070-
0*060&0G0000 w#000#NOS #####NOS #####NOS #####NOS #####NOS #####RPT #####
%0#####0#### "0t010#NOS #####NOS #####NOS #####NOS #####NOS #####NOS #####FLW ###
%#01##&###0#0#0p0##0000 T0##010#0#0#ILK ###\$u0#####0a0M0 0J0#0
0S0#0000 oU000#NOS ###LEV #####aT#####0#0###,0 50#000000[#AUX
#####0<#####080T##60:0C0000000 AUX #####f#####0X0'##-#Y\000000#CON
#####z0Z#####040####.#0000#0000 #LEV #####0#####0#0@##700#0D0:000000000#ILK
###&0#####0)0#0#0#0}0#0f0#000000#0#0#0000NOS #####NOS #####NOS #####NOS #####NOS
#####NOS ###RPT #####0&0#####0####
0a0S0,0y#RPT #####0%#####0#####0k090#0VNOS #####NOS ###CLD #####0#000000##NOS
#####NOS ###NOS #####NOS #####NOS ###ILK ###!j08#####0*0c0)0}0P0#010&08jdT000#NOS
#####CLD #####0#0?#####0x0#000#NOS #####NOS #####NOS #####NOS #####NOS #####NOS ###ILK
###"0/`#####0B0{040H0X070100500#sT000#CLD #####0:g#####0b0A0000:#FLW
###&0>09##&###0q0C0#0C#000000#0#####090#0000ILK ###
%#u#####0#0M0#0l0U0u0C0`000000#0#0#0#0#AUX #####0#o#####050J##80?0D0000000000LEV
#####0#06##900#0?000000#0ECLD #####0?0:#####0_070 00?FLW
###&010>##&###0n090}09#000000#0<###0>0=0#0#ILK ###%v5#####0#0@0q0q0p#0?
0V000000#0=0<0#0#ILK ###"0C0B#####0#0,#0(0[0q0)0Y0;lV0#0#0#ILK ###!0A#####0#0-
#07&0h0%M0@0AV0<000#ILK ###\$0D0A#####0#0;0A0!0#0
000b0Au0#0#000#ILK ###\$Y0C#####0#030t0#00#0.0X0B0;0#0<0000LEV
#####m#####0x00##900#C000000#0-000#NOS #####NOS #####NOS #####NOS #####NOS #####NOS
#####NOS ###NOS #####NOS #####NOS ###CLD #####0=0#00#NOS #####NOS #####NOS
#####NOS ###NOS #####NOS #####NOS #####NOS #####NOS #####NOS #####CON
#####0#d#####0T0'##50080000[0000 #ILK ###"j#####0K0.0.0C0#0H0#0L\00#0Zo000ILK
###!.+#####0[0#0E0#030#0'05I00#9#000#0#FORM###0WSWLRES #####0 0 WMX #####FORM###0WLE
SCI #####WPL1#####0b0b#0V#FORM###0DGWDVWT #####SHC1###

#####EQV ###

#####SHG #####AUR #####WCL #####ZOM1###
#####b@SCR #####\0STY #####ICO #####CAP

#####