

INDUSTRY COST BENEFIT MODEL

Objective:

To quantify the magnitude of cost savings and other efficiencies that will result from 100% Electronic Ticketing (ET) on the Business Processes and Cost-Drivers that are affected by ET.

A separate tool, the "Airline Cost Benefit Model" is provided by IATA to assist individual Airlines in quantifying for their own airline:

- The cost savings and increased efficiency through implementing ET
- The cost impacts of not implementing ET by 2007
- The investment and operating costs for ET
- The net benefit and Return on Investment to the airline from 100% ET.

Glossary: Magnitude of Savings:

1. **Cost Eliminated** = Radical Change - the whole current process and cost-driver is eliminated leading to a close to **100% saving** of the cost incurred in performing that process/function.
2. **Dramatically Reduced** = Fundamental Change – a very large part of the current process is transformed leading to a **60%-80% saving** in the cost incurred in meeting the business need.
3. **Substantially Reduced** = Major Change - a very large part of the current process is transformed, but considerable parts of the infrastructure will need to be maintained to support associated processes, leading to a **30%-60% saving** in the cost incurred in meeting the business need.
4. **Materially Reduced** = Significant Change – a significant part of the current process is transformed or opportunity created to drive more efficient practices, leading to a **10%-30% saving** in the cost incurred in meeting the business need.

The level of potential cost reduction for each business driver has been indicated in the Model in relation to Cost of input goods and services, Cost of systems and hardware including maintenance, as well as Full Time Equivalent (**FTE**) resources. ET implementation provides management the opportunity to deploy the expert FTE resources in other value-added-activities to drive even higher payback.

INDUSTRY COST BENEFIT MODEL

Distribution – Reservation, Ticketing & Delivery

Driver	Direct Sales	Agent Sales	Impact of 100% Electronic Ticketing
1. Ticket Printing Costs: <ul style="list-style-type: none"> a. STD Printing b. STD Wallets c. STD Printers – depreciation, maintenance & cost of capital 	X X X	X X X	Cost Eliminated Cost Eliminated Cost Eliminated
2. Ticket Distribution and Fulfillment Costs: <ul style="list-style-type: none"> a. BSP and ARC b. Safe Custody and secure transport c. Envelopes d. Postage & courier e. Real estate: Ticket Offices, Call Centres & Airport Counters 	X X X X	X X X X	Cost Eliminated Cost Eliminated Cost Eliminated Cost Eliminated Dramatically Reduced
3. Manpower [in full-time equivalent (<i>FTE</i>) staff and the fully allocated cost of those FTEs]: <ul style="list-style-type: none"> a. Managing safe custody and security of paper tickets/STDs b. Issuance of STDs c. Lost tickets d. Exchanges and other post-fulfillment services 	X X X X	X X X X	Cost Eliminated Dramatically Reduced Cost Eliminated Substantially Reduced
4. Other Distribution costs: <ul style="list-style-type: none"> a. Conversion to Direct Web-sales b. Interline Sales Data purchasing from GDSs 	X	X X	<u>Enabler for:</u> Material Cost Reduction + Cashflow Gain Cost Eliminated

INDUSTRY COST BENEFIT MODEL

Ground Handling – Check-in, Boarding & Airport Services

Driver	Impact of 100% Electronic Ticketing
<p>5. Greater use of Self-Service Check-in:</p> <ul style="list-style-type: none"> a. Check-in Counters/Real Estate at Airports b. Boarding Card Printers – depreciation, maintenance and cost of capital 	<p><u>Enabler for:</u></p> <p>Substantially Reduced</p> <p>Substantially Reduced</p> <p><i>Drives higher adoption of Self-Service or Remote Check-in, saving Counters, Equipment & FTEs and improving customer service</i></p>
<p>6. Customer Service:</p> <ul style="list-style-type: none"> a. No "Ticket on Departure" b. Standard, electronic record of ticket c. Electronic Interline endorsement d. Voluntary and Involuntary Re-routing e. Ticketing and Customer Service counters/Real Estate at Airports 	<p>ET dramatically improves the efficiency of each of these drivers and business processes, to deliver or support:</p> <ul style="list-style-type: none"> ▪ Faster customer processing ▪ Higher customer empowerment and satisfaction ▪ On-time flight departure ▪ Higher overall fleet utilization
<p>7. Manpower [in full-time equivalent (FTE) staff and the fully allocated cost of those FTEs]:</p> <ul style="list-style-type: none"> a. Managing Check-in b. Managing Ticketing and Customer service counters c. Managing Post-flight reconciliation and Ticket coupon sorting 	<p>Substantially Reduced</p> <p>Dramatically Reduced</p> <p>Cost Eliminated</p>

INDUSTRY COST BENEFIT MODEL

Revenue Accounting - General

Driver	Impact of 100% Electronic Ticketing
8. Faster more accurate sales data	Improved ability to manage the business
9. Handling of paper-based Lift coupons - Receipt, Sorting and Distribution <ul style="list-style-type: none"> a. Space/Real Estate b. Mailing 	Cost Eliminated Cost Eliminated
10. Scanning and Data capture of Lift coupons <ul style="list-style-type: none"> a. Scanning and data capture space/real estate b. Scanning and data capture equipment – depreciation, maintenance and cost of capital 	Cost Eliminated Cost Eliminated
11. Lift coupon Storage and retrieval: <ul style="list-style-type: none"> a. Storage real estate and facilities b. Retrieval systems and facilities - depreciation, maintenance and cost of capital 	Cost Eliminated Cost Eliminated
12. Manpower [in full-time equivalent (FTE) staff and the fully allocated cost of those FTEs]: <ul style="list-style-type: none"> a. Sorting, Handling, storage and retrieval of paper-based Lift coupons b. Scanning and data capture of Lift coupons 	Cost Eliminated Cost Eliminated
13. Accurate, timely segment revenue reporting	Improved ability to manage the business, inventory and pricing

INDUSTRY COST BENEFIT MODEL

Revenue Accounting - Interline Billing

Driver	Impact of 100% Electronic Ticketing
14. Faster more accurate interline Lift data	Faster outwards billing and improved cashflow
15. Handling and mailing of paper-based interline Lift coupons <ul style="list-style-type: none"> a. Outwards billing b. Inwards billing 	Cost Eliminated Cost Eliminated
16. Seamless integration with industry systems for interline billing and settlement	Improved certainty of settlement and reduction in 'correspondence' through upfront transmission of Settlement Authorisation Codes (SAC)
17. Manpower ([in full-time equivalent (<i>FTE</i>) staff and the fully allocated cost of those FTEs]: <ul style="list-style-type: none"> a. Preparing and dispatching pax interline invoices and supporting data b. Auditing pax interline inwards billings c. Managing Rejections and disputed pax interline billings. 	Dramatic Reduction due to elimination of need for supporting Lift coupons. Substantial Reduction through upfront transmission & receipt of Settlement Authorisation Codes (SAC) Substantial Reduction through upfront transmission & receipt of Settlement Authorisation Codes (SAC)

INDUSTRY COST BENEFIT MODEL

Revenue Protection

Driver	Impact of 100% Electronic Ticketing
18.Reduction of Paper-Ticket Fraud: <ul style="list-style-type: none">a. Utilization of Lost & Stolen ticketsb. Utilization of Counterfeit ticketsc. 'Out of Sequence' coupon usaged. Tariff & Booking Class abusee. Revalidation Sticker abusef. AIRINC blacklist usage and subscription	Loss of Revenue Eliminated Loss of Revenue Eliminated Loss of Revenue Eliminated Loss of Revenue Substantially Reduced Loss of Revenue Eliminated Cost Eliminated <i>BUT....continued need for vigilance against potential of electronic fraud.</i>

AIRLINE COST BENEFIT MODEL

Objective:

To provide a tool for Airlines to quantify the cost savings and other efficiencies for their company that will result from full implementation of Interline-capable Electronic Ticketing.

Full savings in case of certain drivers and business processes will be achieved by the Airline upon adoption of ET by all of its interline partners.

Glossary: Magnitude of Savings:

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2. **Dramatically Reduced** = Fundamental Change – a very large part of the current process is transformed leading to a **60%-80% saving** in the cost incurred in meeting the business need.
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4. **Materially Reduced** = Significant Change – a significant part of the current process is transformed or opportunity created to drive more efficient practices, leading to a **10%-30% saving** in the cost incurred in meeting the business need.

AIRLINE COST BENEFIT MODEL

Section A: Cost Reduction Impacts

Distribution – Reservation, Ticketing & Delivery

Driver	Direct Sales	Agent Sales	Impact of 100% Electronic Ticketing	Value for Your Airline in USD
1. Ticket Printing Costs: a. STD Printing b. STD Wallets c. STD Printers – depreciation, maintenance & cost of capital	X X X	X X X	Cost Eliminated Cost Eliminated Cost Eliminated	
2. Ticket Distribution and Fulfillment Costs: a. BSP and ARC b. Safe Custody and secure transport c. Envelopes d. Postage & courier e. Real estate: Ticket Offices, Call Centres & Airport Counters	X X X X X	X X X X X	Cost Eliminated Cost Eliminated Cost Eliminated Cost Eliminated Dramatically Reduced	
3. Manpower [in full-time equivalent (<i>FTE</i>) staff and the fully allocated cost of those FTEs]: a. Managing safe custody and security of paper tickets/STDs b. Issuance of STDs c. Lost tickets d. Exchanges and other post-fulfillment svcs.	X X X X	X X X X	Cost Eliminated Dramatically Reduced Cost Eliminated Substantially Reduced	
4. Other Distribution costs: a. Conversion to Direct, Web-sales b. Interline Sales Data purchasing from GDSs	X X	X X	<u>Enabler for:</u> Material Cost Reduction & Cashflow Gain Cost Eliminated	

AIRLINE COST BENEFIT MODEL

Section A: Cost Reduction Impacts

Ground Handling – Check-in, Boarding & Airport Services

Driver	Impact of 100% Electronic Ticketing	Value for Your Airline in USD
5. Greater use of Self-Service Check-in: <ul style="list-style-type: none"> a. Check-in Counters/Real Estate at Airports b. Boarding Card Printers – depreciation, maintenance and cost of capital 	<u>Enabler for:</u> Substantially Reduced Substantially Reduced <i>Drives higher adoption of Self-Service or Remote Check-in, saving Counters, Equipment & FTEs and improving customer service</i>	
6. Customer Service: <ul style="list-style-type: none"> a. No "Ticket on Departure" b. Standard, electronic record of ticket c. Electronic Interline endorsement d. Voluntary and Involuntary Re-routing g. Ticketing and Customer Service counters/Real Estate at Airports 	<u>Enabler for:</u> Faster customer processing Higher customer empowerment and satisfaction On-time flight departure Higher overall fleet utilization	
7. Manpower [in full-time equivalent (<i>FTE</i>) staff and the fully allocated cost of those FTEs]: <ul style="list-style-type: none"> a. Managing Check-in b. Managing Ticketing and Customer service counters c. Managing Post-flight reconciliation and ticket coupon sorting 	Substantially Reduced Dramatically Reduced Cost Eliminated	

AIRLINE COST BENEFIT MODEL

Section A: Cost Reduction Impacts

Revenue Accounting - General

Driver	Impact of 100%, interline-capable Electronic Ticketing	Value for Your Airline in USD
8. Faster more accurate sales data	Improved ability to manage the business	
19. Handling of paper-based Lift coupons- Receipt, Sorting and Distribution <ul style="list-style-type: none"> a. Space/Real Estate a. Mailing 	Cost Eliminated Cost Eliminated	
9. Scanning and Data capture of Lift coupons <ul style="list-style-type: none"> a. Scanning and data capture space/real estate b. Scanning and data capture equipment – depreciation, maintenance and cost of capital 	Cost Eliminated Cost Eliminated	
10. Lift coupon Storage and retrieval: <ul style="list-style-type: none"> a. Storage real estate and facilities b. Retrieval systems and facilities - depreciation, maintenance and cost of capital 	Cost Eliminated Cost Eliminated	
11. Manpower [in full-time equivalent (<i>FTE</i>) staff and the fully allocated cost of those FTEs]: <ul style="list-style-type: none"> a. Handling, storage and retrieval of paper-based Lift coupons b. Scanning and data capture of Lift coupons 	Cost Eliminated Cost Eliminated	
12. Accurate, timely segment revenue reporting	Improved ability to manage the business, inventory and pricing	

AIRLINE COST BENEFIT MODEL

Section A: Cost Reduction Impacts

Revenue Accounting - Interline Billing

Driver	Impact of 100%, interline-capable Electronic Ticketing	Value for Your Airline in USD
13. Faster more accurate interline Lift data	Faster outwards billing and improved cashflow	
14. Handling and mailing of paper-based interline Lift coupons <ul style="list-style-type: none"> a. Outwards billing b. Inwards billing 	Cost Eliminated Cost Eliminated	
15. Seamless integration with industry systems for interline billing and settlement	Improved certainty of settlement and reduction in 'correspondence' through upfront transmission of Settlement Authorisation Codes (SAC)	
16. Manpower ([in full-time equivalent (<i>FTE</i>) staff and the fully allocated cost of those FTEs]: <ul style="list-style-type: none"> a. Preparing and dispatching pax interline invoices and supporting data b. Auditing pax interline inwards billings c. Managing Rejections and disputed pax interline billings. 	Dramatic Reduction: elimination of paper Lift coupons. Substantial Reduction through upfront transmission & receipt of Settlement Authorisation Codes (SAC)	

AIRLINE COST BENEFIT MODEL

Section A: Cost Reduction Impacts

Revenue Protection

Driver	Impact of 100%, interline-capable Electronic Ticketing	Value for Your Airline in USD
17.Reduction of Paper-Ticket Fraud: <ul style="list-style-type: none"> a. Utilization of Lost & Stolen tickets b. Utilization of Counterfeit tickets c. 'Out of Sequence' coupon usage d. Tariff & Booking Class abuse e. Revalidation Sticker abuse f. AIRINC blacklist usage and subscription 	Loss Eliminated Loss Eliminated Loss Eliminated Substantially Reduced Loss Eliminated Cost Eliminated <i>BUT....continued need for vigilance against potential of electronic fraud.</i>	
Total Cost Reduction Impacts		XXX,XXX

AIRLINE COST BENEFIT MODEL

Section B: Business Protection Impacts

1- Impact of loss of Interline Capability on your Airline:

Loss of Revenue due to inability to pick-up other airlines' interline passengers
= Your Airline's total Pax Interline claims against other Airlines (**A**)

plus

Revenue at Risk from your passengers that require interline capabilities =
Value of Interlineable Tickets you issued during the year (**B**)

<i>In USD</i>	<u>2002</u>	<u>2003</u>	Average Annual
A. Your Airline's total Pax Interline claims against other Airlines			
B. Value of Interlineable Tickets you issued during the year			
Revenue at Risk Impact			YYY,YYY

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Section B: Business Protection Impacts

2- Impact of escalating Paper-Ticket Costs on your Airline

- i. Carriers representing the vast majority of passenger transactions have either implemented ET or have planned ET implementation.
- ii. As the proportion of Paper Tickets reduces, their procurement, storage & distribution and their handling cost will increase substantially.
- iii. The estimated cost increase of Paper Tickets reported through the IATA BSPs, once the market has reached 90% ET adoption, is shown below:

In USD

Region	Cost Increase per Ticket	Total No. of Tickets for your Airline through the BSP	Total Cost Increase for your Airline
Africa			
Asia Pacific			
Europe			
Latin America			
Middle East			
North Asia			
North America			
Total Ticket Cost Impact			<hr/> XXX,XXX <hr/>

AIRLINE COST BENEFIT MODEL

Section C: Cost-Benefits Summary and RoI Analysis (in USD)

Operating Costs & Savings

		<u>RoI Through ET Implementation</u>	<u>Cost of Not Implementing ET</u>
Section A:	Total Cost Reduction Impact	XXXXX	
Section B:	Total Business Protection Impact		
	1- Impact of loss of Interline Capability on your Airline		YYYYYY
	2- Impact of escalating Paper-Ticket Costs		<u>NNNNNN</u>
Less:	Operating Cost of ET System	(MMMMM)	
	Annual Net Impact	GGGGG	HHHHH

Investments

ET Implementation Team		AAAA	
ET System Cost	- Basic ET Server	BBBBB	
	- Optional Robotic Ticket Tool	CCCCC	
Cost of Interfaces with:			
▪	GDS/Reservation System	DDDD	
▪	Interline ET Hubs	EEEE	
▪	Departure Control Systems	FFFF	
▪	Revenue Accounting System	<u>KKKKK</u>	

Total Investment **FFFFF**

Return on Investment over 5 Years **PPP %**