
Software Analysis and Design (CT203) - Lakeland Airways

Client: Lakeland Airways

Team: Group 26 - Convolo

Members: IRWIN, robert (bob_irwin84@hotmail.com)
LUTHER, dominic (d.luther@student.umist.ac.uk)
MALLITT, chris (chris@mallitt.co.uk)
FITZSIMMONS, Thomas (t.fitzsimmons@student.umist.ac.uk)
HAYTON, robert (n@major-n.com)
LEES, james (james@pkl.net)

Organisational Units

Customer Services

Customer services attends the needs of the customers. It offers them information, advice and help with any enquires they may have. Their primary goal is to make sure every customer is happy with the service the airline provides.

Stakeholders

Customer Services Manager
Customers

Flight Department

The flight department deals with flight, the personnel on the flights and the passengers and cargo that they carry. Their primary goal is to always achieve successful flights, with the most efficient use of space, fuel and staff.

Stakeholders

Announcements Desk
Catering Section
Chief Cabin Services Director
Chief Pilot
Chief Station Controller
Dispatch Controller
Gate Controller
Transfer Desk

Marketing

Marketing deals with the promotion of the airline. Its primary goal is to increase the popularity and usage of the airline.

Stakeholders

Marketing Manager

Planning

The Planning Department develops long-term plans for the airlines operation. They decide which new services to offer, which to extend and which to remove. Their primary goal is to accurately predict future demand for services and develop plans which ful

Stakeholders

Planning Manager

Sales

The sales department manages the sale and distribution of tickets. Its primary goal is to offer an efficient, reliable service and easy to use service.

Stakeholders

Internal Auditor
Sales Manager
Ticket agents
Ticket Agents Manager

The Executive

The executive, i.e. the directors manage the operation, promotion and development of the airline. There goal is to create a expanding, profitable and sound organization.

Stakeholders

Systems Manager

Stakeholders

Announcements Desk

Organisational unit: Flight Department

These people are responsible for announcing any flight details as well as making calls for individual passengers who need to board a particular flight.

Problems

No problems recorded

Catering Section

Organisational unit: Flight Department

Need to know number of meals needed per flight and special customer needs. Predicted passenger information must be made available to them 24 hours before the flight and a final check must be made 2 hours before the flight to cater for last minute changes.

Problems

Customers Special Requirements (in scope)

Chief Cabin Services Director

Organisational unit: Flight Department

The Chief Cabin Services Director is responsible for all of the cabin crew on all flights. The main aspects the cabin crew must attend to are:

* Assisting the captain in flight safety. To do this they demonstrate the planes safety equipment to passengers

Problems

No problems recorded

Chief Pilot

Organisational unit: Flight Department

Person in sole charge of the flight. Has final decision over whether the plane takes off, lands divers to another airport and decides on the flight path and routing etc.

Needs to know information such as number of passengers, weather conditions, possi

Problems

Passengers do not arrive after final call (in scope)

Chief Station Controller

Organisational unit: Flight Department

The Chief Station Controller is mainly concerned with ensuring everyone boards the plane on time. The Chief Station Controller decides at which point the check-in should be opened and closed.

The Chief Station Controller must handle Overbookings and ha

Problems

People being removed from flights after overbooking (in scope)

Customer Services Manager

Organisational unit: Customer Services

Manager responsible for ensuring operations at the airport runs as planned. Duties include :

- * Checking passengers have confirmed reservations
- * Assigning seats to passengers
- * Changing seat allocations
- * Recording premier miles or premier points
- * R

Problems

Customers Special Requirements (in scope)

Passenger arrives without having confirmed reservations (out of scope)

Passengers do not arrive after final call (in scope)

Customers

Organisational unit: Customer Services

Customers are the end users of the airline, they are vital to the business obviously as without customers there is no point in having a business.

However, customers have absolutely no actual interaction with the system except in a third party way i.e.

Problems

No problems recorded

Dispatch Controller

Organisational unit: Flight Department

The Dispatch Controller is responsible for ensuring that a flight gets off the ground. They collate various amounts of data and pass it onto other people and ensure everything for a flight is done before it leaves.

Problems

No problems recorded

Gate Controller

Organisational unit: Flight Department

The aim of the Gate Controller is to ensure that no unauthorized passengers or staff board an aircraft. All authorized staff will carry an identity card and passengers will have an appropriate boarding card.

Problems

No problems recorded

Internal Auditor

Organisational unit: Sales

This person looks through all of the transactions that the airline carries out.

Problems

No problems recorded

Marketing Manager

Organisational unit: Marketing

The general role of the Marketing manager is to develop the airline's schedule for the new season, set fares and promote the airline. To do this the marketing manager believes they need more information on passenger movements and loadings on flights. This

Problems

No problems recorded

Planning Manager

Organisational unit: Planning

Decides how many seats to make available on a flight, at what price and also the economic viability of flights. Therefore needs detailed information about tickets sold (when and how much) to know when to make discounted seats available.

Problems

No problems recorded

Sales Manager

Organisational unit: Sales

Manager in charge of sales. The sales manager is responsible for receiving bookings. The main aim of the sales manager is to make sure every seat on the flight is booked. The sales manager and the sales staff only want to offer discount prices for seats w

Problems

No problems recorded

Systems Manager

Organisational unit: The Executive

Manages current system. The systems manager wants the new system to have the capability of interfacing with other computer reservation systems so portability and compatibility issues are paramount here.

Problems

No problems recorded

Ticket agents

Organisational unit: Sales

This includes both the Travel agents and those people at the airline who are empowered to sell tickets.

Problems

Ticket Agents have to specify individual legs while booking (in scope)

Ticket Agents Manager

Organisational unit: Sales

In charge of communicating with travel agents and ticket agents

Problems

No problems recorded

Transfer Desk

Organisational unit: Flight Department

The transfer desk personnel do exactly the same as the Check-In desk personnel but they are concerned with people transferring between flights.

Problems

No problems recorded

Business Problems

Customer Cancels a booking

- Description: For a number of reasons a customer may decide to cancel their booking on a flight. This can occur at any time and depending on the type of ticket the customer holds there will be an appropriate refund.
- Symptoms: There is an empty seat on the flight.
- Impact: The airline has to anticipate the number of people that are going to cancel and then overbook the flight by this amount. This may lead to reduced fares and compensation if they get the overbooking wrong.
- Status: Critical, in scope

Associated requirements

- Essential Overbook passengers.

Relevant stakeholders

Check-In staff are bunching passengers when allocating seats

- Description: Concerns have been raised as to the way in which passengers are allocated seats on a flight. Currently, check in staff have a tendency to bunch passengers in a certain locations on a flight but this has safety concerns as the tail of the plane may scrap t
- Symptoms: Passengers are not distributed evenly through the aircraft.
- Impact: More fuel is used by the aircraft so this will cost the airline more money. Also if the aircraft scrap the runway, the aircraft may require maintenance and so be out of commission for a while, hence some flights may need to be cancelled.
- Status: Severe, in scope

Associated requirements

- Essential Allocate seats on the plane in a more random basis for safety re

Relevant stakeholders

A plane crashes

- Description: Planes crash for lots of reasons, which aren't important. The manifest of the plane would need to be sent to the aviation authority, the inquiry and possible a trial. The plane and all the customers would have to be removed from the database.
- Symptoms: A plane never lands. A plane is lost from the inventory of the company. Customers die. Bad press publicity.
- Impact: The loss of a plane is very expensive, it would also be very damaging to the image of the airline. Further more, as Lakeland only has a small number of planes it would significantly reduce the number of flight/routes until the plane was replaced.
- Status: Workable, out of scope

Associated requirements

Desirable Deal with unusual events associated with a airline

Relevant stakeholders

Customers Special Requirements

- Description: Some customers have special requirements for when boarding an aircraft, this will mean that something needs to be done before they board the flight.
- Symptoms: Young passengers require to be met by someone who will guide them through the check-in, etc.
Some people have disabilities and require special needs such as wheelchairs.
Some people have dietary requirements.
Some very tall people may require special s
- Impact: These special requirements means that the airline will achieve a better customer relationship and customer are more likely to return if they know that their needs will be met by the airline. The negative side is that more people need to be notified of th
- Status: Workable, in scope

Associated requirements

Essential Passenger manifests need to be printed and given to flight crew

Relevant stakeholders

Catering Section
Customer Services Manager

Overbooking Occurs

- Description: The airline needs to overbook flights as customers have a tendency to cancel their booking. This overbooking is only ever a estimate and sometimes they get it wrong.
- Symptoms: More people turn up to the check-in desk than can fit on the plane.
- Impact: The airline has to pay compensation/find alternatives for all the passengers not able to fly. The customers get very annoyed and the reputation of the airline diminishes.
- Status: Workable, in scope

Associated requirements

- | | |
|-----------|---|
| Essential | Creation of ad-hoc reports which collate and graphically display Overbook passengers. |
|-----------|---|

Relevant stakeholders

Passenger arrives without having confirmed reservations

- Description: A passenger arrives at the airports with reservations that have not been confirmed
- Symptoms: Passenger does not have a confirmed reservation
- Impact: NONE
- Status: Workable, out of scope

Associated requirements

- | | |
|-----------|-----------------------------|
| Essential | Accept and handle a booking |
|-----------|-----------------------------|

Relevant stakeholders

Customer Services Manager

Passengers do not arrive after final call

- Description: A passenger does not come to the gate after the final call for them. Chief pilot has to decide how long to wait before taking off
- Symptoms: Flight is delayed whilst the passengers luggage is unloaded. International law prohibits luggage to travel without a passenger for security reasons.
- Impact: The plane will be delayed for even longer costing the company money whilst the luggage is removed. Planes standing waiting to take off lose the business approx 300 pounds per minute.
- Status: Workable, in scope

Associated requirements

- | | |
|-----------|---|
| Essential | Deal with passengers once they have checked in. |
|-----------|---|

Relevant stakeholders

Chief Pilot
Customer Services Manager

People being removed from flights after overbooking

- Description: Allocation of seats at some airlines means that when overbooking occurs, some people may be asked to leave the flight as passengers who have paid more can be assigned their seat. This only occurs when local laws specify it.
- Symptoms: People being asked to leave their seat when overbooked.
Some local laws enforce this.
- Impact: Passengers asked to leave the flight will be very annoyed and so will be unhappy with the service they are receiving from the airline, hence will not fly with them again. This will result in the company losing money.
- Status: Workable, in scope

Associated requirements

Essential Overbook passengers.

Relevant stakeholders

Chief Station Controller

Plane gets cancelled

- Description: Bad weather, terrorists, airport technical faults (i.e. the Control Tower software stops working) or plane maintenance problems may lead to a plane being cancelled. This means that all passengers need to be found alternative transport.
- Symptoms: The flight never occurs
- Impact: Damages the reputation of the business because people lose trust for the ability of Lakeland to get them where they want to go on time so long term financial implications, also has immediate financial implications because they could have to pay compensation
- Status: Workable, in scope

Associated requirements

Desirable Deal with unusual events associated with a airline

Relevant stakeholders

Plane Gets Diverted

- Description: Terrorist threat, bad weather, a technical fault on the plane or an onboard medical emergency leads to it being diverted from its primary destination.
- Symptoms: The plane doesn't land at its destination, but lands somewhere else.
- Impact: Lakeland need to find passengers another flight and possibly compensate them. This is costly. Also, landing fees, airport fees, and the cost of more fuel is costly to the company.
- Status: Workable, in scope

Associated requirements

Desirable Deal with unusual events associated with a airline

Relevant stakeholders

Ticket Agents have to specify individual legs while booking

Description: The ticket agents have reported that while they can review an entire route that a customer wishes to fly, when the booking of the route occurs they must book each individual leg.

Symptoms: The Ticket Agent has to spend a long time booking individual legs of a flight and also there is a greater chance of making a mistake while entering multiple items.

Impact: The Ticket Agents may make mistakes and so the customers will be annoyed and so book with other travel agents. Also if the Ticket Agents have the option they may book using another system that is more friendly as they will find it easier to use and so La

Status: Workable, in scope

Associated requirements

Essential	Allow multi-leg bookings
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Relevant stakeholders

Ticket agents

Constraints

Airport Plane parking spaces

Like most busy car parks the airport only has so much room. Busy airports manage the space available to a tight schedule and if a plane arrives or takes off late the airport imposes fines. This is not a good idea and can completely wipe out the profit margin for the flight.

Impact upon Processes

New Flight Route

Compatibility

The systems manager wants the system to be compatible with other reservation systems and so this will need to be considered if a new system is created.

Impact upon Processes

Link to outside system

Remove Other System Interface

Passengers have special requirements

Some passengers have certain requirements that means they must be seated in certain locations on the plain and so they may need to check in early.

Impact upon Processes

Check In

The number of planes available

The number of planes available is a big constraint. It rigidly determines, how many flights can be run at any one time. It also determines how the flights can be ordered and where they can fly from and too.

This is a constraint that could conceivably be overcome by increasing the number of planes, but as this is a massive financial burden it is, in all in all intents and purposes an outside constraint.

Impact upon Processes

New Flight Route

Who is bumped up when overbooking occurs.

In certain countries, the law enforces a rule that states passengers who pay more for a flight should be bumped up to business class when overbooking occurs. This is not like the first-come, first-serve basis that happens in most other countries. This constraint also means that if a passenger has already boarded a flight and it has been overbooked, leaving no spare seats, then a passenger who has paid more will need to board the plane, resulting in a lower paying passenger being asked to leave the plane.

Impact upon Processes

Requirements

Deal with passengers once they have checked in.

Status: Essential, in scope

Weight: Pairwise- 8% Weighted vote- 4%

Bin: Board a Plane

Make sure all customers board the plane, make sure they have every thing they need on the flight etc.

Problems

Passengers do not arrive after fina

Supported by processes

Board Flight

Linked requirements

Passenger manifests need to be printed and given to flight crews.

Status: Essential, in scope

Weight: Pairwise- 4% Weighted vote- 5%

Bin: Board a Plane

Before a flight can leave, a full manifest must be printed out from the system and taken on board so the flight crew know who is who on the flight and also call each passenger by name. This list should also show who has dietary requirements.

Problems

Customers Special Requirements

Supported by processes

Linked requirements

Overbook passengers.

Status: Essential, in scope

Weight: Pairwise- 21% Weighted vote- 14%

Bin: Booking a flight

A flight should be overbooked to a certain degree as to ensure that when some passengers cancel or fail to turn up, which is very likely, there will still be passengers to fill up the plane.

Problems

Customer Cancels a booking

Overbooking Occurs

People being removed from flights

Supported by processes

Linked requirements

Track customer movement

Status: Desirable, in scope

Weight: Pairwise- 21% Weighted vote- 8%

Bin: Internal Airline Business

The movement of customers is very interesting to the airline. It enables them to identify which customers travel where, in which class and how frequently. It can also help them to develop new flight, destinations and services and also decide which planes to use on particular routes.

Problems

Supported by processes

Become CIP

Remove CIP

Linked requirements

Creation of ad-hoc reports which collate and graphically display the data

Status: Essential, in scope

Weight: Pairwise- 13% Weighted vote- 10%

Bin: Internal Airline Business

Lakeland will collect a very large amount of data. This data could be useful for targeting promotions, planning routes etc. This data is only useful however if it can be accessed in a variety of ways and can be displayed in a variety of fashion.

The reports can also be used on days of flights by the Chief Station Controller so they can estimate what passengers are likely to arrive and in what numbers so they can make reparations for overbookings.

Problems

Overbooking Occurs

Supported by processes

Create Report

Remove Report From System

Linked requirements

Accept payment and print Tickets

Status: Essential, in scope

Weight: Pairwise- 11% Weighted vote- 8%

Bin: Booking a flight

The ability to print tickets, once the potential customer has paid for them. On no account must a ticket be released for a booking that has not been paid for.

Problems

Supported by processes

Booking paid for & Ticket Issue

Linked requirements

Accept and handle a booking

Status: Essential, in scope

Weight: Pairwise- 11% Weighted vote- 8%

Bin: Booking a flight

A booking is taken when a potential customer requests a seat on a plane. The customer usually has to pay for the booking at the time they booked it, but this is sometimes not the case. The booking for a seat on a flight is either created by Lakeland itself or one of the travel agents, etc.

Problems

Passenger arrives without having

Supported by processes

Initial Booking

Linked requirements

Deal with cancelled bookings

Status: Desirable, in scope

Weight: Pairwise- 11% Weighted vote- 5%

Bin: Booking a flight

Sometimes, for reasons that are unimportant to the operation of the system a customer may choose to cancel a booking. The system has to deal with this and act in an appropriate way, freeing up the space on the flight and removing customer data. Premier points and miles will also have to be removed from the customers Premier account if they have one and have accumulated points or miles during the booking of the flight.

Problems

Supported by processes

Cancel booking

Linked requirements

Add new routes to and from destinations

Status: Essential, in scope

Weight: Pairwise- Weighted vote- 4%

Bin: Flights

Customer' needs change and the Lakeland flight timetable may need to change with it. New routes need to be added between airports with no direct links if the need arises for these. One reason for this is the number of flights to a place may increase so a direct flight may become more appropriate than a multi leg flight.

Problems

Supported by processes

New Flight Route

Remove Route

Linked requirements

Create an instance of a flight

Status: Desirable, in scope

Weight: Pairwise- Weighted vote- 4%

Bin: Flights

This creates a time of a flight between a source and a destination. To book a ticket a flight must exist for the customers to be allocated to. A multi leg route includes more than one flight and flights have Date and Time attributes.

Problems

Supported by processes

Flight

Linked requirements

Interact with other systems.

Status: Desirable, out of scope

Weight: Pairwise- Weighted vote- 4%

Bin: Internal Airline Business

There is a variety of information that Lakeland need to send to other people. This information may include flight plans, seat allocations, passenger manifests etc. It will be very useful if the system we create for them has the ability to send this information automatically. This is out of the scope of the design as we have no information about what systems have to be interacted with and how this needs to be achieved. The programmers will have to find out what information has to be passed to who, using which protocols at a later date.

Problems

Supported by processes

Link to outside system

Remove Other System Interface

Linked requirements

Maintain a list of all the members of staff, for auditing purposes

Status: Desirable, in scope

Weight: Pairwise- Weighted vote- 3%

Bin: Internal Airline Business

Staff members may be users of the system, or members of the flight crew. A list of all these people must be maintained so that if an audit is carried out they are readily available

Problems

Supported by processes

New Member of staff

Remove staff member

Linked requirements

Add new airports to the system

Status: Desirable, in scope

Weight: Pairwise- Weighted vote- 3%

Bin: Flights

When the airline decides to start flying to a new airport it needs to be added to the system with a unique airport code.

Problems

Supported by processes

Linked requirements

Allow multi-leg bookings

Status: Essential, in scope

Weight: Pairwise- Weighted vote- 5%

Bin: Booking a flight

The system must allow customers to book flights over a series of legs as many customers fly on routes which are not direct.

Problems

Ticket Agents have to specify indiv

Supported by processes

Linked requirements

Handle travel agents, as users of the system

Status: Desirable, in scope

Weight: Pairwise- Weighted vote- 4%

Bin: Internal Airline Business

Travel agents sell a vast number of Lakeland's tickets and so they need to be explicitly handled by the system. Further more travel agents have fewer rights than Lakeland's own staff and the system should accommodate this too.

Problems

Supported by processes

New Travel Agent

Travel agent removed

Linked requirements

Deal with unusual events associated with a airline

Status: Desirable, in scope

Weight: Pairwise- Weighted vote- 2%

Bin: Internal Airline Business

Airlines have a set of events that don't happen very often but are still worthy of support. These can be, for instance plane crashes and hijacking or can be more mundane like diversions.

Problems

A plane crashes

Plane gets cancelled

Plane Gets Diverted

Supported by processes

New Plane Added

Plane Removed

Linked requirements

Maintain User accounts with differing rights

Status: Desirable, in scope

Weight: Pairwise- Weighted vote- 3%

Bin: Internal Airline Business

For auditing purposes it will be very useful to be able to track which users have done what. Also different users will have different rights and it is necessary to maintain this distinction too.

Problems

Supported by processes

Add User To System

Remove User From System

Linked requirements

Deal with customer check in/check out

Status: Desirable, in scope

Weight: Pairwise- Weighted vote- 5%

Bin: Board a Plane

The system should have support for customers checking in and out.

Problems

Supported by processes

Check In

Check-out

Linked requirements

Allocate seats on the plane in a more random basis for safety reasons.

Status: Essential, in scope

Weight: Pairwise- Weighted vote-

Bin:

For safety reasons we need to be able to allocate seats more randomly on the aircraft. A new system should also be able to specify individual seats incase passengers wish to sit near to one another.

Problems

Check-In staff are bunching passe

Supported by processes

Linked requirements

Requirements Bin Contents

Bin 1 Booking a flight

The system of taking a booking and paying for it before the customer is allowed to fly.

- | | |
|-----------|----------------------------------|
| Essential | Accept and handle a booking |
| Essential | Accept payment and print Tickets |
| Essential | Allow multi-leg bookings |
| Desirable | Deal with cancelled bookings |
| Essential | Overbook passengers. |

(5 requirements)

Bin 2 Board a Plane

This takes into account all of the things that must happen from when a customer arrives at an airport to actually boarding a plane.

- | | |
|-----------|---|
| Desirable | Deal with customer check in/check out |
| Essential | Deal with passengers once they have checked in. |
| Essential | Passenger manifests need to be printed and given to flight crews. |

(3 requirements)

Bin 3 Flights

This is the section that concerns all that is involved with created a flight and the airports the flight visits.

- | | |
|-----------|---|
| Desirable | Add new airports to the system |
| Essential | Add new routes to and from destinations |
| Desirable | Create an instance of a flight |

(3 requirements)

Bin 4 Internal Airline Business

This bin concerns all that is involved within the airline itself and does not necessarily deal with the flights and bookings.

- | | |
|-----------|---|
| Essential | Creation of ad-hoc reports which collate and graphically display the data |
| Desirable | Deal with unusual events associated with a airline |
| Desirable | Handle travel agents, as users of the system |
| Desirable | Interact with other systems. |
| Desirable | Maintain a list of all the members of staff, for auditing purposes |
| Desirable | Maintain User accounts with differing rights |
| Desirable | Track customer movement |
-

(7 requirements)

Events

Airport Added

A new destination is now available to travel to and from.

Aliases: Route Added

Control: No control message specified

Source: Planning Manager

Data items

<u>Data name</u>	<u>Type</u>
Airport City	Character
Airport Country	Character
Airport Governing Flight body	Character
Airport ID	Character
Airport Latitude	Real
Airport Longitude	Real
Airport Name	Character

Assigned to Objects

Flight Route
Route
System Users

Starts processes

New Flight Route

Airport Modified

It may be necessary to change the details of an airport.

Aliases:

Control: No control message specified

Source: Systems Manager

Data items

<u>Data name</u>	<u>Type</u>
AirportID	Character

Assigned to Objects

Starts processes

Airport Removed

Lakeland no longer flies to that destination.

Aliases: Route Removed

Control: No control message specified

Source: Planning Manager

Data items

<u>Data name</u>	<u>Type</u>
Airport ID	Character

Assigned to Objects

Flight Route
Route
System Users

Starts processes

Remove Route

Board Plane

A passenger Boards the plane.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Boarding Pass No	Character
Passenger ID	Character

Assigned to Objects

Boarding Pass
Customers
Passenger
Staff

Starts processes

Board Flight

Booking

A customer books a ticket.

Aliases:

Control: No control message specified

Source: Customers

Data items

<u>Data name</u>	<u>Type</u>
<<Oops - delete me >>	Character
Booking ID	Character

Assigned to Objects

CIP
Customers
Flight Route
Potential Customer
Staff
System Users
Travel Agents

Starts processes

Booking paid for & Ticket Issue
Initial Booking

Call to Other System

The system needs to interface with a system that is not part of the Lakeland system.

Aliases:

Control: No control message specified

Source: Systems Manager

Data items

<u>Data name</u>	<u>Type</u>
Data	Character

Assigned to Objects

Other System Interfaces
System Users

Starts processes

Cancel Booking

A customer cancels their booking.

Aliases:

Control: No control message specified

Source: Customers

Data items

<u>Data name</u>	<u>Type</u>
Booking ID	Character

Assigned to Objects

Booking
Customers
Flight Route
Staff
System Users
Travel Agents

Starts processes

Cancel booking

Check In

A customer checks-in at the airport, they may then be asked to go to the executive lounge if appropriate or asked to go to another part of the airport where they will eventually board the plane.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Boarding Pass No	Character
Customer ID	Character
Ticket No	Character

Assigned to Objects

Boarding Pass
Customers
Staff
System Users
Tickets

Starts processes

Check In
Flight

Create an interface for other system

This creates the interface for the systems that our system has to talk to. These include government system, other Lakeland's systems and airport system.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Interface Characteristics	Character
Other System ID	Character

Assigned to Objects

Starts processes

Link to outside system

Customer Joins Premier Club

When a customer joins the Premier Club they get lots of benefits, such as frequent flier miles and free membership to the Executive lounge. When they join the Premier Club they stop being customers and start to belong to CIPs, which is a subset of custom

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Customer ID	Character
Premier Club ID	Character

Assigned to Objects

Customers
Staff
System Users

Starts processes

Become CIP

Customer Leaves Premier Club

A customer leaves the Premier Club, be it either by not renewing their membership, or asking to be removed.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Premier Club ID	Character

Assigned to Objects

CIP
Customers
Staff
System Users

Starts processes

Remove CIP

Delete Report

It may become necessary to delete reports from the system to clear them out when they are no longer required or are obsolete.

Aliases:

Control: No control message specified

Source: Systems Manager

Data items

<u>Data name</u>	<u>Type</u>
Report Storage ID	Character

Assigned to Objects

Starts processes

Remove Report From System

Delete Route

If an airport is removed then it may be necessary to remove a route so that flights can no longer go to that destination.

Aliases: Remove Route

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Flight Route ID	Character

Assigned to Objects

Flight Route

Starts processes

Remove Route

Flight Cancelled

A flight is cancelled

Aliases:

Control: No control message specified

Source: Despatch Controller

Data items

<u>Data name</u>	<u>Type</u>
Flight ID	Character

Assigned to Objects

Customers
Flight Route
Plane
Staff
System Users

Starts processes

Flight Delay

Event when flight is delayed.

Aliases:

Control: No control message specified

Source: Despatch Controller

Data items

<u>Data name</u>	<u>Type</u>
Flight ID	Character

Assigned to Objects

Flight Route
Plane
Staff
System Users

Starts processes

Flight Occurs

A flight has been boarded by passengers and has taken off.

Aliases: Take Off
Flight Depart

Control: No control message specified

Source: Despatch Controller

Data items

<u>Data name</u>	<u>Type</u>
Flight ID	Character

Assigned to Objects

Passenger

Starts processes

Flight Overbooking

A flight has too many passengers and not enough seats.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Flight ID	Character

Assigned to Objects

Booking
Staff
System Users

Starts processes

Generate Report

Reports can be generated for various reasons and then either be stored or passed onto others.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Query	Character
Report ID	Character

Assigned to Objects

Booking
Reports
System Users

Starts processes

Create Report

Member of staff hired

When a member of staff is hired the system needs to be told about it. The information is not really that useful, but can be used to track requests for information etc.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Staff Age	Integer
Staff Department	Character
Staff Grade	Character
Staff ID	Character
Staff Name	Character
Staff Sex	Character
Staff Title	Character

Assigned to Objects

Starts processes

New Member of staff

Member of staff leaves.

For whatever reason a member of staff may leave. As the system holds information about all members of staff it needs the facility to remove them when they no longer work for the company.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Staff ID	Character

Assigned to Objects

Starts processes

Remove staff member

New Flight Route

The needs of Lakeland's customers/potential customers will change over time. They will need to travel to and from different destinations and this will mean that Lakeland's flights will need to change too.

Aliases:

Control: No control message specified

Source: Planning Manager

Data items

<u>Data name</u>	<u>Type</u>
Destination Airport ID	Character
Flight Route ID	Character
Number of Legs	Integer
Source Airport ID	Character

Assigned to Objects

Route

Starts processes

New Flight Route

New Travel Agent

Lakeland sell a vast number of their tickets through travel agents and the system needs to be able to handle new travel agents being added.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Travel Agent Address	Character
Travel Agent ID	Character
Travel Agent Name	Character
Travel Agent Telephone No.	Character

Assigned to Objects

Starts processes

New Travel Agent

Other system gets removed

For reasons that are of little concern, systems which the Lakeland system has to interact with may be removed. The Lakeland system has to react to this in an appropriate manner.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Other System ID	Character

Assigned to Objects

Starts processes

Remove Other System Interface

Passenger leaves system at destination

A customer gets of the plane and goes through customs. He/She is now no-longer a customer or a passenger and they have effectively checked-out.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
------------------	-------------

Assigned to Objects

Starts processes

Check-out

Pay For Booking

A customer must pay for a booking before they can take a flight. Once the booking has been paid for, the ticket may be released.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Customer ID	Character
Payment Method	Character
Potential Customer ID	Character

Assigned to Objects

Booking
CIP
Customers
Potential Customer
Staff
System Users

Starts processes

Booking paid for & Ticket Issue

Plane Added

A new plane has been added to the airlines fleet.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Plane Bussiness Capacity	Integer
Plane Economy Capacity	Character
Plane First Class Capacity	Integer
Plane ID	Character
Plane Maximum Load(kg)	Integer
Plane Range(Miles)	Integer
Plane Type	Character
Plane Type	

Assigned to Objects

System Users

Starts processes

New Plane Added

Plane Removed

A plane has been removed form the system as it is no longer part of the Lakeland fleet.

Aliases: Plane Blown Up
 Plane too Old

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Plane ID	Character

Assigned to Objects

Plane
System Users

Starts processes

Plane Removed

Staff Changed

Modify a staffs details.

Aliases:

Control: No control message specified

Source: Systems Manager

Data items

<u>Data name</u>	<u>Type</u>
Staff ID	Character

Assigned to Objects

Starts processes

Ticket Issued

Ticket is issued after it is paid for.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Booking ID	Character

Assigned to Objects

Booking
CIP
Customers
Staff
System Users
Tickets

Starts processes

Travel Agent removed

For time to time travel agents will leave the system and this needs to be managed by the system.

Aliases:

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Travel Agent ID	Character

Assigned to Objects

Starts processes

Travel agent removed

User Added

A User is added to the system.

Aliases: New User

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
Staff ID	Character
User ID	Character
User Name	Character
User Password	Character

Assigned to Objects

System Users

Starts processes

Add User To System

User Removed

A User is removed from the systems.

Aliases: User Left
User Depart
Resignation

Control: No control message specified

Source: No control source specified

Data items

<u>Data name</u>	<u>Type</u>
User ID	Character

Assigned to Objects

System Users

Starts processes

Remove User From System

Objects

Boarding Pass

A BOARDING PASS is issued at the Check-In and allows a PASSENGER to board an aircraft. These are shown upon boarding to show who is on the plane and who isn't.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Class of Travel	Character	
Customer ID	Character	Key
Customer Name	Character	
Customer Sex	Character	
Flight Number	Integer	
Leg Desitnation	Character	
Leg Start Point	Character	
Nationality	Character	
Seat Number	Integer	

Events assigned to object

Board Plane
Check In

Processes manipulating object

Board Flight	R
Check In	C
Check-out	D

Booking

An actual BOOKING for a seat on an airline. This may or may not be a paid-for booking.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Booking Number	Integer	Key
Customer ID	Character	
Date Booked	Date/Time	
Flight Date	Date/Time	
Price Paid	Currency	
Route ID	Character	

Events assigned to object

Cancel Booking
Flight Overbooking
Generate Report
Pay For Booking
Ticket Issued

Processes manipulating object

Booking paid for & Ticket Issue	U
Cancel booking	D
Create Report	R
Initial Booking	C

CIP

A CIP is a commercially important person. A customer becomes a CIP when they join the premier club scheme.

They are commercially important because we are able to accurately track the members of the Premier Club, which helps with our data collection. Plus these people are most likely to be people who often use the airline.

Aliases: Premier Club Member

Data items

<u>Data name</u>	<u>Type</u>	
Address	Character	
Date Joined	Character	
E-mail Address	Character	
Executive Lounge(yes/no)	Character	
Phone Number	Character	
Premier Club ID	Character	Key
Premier Points Balance	Character	
Special Requirements	Character	

Events assigned to object

Booking
Customer Leaves Premier Club
Pay For Booking
Ticket Issued

Processes manipulating object

Become CIP	C
Booking paid for & Ticket Issue	U
Check In	R
Create Report	R
Flight	R
Initial Booking	U
Remove CIP	D

Customers

A CUSTOMER is a person who has paid for a BOOKING.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Adult	Real	
Flight Booked on	Character	
Gender	Character	
Name	Character	Key

Events assigned to object

Board Plane
Booking
Cancel Booking
Check In
Customer Joins Premier Club
Customer Leaves Premier Club
Flight Cancelled
Pay For Booking
Ticket Issued

Processes manipulating object

Become CIP	D
Booking paid for & Ticket Issue	C
Cancel booking	D
Check In	R
Check-out	D
Create Report	R

Flight Route

A FLIGHT ROUTE is a Flight leg or set of flight legs which transports PASSENGERS from a source to a destination

Aliases: Flight

Data items

<u>Data name</u>	<u>Type</u>	
Flight Number	Character	Key
Number of Legs	Integer	

Events assigned to object

Airport Added
Airport Removed
Booking
Cancel Booking
Delete Route
Flight Cancelled
Flight Delay

Processes manipulating object

Check In	R
Create Report	R
Flight	C
Initial Booking	R
New Flight Route	C
Remove Route	D

Other System Interfaces

An OTHER SYSTEM is one which is not part of the current system. Its inner workings are invisible to use but we may need to interface with it.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Interface Discription	Character	
Other System ID	Character	Key

Events assigned to object

Call to Other System

Processes manipulating object

Check In	U
Flight	R
Link to outside system	C
Remove Other System Interface	D

Passenger

A PASSENGER is A person who flies with the airline. A person becomes a passenger when they check in, and cease being a passenger when they check-out at the end of the FLIGHT or set of FLIGHT LEGS.

Aliases: Customer

Data items

<u>Data name</u>	<u>Type</u>	
Class of Travel	Character	
Customer ID	Character	Key
Dietary Requirement	Character	
Seat No	Integer	
Special Requirements	Character	

Events assigned to object

Board Plane
Flight Occurs

Processes manipulating object

Check In	C
Check-out	D
Create Report	R
Flight	R

Plane

A PLANE is an object which contains the seats we are BOOKING. Without the seats on the PLANE, we have no airline. A PLANE carries PASSENGERS on ROUTES.

Aliases: Aircraft

Data items

<u>Data name</u>	<u>Type</u>	
Capacity Bussiness Class	Integer	
Capacity Ecomomy Class	Integer	
Capacity First Class	Integer	
Plane ID	Character	Key
Plane Type	Character	
Range (miles)	Integer	
Special Notes (maintainance etc)	Character	

Events assigned to object

Flight Cancelled
Flight Delay
Plane Removed

Processes manipulating object

Flight	R
New Flight Route	R
New Plane Added	C
Plane Removed	D

Potential Customer

A POTENTIAL CUSTOMER is a customer that has made a BOOKING, but has not yet paid for it.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Booking ID	Character	Key
Name	Character	
Sex	Character	

Events assigned to object

Booking
Pay For Booking

Processes manipulating object

Booking paid for & Ticket Issue	D
Create Report	R
Initial Booking	C

Reports

REPORTS are generated by a system and are either stored or passed to other objects to be processed by them.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Query report answers	Character	
Report Output	Character	
Report Title	Character	
Storage ID	Character	Key

Events assigned to object

Generate Report

Processes manipulating object

Create Report	C
New Flight Route	R
Remove Report From System	D

Route

A ROUTE is a flight between two locations. A number of ROUTES or FLIGHT LEGS can make up a FLIGHT ROUTE.

Aliases: Flight Leg

Data items

<u>Data name</u>	<u>Type</u>	
Departure Airport ID	Character	
Destination Airport ID	Character	
Route ID	Character	Key

Events assigned to object

Airport Added
Airport Removed
New Flight Route

Processes manipulating object

Create Report	R
Flight	R
Initial Booking	R
New Flight Route	C
Remove Route	D

Staff

STAFF are people employed by the airline.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Is System User	Character	
Staff ID	Character	Key
Staff Name	Character	
Staff Sex	Character	

Events assigned to object

Board Plane
Booking
Cancel Booking
Check In
Customer Joins Premier Club
Customer Leaves Premier Club
Flight Cancelled
Flight Delay
Flight Overbooking
Pay For Booking
Ticket Issued

Processes manipulating object

Add User To System	R
Create Report	R
Flight	R
New Flight Route	R
New Member of staff	C
Remove Report From System	R
Remove staff member	D
Remove User From System	R

System Users

SYSTEM USERS are a subset of the STAFF Object who will directly use the system for their job.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Login ID	Character	Key
Password	Character	
Priveledges	Character	
Staff ID	Character	

Events assigned to object

Airport Added
Airport Removed
Booking
Call to Other System
Cancel Booking
Check In
Customer Joins Premier Club
Customer Leaves Premier Club
Flight Cancelled
Flight Delay
Flight Overbooking
Generate Report
Pay For Booking
Plane Added
Plane Removed
Ticket Issued
User Added
User Removed

Processes manipulating object

Add User To System	C
Become CIP	R
Booking paid for & Ticket Issue	R
Cancel booking	R
Check In	R
Initial Booking	R
Remove User From System	D

Tickets

A TICKET is issued after a BOOKING object has been created and paid for.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Booking ID	Character	
Class Booked	Character	
Customer ID	Character	
Customer Name	Character	
Customer Sex	Character	
Customer Type(adult/child)	Character	
Departure	Character	
Destination	Character	
Flight Arrival Time	Date/Time	
Flight Date	Date/Time	
Flight DepartureTime	Date/Time	
Flight ID	Character	
Price Paid	Currency	
Route ID	Character	
Ticket ID	Character	Key

Events assigned to object

Check In
Ticket Issued

Processes manipulating object

Booking paid for & Ticket Issue	C
Cancel booking	D
Check In	R

Travel Agents

TRAVEL AGENTS are capable of creating a BOOKING for a CUSTOMER so a PASSENGER may travel on a particular FLIGHT.

Aliases:

Data items

<u>Data name</u>	<u>Type</u>	
Travel Agents ID	Character	Key
User ID	Character	

Events assigned to object

Booking
Cancel Booking

Processes manipulating object

Cancel booking	U
Initial Booking	R
New Travel Agent	C
Travel agent removed	D

Processes

Add User To System

When a new user is employed or is granted access to the system, they need to be given usernames and passwords.

Aliases: Create New User

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
Deal with customer check in/check ou
Deal with passengers once they have
Deal with unusual events associated
Deal with unusual events associated
Handle travel agents, as users of the
Handle travel agents, as users of the
Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

User Added

Object manipulated by process

Staff	R
System Users	C

Process constrained by

Become CIP

Customers become CIPs when they join one of the club points schemes.

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
- Deal with passengers once they have
- Deal with unusual events associated
- Deal with unusual events associated
- Handle travel agents, as users of the
- Handle travel agents, as users of the
- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

- Customer Joins Premier Club

Object manipulated by process

- | | |
|--------------|---|
| CIP | C |
| Customers | D |
| System Users | R |

Process constrained by

Board Flight

Passenger boards a flight and their boarding pass is checked.

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
Deal with customer check in/check ou
Deal with passengers once they have
Deal with unusual events associated
Deal with unusual events associated
Handle travel agents, as users of the
Handle travel agents, as users of the
Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Board Plane

Object manipulated by process

Boarding Pass

R

Process constrained by

Booking paid for & Ticket Issue

A person books and pays for a ticket and they become a customer. The ticket should then be printed and released.

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
- Deal with passengers once they have
- Deal with unusual events associated
- Deal with unusual events associated
- Handle travel agents, as users of the
- Handle travel agents, as users of the
- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

- Pay For Booking
- Booking

Object manipulated by process

- | | |
|--------------------|---|
| Booking | U |
| CIP | U |
| Customers | C |
| Potential Customer | D |
| System Users | R |
| Tickets | C |

Process constrained by

Cancel booking

When a customer has paid for a booking they sometimes have an opportunity to cancel that booking. They then may stop being a passenger. If a ticket has already been issued for the booking, then it must be cancelled. Also, depending upon the basis of ticket and the time left until the flight, a full or partial refund may have to be made.

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
- Deal with passengers once they have
- Deal with unusual events associated
- Deal with unusual events associated
- Handle travel agents, as users of the
- Handle travel agents, as users of the
- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

Cancel Booking

Object manipulated by process

Booking	D
Customers	D
System Users	R
Tickets	D
Travel Agents	U

Process constrained by

Check In

A person checks in. They are issued a Boarding Pass, and their luggage is checked and loaded onto the plane. The person becomes a passenger.

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
- Deal with passengers once they have
- Deal with unusual events associated
- Deal with unusual events associated
- Handle travel agents, as users of the
- Handle travel agents, as users of the
- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

Check In

Object manipulated by process

Boarding Pass	C
CIP	R
Customers	R
Flight Route	R
Other System Interfaces	U
Passenger	C
System Users	R
Tickets	R

Process constrained by

Passengers have special requirements

Check-out

When a passenger checks out, their boarding passes are made null-and-void (having already been used). The passenger is also no longer a passenger.

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
- Deal with passengers once they have
- Deal with unusual events associated
- Deal with unusual events associated
- Handle travel agents, as users of the
- Handle travel agents, as users of the
- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

- Passenger leaves system at desti

Object manipulated by process

- | | |
|---------------|---|
| Boarding Pass | D |
| Customers | D |
| Passenger | D |

Process constrained by

Create Report

One of the main goals of the system is to create reports for the varies managers. This process actually covers several different processes, once for each type of report needed.

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
- Deal with passengers once they have
- Deal with unusual events associated
- Deal with unusual events associated
- Handle travel agents, as users of the
- Handle travel agents, as users of the
- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

- Generate Report

Object manipulated by process

Booking	R
CIP	R
Customers	R
Flight Route	R
Passenger	R
Potential Customer	R
Reports	C
Route	R
Staff	R

Process constrained by

Flight

During a flight customers become passengers (in between check-in and check-out).

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
- Deal with passengers once they have
- Deal with unusual events associated
- Deal with unusual events associated
- Handle travel agents, as users of the
- Handle travel agents, as users of the
- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

- Check In

Object manipulated by process

- | | |
|-------------------------|---|
| CIP | R |
| Flight Route | C |
| Other System Interfaces | R |
| Passenger | R |
| Plane | R |
| Route | R |
| Staff | R |

Process constrained by

Initial Booking

A person can sometimes make a booking and not pay for it at the same time. This creates a potential customer. A ticket should not be issued until the booking has been paid for.

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
Deal with customer check in/check ou
Deal with passengers once they have
Deal with unusual events associated
Deal with unusual events associated
Handle travel agents, as users of the
Handle travel agents, as users of the
Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Booking

Object manipulated by process

Booking	C
CIP	U
Flight Route	R
Potential Customer	C
Route	R
System Users	R
Travel Agents	R

Process constrained by

Link to outside system

We need to be able to communicate with systems which are not build by us and may have very specific interfaces. We may also need to add and remove these interfaces

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
Deal with customer check in/check ou
Deal with passengers once they have
Deal with unusual events associated
Deal with unusual events associated
Handle travel agents, as users of the
Handle travel agents, as users of the
Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Create an interface for other syst

Object manipulated by process

Other System Interfaces

C

Process constrained by

Compatibility

New Flight Route

The planning manager monitors demand for flights not already offered by the airline. When they decide a new route is needed they create a new route, and possibly add new destinations.

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
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Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Airport Added
New Flight Route

Object manipulated by process

Flight Route	C
Plane	R
Reports	R
Route	C
Staff	R

Process constrained by

Airport Plane parking spaces
The number of planes available

New Member of staff

As with any business a staff members come and go and it will be very useful if we can keep track of this.

Aliases:

Supports requirements

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Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
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Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Member of staff hired

Object manipulated by process

Staff

C

Process constrained by

New Plane Added

new plane added to the fleet.

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
Deal with customer check in/check ou
Deal with passengers once they have
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Deal with unusual events associated
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Handle travel agents, as users of the
Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Plane Added

Object manipulated by process

Plane

C

Process constrained by

New Travel Agent

A new travel agent is added to the system

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
Deal with customer check in/check ou
Deal with passengers once they have
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Deal with unusual events associated
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Handle travel agents, as users of the
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Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

New Travel Agent

Object manipulated by process

Travel Agents

C

Process constrained by

Plane Removed

Plane removed from the fleet.

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
Deal with customer check in/check ou
Deal with passengers once they have
Deal with unusual events associated
Deal with unusual events associated
Handle travel agents, as users of the
Handle travel agents, as users of the
Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Plane Removed

Object manipulated by process

Plane

D

Process constrained by

Remove CIP

A CIP leaves the club

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
Deal with customer check in/check ou
Deal with passengers once they have
Deal with unusual events associated
Deal with unusual events associated
Handle travel agents, as users of the
Handle travel agents, as users of the
Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Customer Leaves Premier Club

Object manipulated by process

CIP

D

Process constrained by

Remove Other System Interface

The system we design for Lakeland should be able to "talk" to other systems. These systems are out of our control and so from time to time the interfaces by which we communicated with these systems will change. To be flexible and useful our system should be able to adapt to this change by allowing useless interfaces to be removed.

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
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- Handle travel agents, as users of the
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- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

- Other system gets removed

Object manipulated by process

- Other System Interfaces

D

Process constrained by

- Compatibility

Remove Report From System

Remove a report from the system when it is no longer required, instantiated by Delete Report event.

Aliases: System Maintenance

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
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- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

Delete Report

Object manipulated by process

Reports	D
Staff	R

Process constrained by

Remove Route

A flight route is removed.

Aliases:

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
- Deal with customer check in/check ou
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- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

- Delete Route
- Airport Removed

Object manipulated by process

- | | |
|--------------|---|
| Flight Route | D |
| Route | D |

Process constrained by

Remove staff member

When a member of staff leaves Lakeland it is no-longer useful to keep any information about them. They should therefore be removed from the system.

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
Creation of ad-hoc reports which colla
Deal with cancelled bookings (in scop
Deal with customer check in/check ou
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Handle travel agents, as users of the
Handle travel agents, as users of the
Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Member of staff leaves.

Object manipulated by process

Staff

D

Process constrained by

Remove User From System

When a user has left the company or no longer has access to the system then they need to be removed for security reasons.

Aliases: Delete System User

Supports requirements

- Accept and handle a booking (in scop
- Accept payment and print Tickets (in
- Add new routes to and from destinatio
- Add new routes to and from destinatio
- Create an instance of a flight (in scop
- Creation of ad-hoc reports which colla
- Creation of ad-hoc reports which colla
- Deal with cancelled bookings (in scop
- Deal with customer check in/check ou
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- Handle travel agents, as users of the
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- Interact with other systems. (out of sc
- Interact with other systems. (out of sc
- Maintain a list of all the members of st
- Maintain a list of all the members of st
- Maintain User accounts with differing r
- Maintain User accounts with differing r
- Track customer movement (in scope)
- Track customer movement (in scope)

Started by event

User Removed

Object manipulated by process

Staff	R
System Users	D

Process constrained by

Travel agent removed

A travel agent stops acting as a ticket agent for Lakeland.

Aliases:

Supports requirements

Accept and handle a booking (in scop
Accept payment and print Tickets (in
Add new routes to and from destinatio
Add new routes to and from destinatio
Create an instance of a flight (in scop
Creation of ad-hoc reports which colla
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Deal with cancelled bookings (in scop
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Handle travel agents, as users of the
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Interact with other systems. (out of sc
Interact with other systems. (out of sc
Maintain a list of all the members of st
Maintain a list of all the members of st
Maintain User accounts with differing r
Maintain User accounts with differing r
Track customer movement (in scope)
Track customer movement (in scope)

Started by event

Travel Agent removed

Object manipulated by process

Travel Agents

D

Process constrained by