BRIEF SUMMARY

[0008] Embodiments of the invention described herein thus provide systems and methods for allowing use of what has traditionally been a cargo area of a passenger aircraft to be used as a lower deck cabin. Various modifications to the aircraft are described, as well as various features to be added in order to enhance the passenger experience. For example, there may be provided a lowered technical floor, stairs or other passageways provided at both ends of the lower deck cabin, a window replacement technique, an alternative way of storing cabin luggage, or any combination thereof.

[0008a] According to a first aspect of the present invention, there is provided an aircraft fuselage defining an internal space and having a horizontal wing plane, comprising: a partition floor dividing the internal space into a main deck cabin located generally above the wing plane and a lower deck cabin located generally below the wing plane, wherein each of the main deck cabin and at least a portion of the lower deck cabin are configured for passenger transport and have one or more seating areas; the lower deck cabin comprising a first and second passageways between the upper main deck cabin and the lower deck cabin, the first passageway positioned at one end of the lower deck cabin seating area and the second passageway positioned at an opposite end of the lower deck cabin seating area.

[0008b] According to a second aspect of the present invention, there is provided an aircraft fuselage defining an inner space and having a horizontal wing plane, comprising: a main deck cabin and a lower deck cabin, wherein the lower deck cabin is located below the horizontal wing plane, wherein at least a portion of the lower deck cabin is configured for passenger transport and comprises one or more display screens for displaying images retrieved from one or more cameras external to the aircraft in order to accommodate for a lack of windows in the lower deck cabin.

[0008c] According to a third aspect of the present invention, there is provided an aircraft fuselage defining an inner space, comprising: a main deck cabin and a lower deck cabin, a partition floor generally positioned at wing level that divides the main

deck cabin from the lower deck cabin, wherein at least a portion of the lower deck cabin is configured for passenger transport and comprises one or more side bins positioned along a lower deck cabin sidewall.

[0008d] According to a fourth aspect of the present invention, there an aircraft fuselage defining an inner space, comprising: a main deck cabin and a lower deck cabin, a partition floor generally positioned at wing level that divides the main deck cabin from the lower deck cabin, wherein at least a portion of the lower deck cabin is configured for passenger transport and comprises a luggage storage area rather than or in addition to overhead storage compartments.

[0009] Particularly, examples of the invention relate to an aircraft fuselage defining an inner space, comprising a main deck cabin, a lower deck cabin (with the lower deck cabin being positioned generally below the aircraft wing plane, which may also be referred to as a horizontal wing plane) and at least one of the following features considered alone or in combination :

- a partition floor dividing the internal space into an upper main deck cabin and a lower deck cabin;
- the main deck cabin and at least a portion of the lower deck cabin are configured for passenger transport, with each of the main deck cabin and at least a portion of the lower deck cabin having seating areas;
- first and second passageways between the upper main deck cabin and the lower deck cabin;
- the first passageway positioned at one end of the lower deck cabin seating area;
- the second passageway positioned at an opposite end of the lower deck cabin seating area;
- the first and/or second passageways comprise stairways;
- the stairways comprise one or more straight route segments;