

# **Striving for an era of Grass-Root People**

**---A proposal regarding establishing a world low-cost airlines  
research alliance on “half-standing air tickets”**

**Spring Airlines**

**September 30, 2009**

## Slide 1

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U1

Ladies and Gentlemen, it is a great pleasure for us Spring Airlines, to speak a thought on the future to LCC, also the proposal..., what I would to say is, let's work hard together to strive for an Air Era to Grass-root People.

张武安, 29/09/2009

**In China**

**common people are called  
“grass-root stratum”.**

**We gave ourselves a nick name,  
“Grass people”.**

**The offer of “half-standing air tickets”  
aims to get “Grass people” fly.**

**Low-cost airlines would not forget  
billions people longing for flight.  
There are at least 70% of population in the world  
who never could afford to fly**

### **Outline**

- 1, An unlimited market  
with huge potential**
- 2, Reaction for “Half-Standing Tickets”**
- 3, Our Initial Views**

**1. A market with huge potential**

**Flying is one of human being's inherent dreams.**

**In ancient Greece-Roma fairy stories and ancient Chinese mythology,**

**flying is a "God" innate ability since God was born.**

**However, facing the sky up so high, human beings can only gave a long groan,**

**Gods in Ancient Greece-Roma  
Mythology stories**

**Teenager always want to fly**

**Superman by people's  
imagination**

**Chang E flying to the moon  
in ancient Chinese fairy stories**

**Dunhuang Grottoes Flying ladies  
in Ancient Chinese fairy stories**

**Eight immortals crossing the sea in  
ancient Chinese fairy stories**

**Every Chinese has  
a desire to go to sky,  
Not only for a rapid move,  
but also to see  
how the earth and people on the  
ground look like.**

**Until the Wright Brothers enabled people to enter into a flying Era.  
“The first human flight” in 1903 only lasted for a very short moment  
about 12 seconds with 36.6 meters of flying distance,  
but flying was no longer just Gods’ patent.**

**Low cost airlines in the world**

**For examples,**

**Southwest and Jet Blue in the United States,**

**EasyJet and Ryan Air in Europe,**

**Air Asian in Southeast Aisa, Spring in China,**

**Almost every LCC has an oath as**

**"everyone can fly".**

**however, there is a long way it,**

**In reaffirming the greatness of our LCC,  
we understand that “great is never a given,  
it must be earned”.**

**Every year we can see this scene**



**This picture shows a grass root people with a joyful expression after getting a railway ticket**



**There are at least 70% people who never fly**



**What's the feeling on this scene?**



**Where can we get hundred millions of air seat to allow  
“Grass People ” to go home as soon as possible**

**According to IMF statistics in 2008, China's GDP ranks the third in  
the world and reached 3266.8 U.S. dollars per capita,  
which is positioned in the middle in the world rankings.**

**But there are still 70% of China's population, who never fly in their  
whole lifetime because of high airfare.**

**They may queue for a railway ticket day and night.**

**They may stand in the train more than 10 hours  
only to get home.**

**Will anyone be shocked by scenes which have taken place around us every year?**

**Around the world there are at least 70% of people who have never flied.  
According to the United Nations Statistics, the population  
in developing and least developed countries account for  
85% of the whole population on the earth.  
There are at least 70% of common people who never enjoyed  
modern transportation.**

**The stories happen to others, the pain are in our hearts.  
Most grass root travelers around the world may have such a experience.**

**Mankind has already entered the  
civilization modern society,  
But, when can  
these 70% of the global population,  
afford to fly?**

## **2, Reactions for “Half-Standing Air Tickets”**

## **The dream to fly never stops**

**Manufacturers have spent a lot of money and resources, in order to reduce the cost per seat by technology innovations.**

**We think there is a simple and fast way to reduce 40% cost per seat.**

**That is, to deliver more passengers in a same aircraft.**

**So we began to consider the concept of  
‘half standing air tickets’**

It caused a tremendous dispute after putting forth the idea of  
“half-standing air tickets”

Lots of media, such as CNN, BBC, CCTV, and newspapers, websites in France,  
Germany and Spain, focused on the  
Interview with Spring Airlines on the incredible idea.

People spread the news and left comments online.

As we can see by Google search, there are 91 millions query results on the internet.

This phenomenon shown the truth that  
human beings do desire to "fly", regardless of sitting or standing.

Google 飞机站票 Google 搜索 高级搜索 | 使用偏好

**Key word: standing air ticket**  
(in Chinese)

搜索 飞机站票 获得大约 91,000,000 条查询结果, 以下是第 1-10 条 (搜索用时: 0.38 秒)

**91 millions query results**

上海特价机票, 打折机票  
www.sh-etrip.com 订票电话: 021--52653080/3081 国际国内机票酒店2-7折

飞机站票的相关焦点

飞机站票: 不是站 是设“吧台座” - 3小时前  
至于实现的时间, 有媒体称春秋航空最快将在年内向民航局运行审定部门提出卖飞机站票的申请, 但张武安昨天说, 时间尚不能预期, 目前这只是一个假设。 ...  
四川新闻网 - 475 篇相关文章 >  
毕晓哲: 飞机上卖站票和火车票实名制 - 荆楚网 - 4 篇相关文章 >  
过半数网友支持“站飞机”(图) - 和讯网 - 2 篇相关文章 >

聊聊飞机站票  
春秋航空生造了一条新闻《春秋航空欲售飞机站票只待政府批准》, 看看内文就知道了, 无非是春秋航空的董事长王正华先生在拍大佬的马屁。大佬说: 飞机卖站票吧! ...  
www.hecaitou.net/?p=5840 - 网页快照 - 类似结果

飞机站票: 不是站是设“吧台座”- 飞机站票- 四川新闻  
2009年6月27日 ... 至于实现的时间, 有媒体称春秋航空最快将在年内向民航局运行审定部门提出卖飞机站票的申请, 但张武安昨天说, 时间尚不能预期, 目前这只是一个假设。 ...  
scnews.newssc.org/system/2009/06/27/012079758.shtml - 3小时前 - 类似结果

春秋航空董事长: 若政府批准敢尝试卖飞机站票- 搜狐新闻

购买特价机票上国航官网  
机票+酒店特惠, 还有额外里程赠送  
仅限国航网站和订票热线4008986999  
www.airchina.com.cn

上海“淘机票”旅行网  
提供国内外机票、特价机票、打折机票  
订票咨询热线: 021-51085567  
www.taojp.com  
上海市

携程推出往返程特价机票  
往返程特价机票更优惠, 让你省心省力  
网上注册订票送积分。T:400-820-6666  
www.ctrip.com

游易网, 定机票送畅销书  
集85家航空公司10万条航线, 机票折扣  
定机票送最新最潮的畅销书, 会员专享  
www.yoee.com  
上海市

上海长城假日给您特价机票  
一样的机票, 不一样的价格

Most of those people on line have shown their opinions support the idea of “half-standing air tickets”.

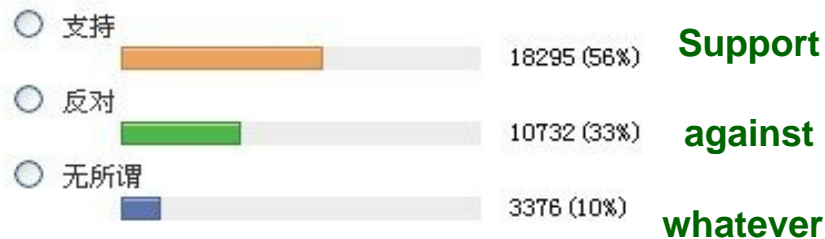
According to an online survey by QQ.com, the largest comprehensive network in China, even more than half said: “We are willing to buy half standing air tickets, as long as

过半数网友：飞机站票敢卖我就敢买 **n sell it”**  
More than half netcitizen support the idea

<http://finance.qq.com> 2009年06月23日09:06 腾讯财经 我要评论 (30)

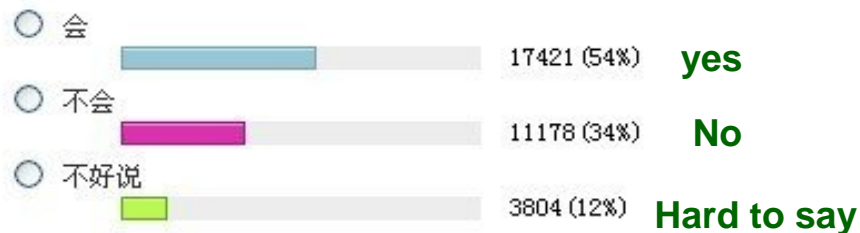
你支持开卖飞机站票吗? (必选)

Do you Support half standing air ticket



如果真卖飞机站票，你有可能购买吗? (必选)

Will you buy half standing air ticket?





**“I dreamed to buy an half-standing air ticket last night!”  
Hope is what we saw in words by “octopus”, a young user  
in Sohu community online.**

**“A great progress of China's history  
—on the emergence of Half-standing air tickets”,  
hope is what we heard in the voice of “bloodskt”, a passionate user  
in “Xisi Hutong”, China's largest community network.**



昨晚梦见买到飞机站票啦 - 民间纪事-人文观察-搜狐社区 - Microsoft Internet Explorer

地址: http://club.news.sohu.com/r-minjian-3386623-0-0-0.html

论坛名称: 民间纪事 http://mj.club.sohu.com 复制 加入个人珍藏

斑竹: 悠悠闲云 落雪是花a 杰尔文森 陆地上的海蛎子 忘了-算了

专家: 申请成为专家

文章检索 请输入关键字 全文 搜索

主题: 昨晚梦见买到飞机站票啦 阅读 2590 回复 4 [回复] [编辑] [修改]

**八爪鱼** [fores@sohu]  
头衔: 版友  
等级: 12级  
魅力: 110896  
发帖数: 55995  
积分: 6779

[加为好友] [传小纸条] [送礼物] 2009-06-26 13:25:42 楼主

**张娜拉对妈妈说: 我要吃五谷杂粮**

[民间纪事] [焦点约稿16] 桑兰 vs 小保姆: 各打50大板

[镜头看世界] YORVIK Viking Centre 海盗城

[镜头看世界] 细数睡姿最美女星

**核心提示:** 近日, 中国春秋航空董事长王正华表示, 只要中国政府的适航部门批准, 他就敢尝试“给飞机卖站票”, 这个话题是国务院张德江副总理提出来的。这个说法如果实现, 坐飞机就像坐公共汽车一样方便, 航班上的人数可以增长40%, 机票的价格也可以降下来。



地址: http://www.xici.net/u15891002/493475715.htm

西祠胡同 用户/ID 密码 登录 注册新用户

**bloodskt的角落** http://u15891002.xici.net

首页 | 文章 | 相册 | 彩信 | 加好友 | 留言 | 请输入

**我的名片**

**中国历史的伟大进步——论飞机站票的出现**

09-06-27 23:46 发表于:《[河海同窗情](#)》 分类: 未分类



bloodskt

ID 号: 15891002  
注册时间: 08-12-31  
上次登陆: 09-09-13

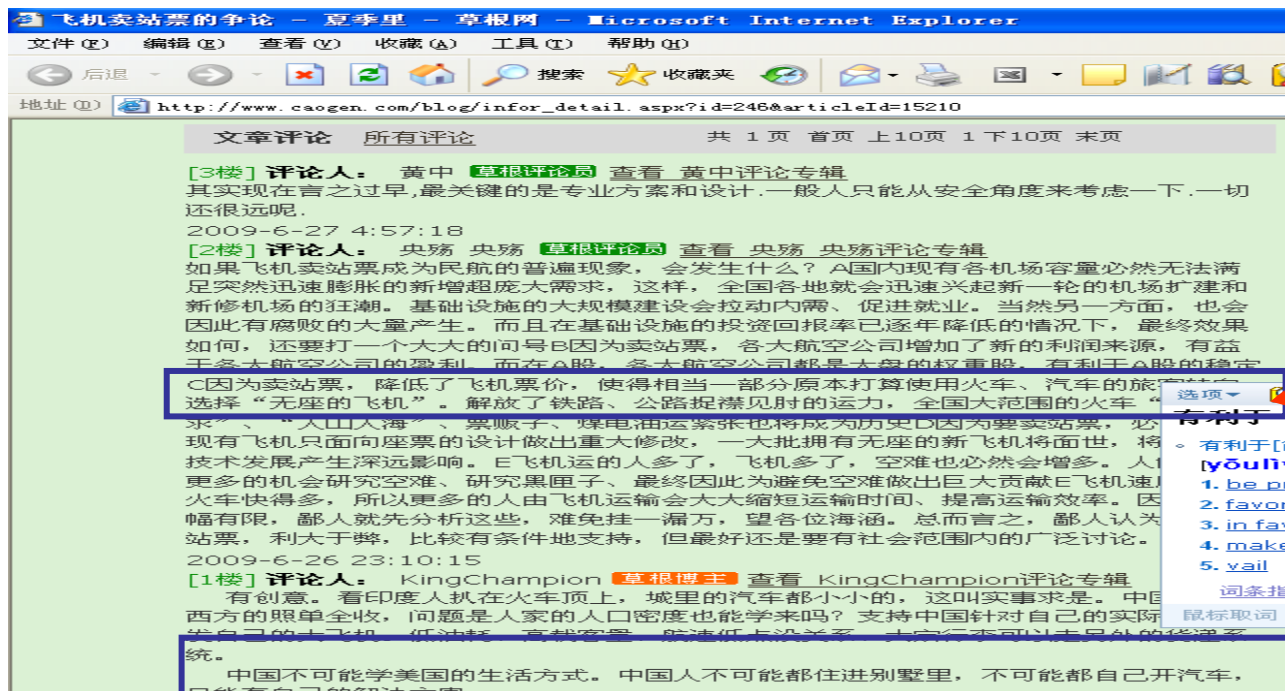


春秋航空  
SPRING AIRLINES  
China-SSS  
XINHUA

“Chinese people can not follow American’s life styles. It is impossible that every Chinese people lives in a villa, drives a car. We should find out the right solution for ourselves.”

A user named "KingChampion" graduated from Physics Department of East China Normal University, affirmed and encouraged the proposal of half standing air seats.

“Reduced airfares by half standing seats can make more common people fly”.



“half standing air tickets”.

Comment by Yang Shang

Comment by King Channpion

Ms. Mary Kirby, a CEO from Chicago, U.S.A, commented on “World Flight” website: "I agree, it will completely change the concept of travel. Short-term travel will become an interesting trip to hell", which vividly predicts the half-standing experience.

<http://www.flightglobal.com/blogs/runway-girl/2009/07/stand-by-your-seats-interiors.html#comment-1769589>



By Olivia Phyllis  
on August 2, 2009 8:22 PM | Reply

As a experimental twenty something, I have to say I think this is a great idea! To think that I could fly for free across seas via an airline that is willing to accept ancillary revenue would be great. It would revolutionize travel!!! A lot more people would travel and be more diverse.



Mary Kirby replied to Olivia Phyllis  
on August 2, 2009 8:34 PM | Reply

**Comment by Mary Kirby**



I agree. I think this could change our entire view of travel. Short-haul would become a hell of a lot more interesting!



By jbzoom  
on August 5, 2009 1:38 AM | Reply

The idea is older than you think. Shakespeare did it at the Globe theatre! Maybe having the passengers stand would make room for live in-flight entertainment.

## **The Assumption of a new X322 Aircraft**

**Therefore, the “half standing air seats” concept is to modify the cabin layout of X320 and reduce costs per seat in order to carry more passengers by X320.**

**Now, We call this new airplane: X322.**

**Just like “The Project Hope” in China enables more children to go to school, the X322 is a “The Project Hope” for aviation industry to make more grass root people to fly with LCCs.**

## **3, Our Initial Views**

**5 points need to be clarified firstly**

- A, The precondition is Air Safety;**
- B, Another precondition is to be approved by Airworthiness Authority;**
- C, The target consumer is grass root people;**
- D, it is just a market demand, not pure technical solution;**
- E, Suitable for short haul.**

**The top principle is safety**

**In a modern air era,  
it worth nothing without safety.**

**Target customers are grass root people.  
It is a little less comfortable than first class and  
economy class seats.  
So it is designed for price sensitive passengers.**

## **Our initial Idea**

**Base on 180 seats X320,**

**The first 4 rows seats in front cabin remain 75cm distance with each row,**

**Every 2 rows of seat modified to 3 rows of half standing seat for the rest of seats,**

**it is 50cm distance between each row.**

**So in the middle and end of the cabin, 26 rows previous seat become 39 rows of half standing seat,**

**6 passengers per row remain the previous width.**

**Now, the X322 can carry 258 passengers**

**The Spring's fare is already 36% lower than industry average, half standing seats will then further reduce its fare by 40%.**

# **Maximum payload feasibility analysis**

**The maximum payload of the assumptive airplane is about 19,000 kg on the base of existing engines (example:X320 WV=12 is being operated by Spring Airlines )**

**253 passengers can be on board**

**on the base of existing power of X320**

**(each passenger weight is about 75kg, under the current standard of CAAC )**

**On the base of existing power of X320**

**If each passenger takes 15kg package on board**

**211 passengers can be on board**

**If each passenger takes 7kg package on board**

**231 passengers can be on board**

**Due to the fact above, X320 need more power or less OEW (operated empty weight)**

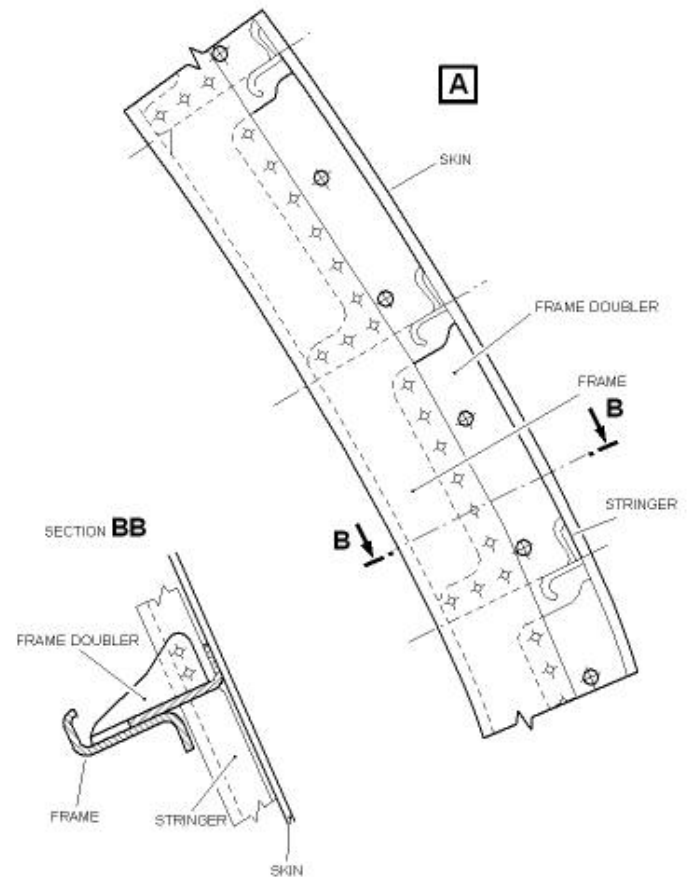
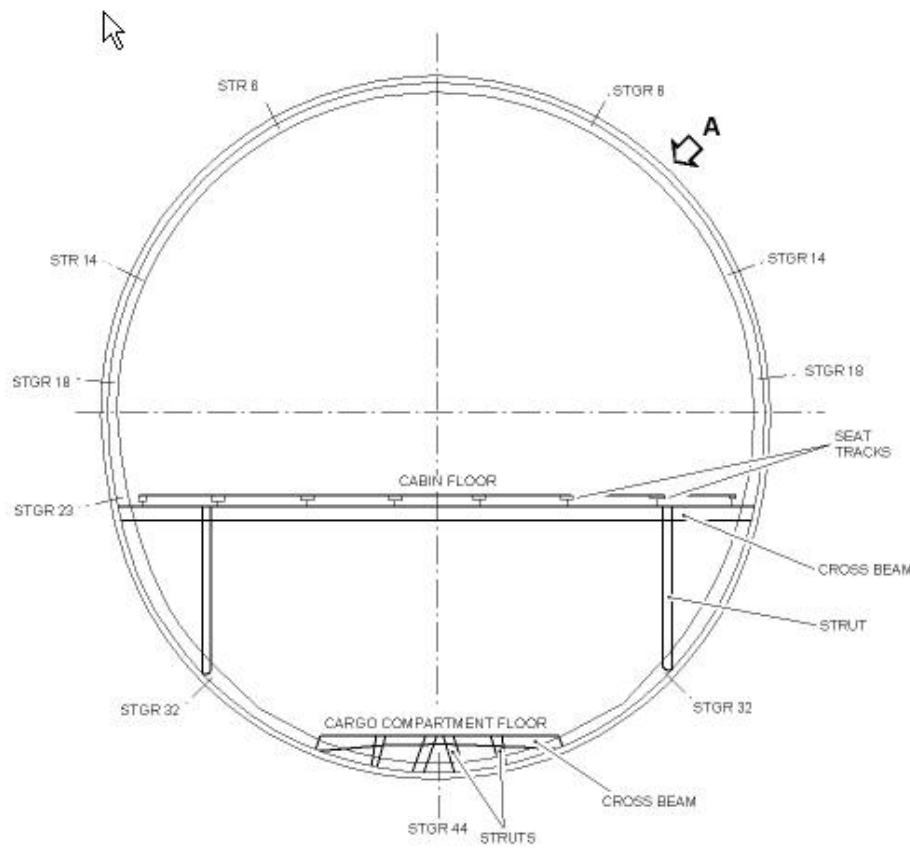
# **Floor structure analysis**

**(X320 as example)**

## **Cabin floor**

**is designed to accommodate 180 passengers in X320 cabin. If more passengers are on board, cabin floor need to be re-designed**

# Cabin floor support structure (X320 as example)



# **Fresh air supply analysis**

**(X320 as example)**

**Fresh air quantities in cruise phase is 0.817KG/S  
supplied by existing Air condition system of X320  
Each passenger must be supplied with 250g/M fresh  
air by air condition system in order to  
comply with CCAR25-831**

**Due to the restrictions the maximum passenger  
number**

**is 196(including aircrew) on the basis of existing  
air condition system**

# **Eligible suppliers manufacture quality equipments**

## **Passenger seat and belt**

### **Manufacturing requirements**

**The following regulations have to be complied if supplier intend to manufacture seats and belts for A/C**

**CCAR 25.561-seat, sleeper, shoulder tape and belt**

**CCAR25.785- emergency landing**

**Even if passengers are half-standing, safe equipments have to be equipped in cabin in order to ensure passenger safety**

**while taking off bumping and landing**

### **Operation requirements**

**Passenger seats have to comply with CCAR121.213 in order to install them in cabin.**

**If passengers is half-standing on board,**

**Layout have to been changed.**

**EASA, FAA and CAA have no regulations on half standing**

# **Doors, slide and oxygen equipments have to be changed in the same time**

**Eligible suppliers manufacture quality equipments**

**Emergency equipments**

**Emergency doors**

**According to CCAR25-807,**

**More emergency doors have to be equipped.**

**four type doors and four type doors have to be designed  
for X320 now**

**195 passenger can escape from these doors in theory.**

**Just 180 passengers and 6 aircrews can escape from these doors within  
90 seconds while applying TC.**

**Because of these, more or bigger doors will be needed if more  
passengers are on board.**

**Emergency slides**

**In order to load more passengers on board,  
slides have to be changed with doors in the same time.**

## **Oxygen equipments**

**Oxygen equipments have to be equipped for every passenger in order to comply with CCAR25-1443 and 91-423**

**There are 7 oxygen masks in overhead container for each row passengers in X320 cabin. For this reason, there are 210 oxygen masks in cabin.**

**If the quantities of passenger is below 210, the existing oxygen masks are acceptable.**

**But overhead container may be removed in order that more space is available. So oxygen mask may been moved other location.**

## **Fire extinguisher**

**Fire extinguishers have to been equipped to comply with CCAR121.309**

**If overhead containers are removed, Fire extinguishers may**

**Analysis on the modification of cabin sheet  
system (electron), departure system,  
selling system**

**System modification is feasible to meet the needs of  
Cabin layout modification**

# **Passenger seats lay out**

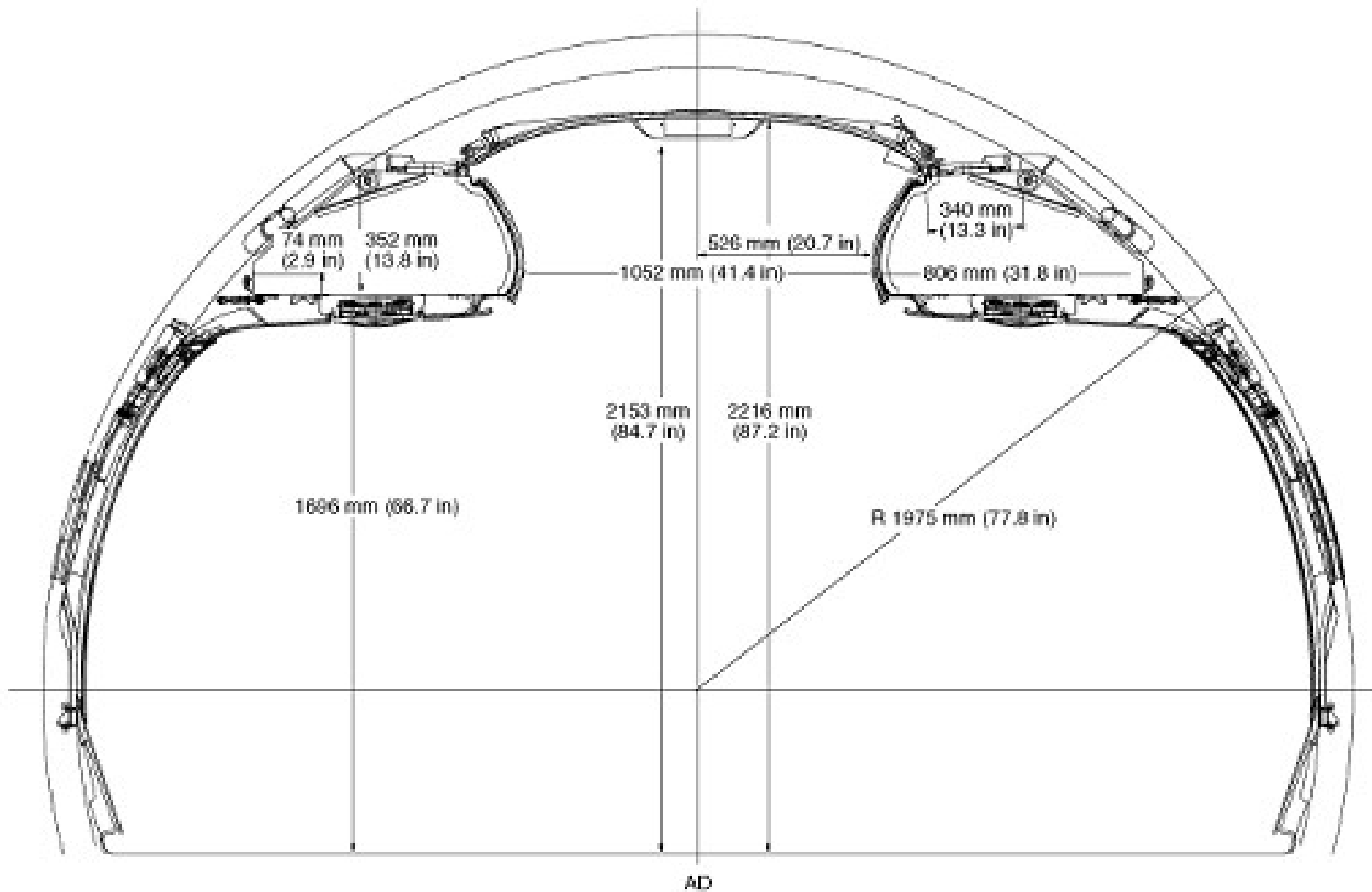
**Short passengers sit by window**

**High passengers sit by aisle**

**Arrange different passenger according to the above principle while checking in.**

**Luggage rack can be moved up, and the cabin floor can be moved down in order to retain sufficient space.**

# Cabin Space diagram





# **Economy analysis**

**Costs should be counted as below:**

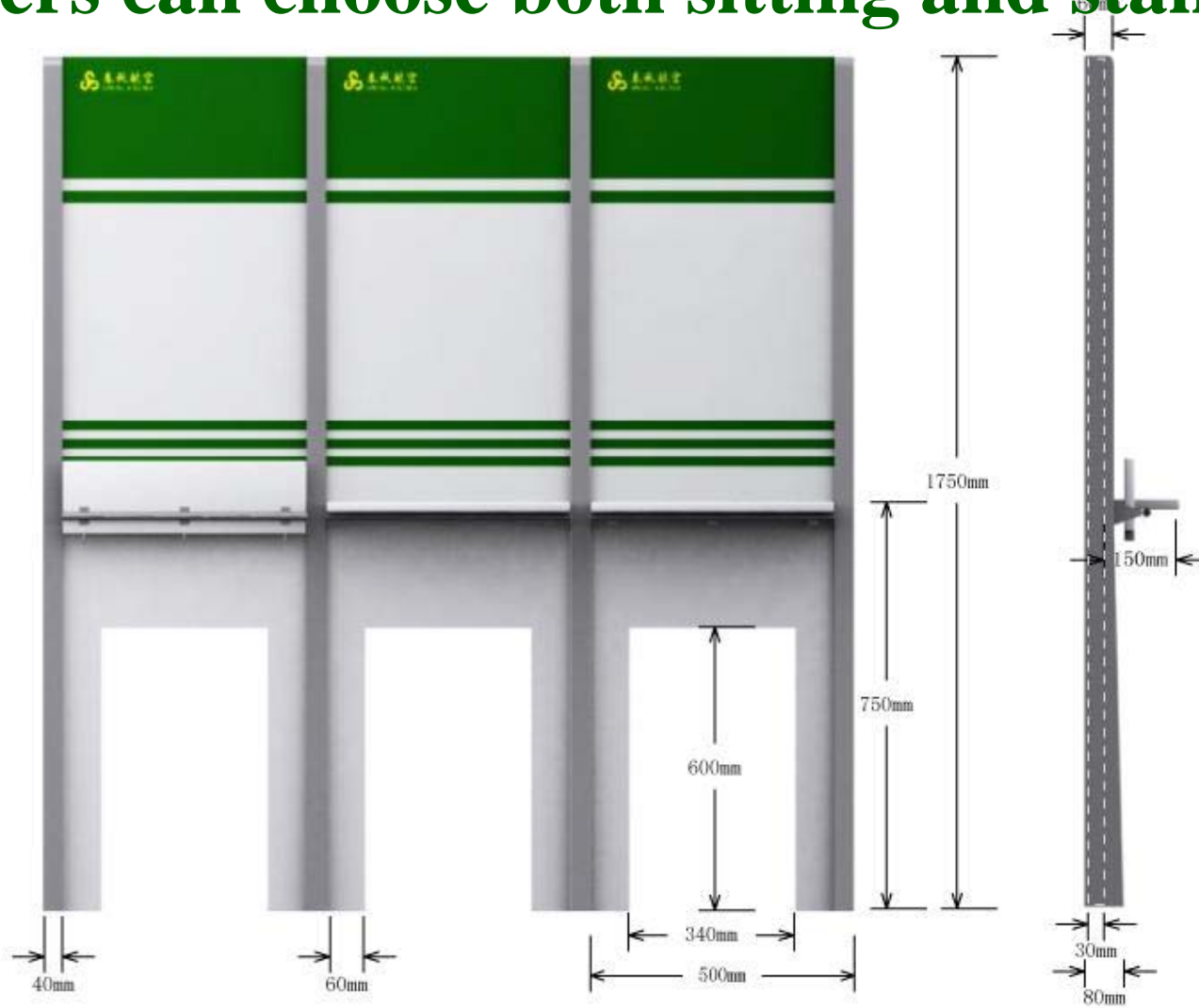
**The cost for applying TC,  
modifying,  
re-weight,**

**IT system modification,  
fuel consumption and limitation for  
cargo payload**

**Etc.**

# Seat Solutions A : Higher tip-up seat

Passengers can choose both sitting and standing



# Seat Solutions A : Higher tip-up seat

Passengers can choose both sitting and standing



# Seat Solutions A : Higher tip-up seat

Passengers can choose both sitting and standing



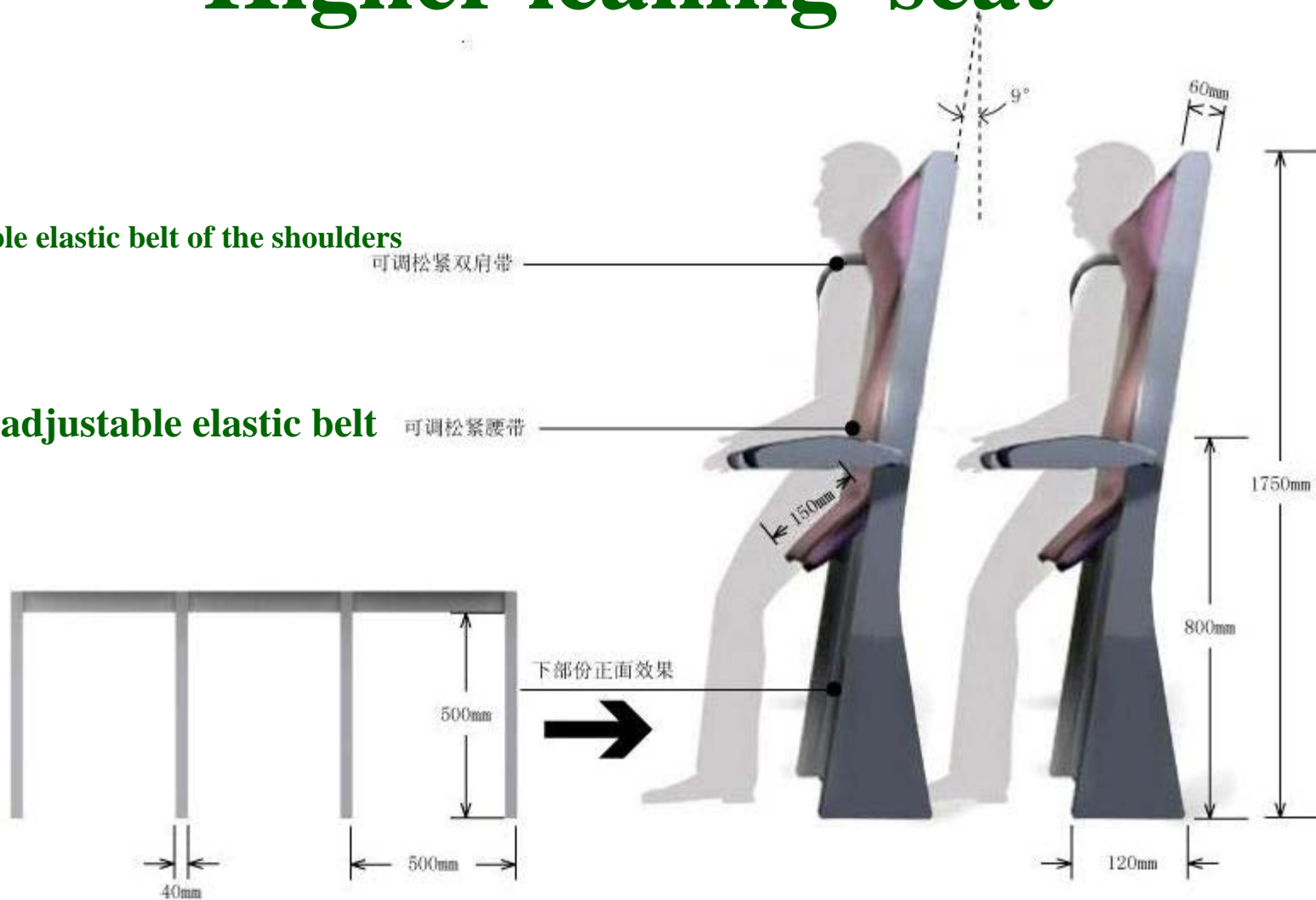
# Seat Solutions B : Higher leaning seat

The adjustable elastic belt of the shoulders

可调松紧双肩带

The adjustable elastic belt

可调松紧腰带



# Seat Solutions B : Higher leaning seat



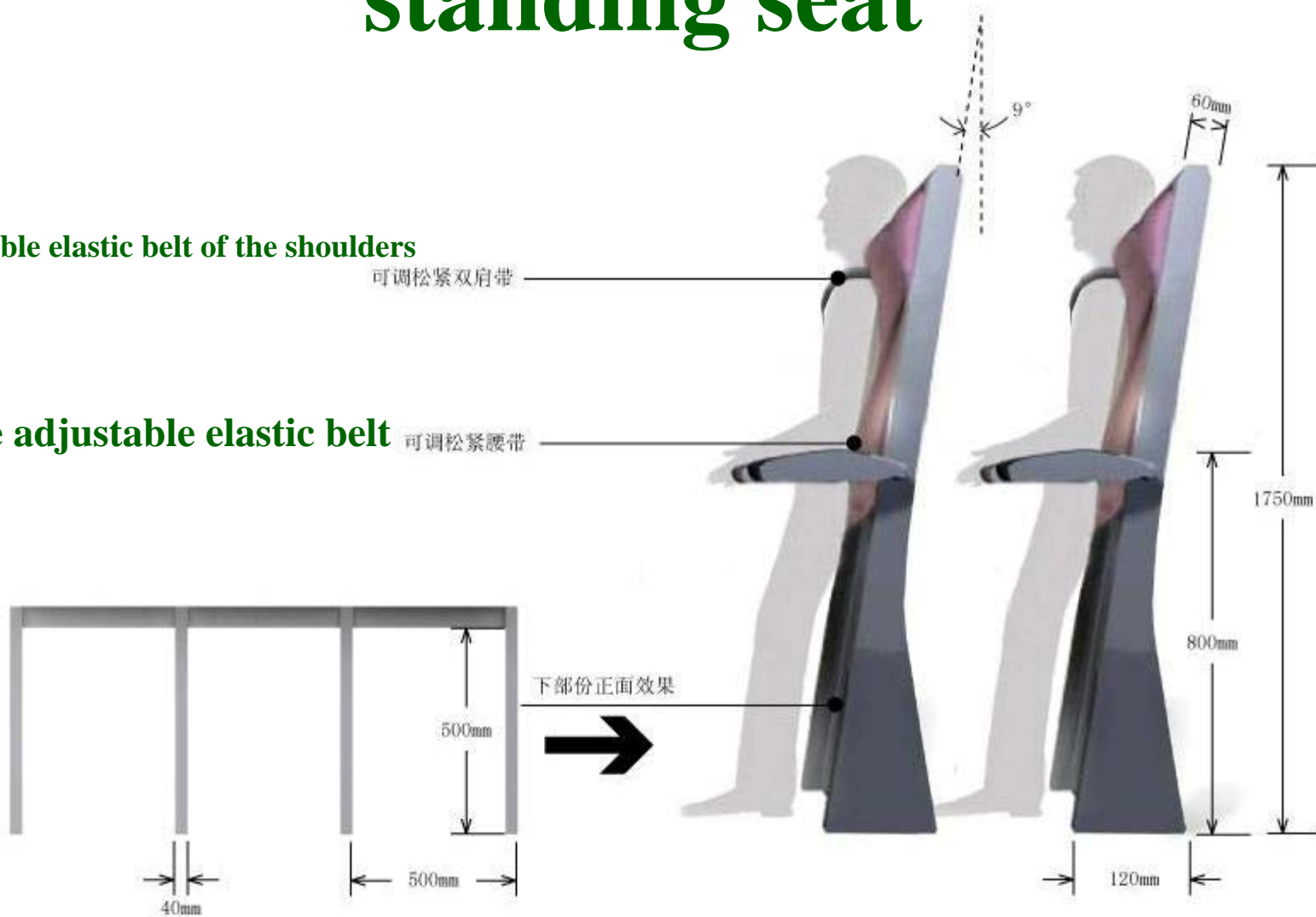
# Seat Solutions C : standing seat

The adjustable elastic belt of the shoulders

可调松紧双肩带

The adjustable elastic belt

可调松紧腰带



# Seat Solutions C : standing seat



# Seat Solutions C : standing seat



**Above are the first sample  
seat.**

**In the following sample later,  
we will make a treat program.**

**conclusion : the idea is feasible**

**All considerations above**

**Need joint efforts from**

**Manufacturers,**

**Component Suppliers**

**And Airworthiness Authority**

**The Aircraft type need to meet the  
requirement of safety and obtain type  
license.**

**Despite the feasible idea and technology ,  
The difficulty lies in mercerization and  
industrialization.**

**A few orders from one airline,  
obviously, is not able to attract aircraft manufacturer  
to design a new aircraft type.**

**But if all low cost airlines made an alliance and place  
a large order, such as 500, 1000, 2000, 3000  
aircraft order,**

**the new aircraft type, which was designed for grass  
root people and named X322 by LCCs,  
is no longer just a dream on paper.**

**In order to provide more safe, low fare flights to  
more grass root people, Spring suggests:  
On the LCC congress, let's establish a research and  
development alliance for "half standing air seats".  
please join us and work together!**

**Any suggestions and comments  
will be appreciated**

**Thanks !**