



一款人人都能使用的飞行汽车即将上市

A flying car that anyone can use will soon go on sale

中文导读：

Pivotal 公司（前身为 Opener 公司）刚刚推出了一款新型 eVTOL（电动垂直起降）汽车——Pivotal Helix，它是一款单人电动飞行器（EAV）。它定价 19 万美元，并将于明年 1 月上市销售。

Electrically powered vertical-take-off-and-landing (eVTOL) aircraft—flying cars, to the layman—are an idea whose time has not quite yet come, but is fast approaching. Many firms are jostling with each other, offering designs that range from scaled-up multicopter drones, via things which resemble rigid spiders' webs, to fixed-wing/helicopter hybrids. None of these, however, will be Jetson-like family saloons with dad (or even mum) at the controls. Those flying them will require a pilot's licence. Most will probably be used initially as sky-going taxis.

电动垂直起降（eVTOL）飞行器，通常被称为飞行汽车，是一个尚未完全成熟，但发展迅猛的概念。许多公司都在争相推出各种设计，从放大的多旋翼无人机，到类似刚性蜘蛛网的构



想，再到固定翼/直升机的混合型飞行器。然而，这些飞行汽车都不会像“杰森一家”中的轿车那样由爸爸（甚至妈妈）来操控。驾驶这些飞行汽车的人需要有飞行员执照。最初，它们可能会用作空中出租车。

重点词汇：

electrically: adv. 用电力地

vertical-take-off-and-landing (VTOL): adj. 垂直起降的

aircraft: n. 飞行器；飞机

jostling: n. 争夺；争斗

scale-up: adj. 放大的；扩大的

multirotor: n. 多旋翼（无人机）

drone: n. 无人机

resemble: v. 类似；像

rigid: adj. 坚硬的；刚性的

spiders' webs: 蜘蛛网

fixed-wing: 固定翼

helicopter: n. 直升机

hybrid: n. 混合物；混合动力车

saloon: n. 轿车（英国用法）

pilot: n. 飞行员；领航员

licence: n. 许可证，执照

长难句分析：

"Electrically powered vertical-take-off-and-landing (VTOL) aircraft—flying cars, to the layman—are an idea whose time has not quite yet come, but is fast approaching."

这句话较为复杂，包含了一定的修饰和从句。现在来分析其结构和要素：

1. "Electrically powered vertical-take-off-and-landing (VTOL) aircraft": 这是一个复合名词短语，用来描述飞行车辆的类型。它包括了以下要素：

- "electrically powered": 这是一个形容词短语，表示这些飞行车辆是通过电力驱动的。

- "vertical-take-off-and-landing (VTOL)": 这是一个修饰性短语，用来详细说明飞行车辆的特性，即它们可以进行垂直



起降。

- "aircraft": 这是指这些飞行车辆本身，即飞机。

2. "flying cars, to the layman": 这是一个插入语，用来解释 "VTOL aircraft" 对于一般人来说是指什么，即飞行汽车。

3. "are an idea": 这是主谓结构，表示某个概念或观念。

4. "whose time has not quite yet come, but is fast approaching": 这是一个包含定语从句的结构，用来详细说明 "an idea"。其中包括了以下要素：

- "whose time": 这里的 "whose" 引导一个定语从句，修饰 "idea"，表示这个概念。

- "has not quite yet come": 这部分表示这个概念还没有完全实现或变为现实。

- "but is fast approaching": 这部分表示相反的情况，即这个概念正在迅速接近或变得更加现实。

One company has, by contrast, stuck to its guns and carried through its original project to create something which people can purchase and pilot themselves. Helix is a single-seat vehicle, so "flying motorbike" might be a more accurate appellation. It has, however, been carefully crafted by its maker, Pivotal, based in Silicon Valley, to be within America's rules for microlight aircraft. That means anyone, pilot's licence or not, can fly it over non-built-up areas. As a result, from next year those with \$190,000 stuffed down the back of the sofa will be able to order one for personal use—though they will not be able to take delivery until June.

相比之下，有一家公司一直坚定不移地贯彻其最初的项目，创造了一款人们可以购买并亲自驾驶的飞行器。Helix 是一款单座飞行器，因此“飞行摩托车”可能是更准确的称呼。然而，这款飞行器由总部位于硅谷的 Pivotal 公司精心打造，以使其符合美国对微型飞行器的规定。这意味着任何人，无论是否有飞行员执照，都可以在非建筑区域飞行。因此，从明年开始，那



些在沙发后面藏有 19 万美元的人就可以订购一架供个人使用了——尽管他们要到 6 月份才能提货。

重点词汇：

stuck to one's guns: 坚持己见；不退让

carry through: 完成；贯彻

original: adj. 原始的；最初的

project: n. 项目；计划

purchase: v. 购买

pilot: v. 驾驶

single-seat: adj. 单座的

vehicle: n. 车辆

appellation: n. 名称；称呼

craft: v. 精心制作

maker: n. 制造商

Silicon Valley: 硅谷

rule: n. 规则；法规

non-built-up areas: 非建设区域

order: v. 订购

personal: adj. 个人的，私人的

固定搭配：

stuck to one's guns: 坚守立场

Despite the criticism, he stuck to his guns and continued with his innovative project. (尽管遭受批评，他仍然坚守立场，继续进行他的创新项目。)

carry through: 完成；贯彻

She was determined to carry through her plan to launch a new product. (她决心要完成她推出新产品的计划。)

It has been a hairy ride. Pivotal, known as Opener until October 5th, the day Helix was announced, was founded by Marcus Leng, a Canadian. Mr Leng is a mechanical engineer. In 2011, having built up and sold a manufacturing company, he



found himself at a loose end. He had, he says, always been interested in flight, and some back-of-the-envelope calculations he made suggested that electric lift-off of a human-carrying craft, using motors powered by the lithium-ion batteries that were then becoming fashionable, ought to work.

这是一段曲折的历程。Pivotal（直到 10 月 5 日前还被称为 Opener）由加拿大人 Marcus Leng 创立。Leng 先生是一名机械工程师。2011 年，他在创立并出售一家制造公司后，他发现自己无所事事。他说他一直对飞行有浓厚的兴趣，他通过一些粗略计算表明，使用由当时流行的锂离子电池驱动的电机电机，载人飞行器的电动升空应该可行。

重点词汇：

hairy: adj. 危险的；可怕的

announce: v. 宣布；公布

founder: n. 创始人

mechanical: adj. 机械（方面）的；机械般的

built up: 建立；发展

sold: v. 出售

manufacturing company: 制造公司

at a loose end: 闲置不用

flight: n. 飞行

back-of-the-envelope calculations: 手算估算

lift-off: n. （火箭等）离地升空，垂直发射

lithium-ion battery: 锂离子电池

fashionable: adj. 流行的，时髦的

固定搭配：

at a loose end: 闲置不用

After retiring, he found himself at a loose end and decided to take up a new hobby. （退休后，他觉得自己无所事事，决定开始培养新的兴趣爱好。）

back-of-the-envelope calculations: 手算估算



They made some back-of-the-envelope calculations to estimate the project's potential cost. (他们进行了一些手算估算, 以估计该项目的潜在成本。)

He thus built a prototype and flew it in the garden of his house in Warkworth, Ontario. He called it BlackFly. It was (and still is, for it is preserved in the company's museum) almost literally a thing of sealing-wax and string. The airframe consisted of carbon-fibre struts held together in at least one place by a chopstick. The propellers were wooden. It rose into the air but once. That flight was, though, the first ever made by a human being in an eVTOL craft.

因此, 他制造了一架原型机, 并在安大略省瓦克沃斯的自家花园里试飞。他将其命名为 BlackFly。它过去 (现在仍然, 因为它被保存在公司的博物馆里) 几乎就是用密封蜡和绳子做成的。机身由碳纤维支架组成, 至少有一处是用筷子固定在一起。螺旋桨是木制的。它只升空一次。不过, 那次飞行是人类首次驾驶 eVTOL 飞行器进行的飞行。

重点词汇:

prototype: n. 原型; 样机

preserved: adj. 保存的

sealing-wax: 封蜡

airframe: n. 机身; 飞机框架

carbon-fibre: 碳纤维

strut: n. 支撑杆

propeller: n. 螺旋桨

rose into the air: 升空

固定搭配:

rose into the air: 升空

The balloon slowly rose into the air, carrying its passengers with it. (气球缓缓升入空中, 带着乘客一同升



空。)

Twelve years later, after much tinkering, the firm thinks it has something marketable. On the way, besides changing its location, its name, and the name and livery of its putative product (Helix is largely white, with a red go-faster stripe), it has also changed boss. Mr Leng handed over the reins in 2022, to Ken Karklin, who had previously worked for AeroVironment, a maker of military drones.

12年后，经过多次改进，该公司认为它有一些销路。在这个过程中，除了改变了公司的地点、名称以及产品的名称和涂装（Helix 主要是白色，带有一道红色的加速条纹），他们还更换了老板。Leng 先生于 2022 年将公司交给了肯·卡克林（Ken Karklin），他曾在军用无人机制造商 AeroVironment 工作。

重点词汇：

tinkering: n. 折腾；小修小补

marketable: adj. 有销路的；适销的

location: n. 位置；地点

livery: n. 装饰；制服

putative: adj. 推测的；假定的

stripe: n. 条纹，线条

rein: n. 缰绳；控制

hand over: 移交

固定搭配：

much tinkering: 大量的调试

After much tinkering, they finally got the machine to work perfectly. (经过大量的调试，他们终于让机器完美运行。)

hand over the reins: 移交领导权



He decided to hand over the reins of the company to his son and retire. (他决定把公司的领导权移交给儿子并退休。)

The rebaptised aircraft has, nevertheless, changed little in its fundamentals over the years. The struts which held the original together have been replaced by a monocoque body. The chopstick is gone. But it still sports two pairs of wings, one fore and one aft, and eight propellers (two on each wing), meaning it vaguely resembles a squashed “H” when seen in the sky from below. And there is no undercarriage. Instead, its belly is curved in a way reminiscent of a humpback whale’s, so it rocks to stability after landing.

尽管如此，经过重新改装的飞机多年来其基础几乎没有什么变化。最初支撑它的支架已被整体式机身取代。筷子也不见了。但它仍然配备了两对机翼，一前一后，以及八个螺旋桨（每个机翼上两个），因此从下面看向天空时，它在形状上有些类似一个扁平的“H”。而且没有起落架。相反，它的腹部呈弧形，让人联想到座头鲸的腹部，因此它在着陆后会摇摆以保持稳定。

重点词汇：

rebaptised: adj. 改名的

aircraft: n. 飞行器；飞机

fundamental: n. 基本原理；基础

monocoque: n. 单壳体

pair: n. 对；双

wing: n. 翅膀

fore: adv. 在前面

aft: adv. 在后面

propeller: n. 螺旋桨

resemble: v. 类似

squash: adj. 压扁的



undercarriage: n. 起落架

belly: n. 腹部

curved: adj. 弯曲的

reminiscent: adj. 使人联想的；怀旧的

 **固定搭配:**

rock to stability: 摇摆以保持稳定

The ship's design allows it to rock to stability in rough seas. (这艘船的设计使其能够在恶劣的海况中摇摆以保持稳定。)

Pilot's licence or not, buyers will still need to undertake at least some training to fly a Helix. Pivotal insists on this—not least because it worries that an early accident would be catastrophic for sales. For the same reason, the craft's software will stop the pilot doing anything that does not fit inside its aerodynamic-safety envelope. And if, despite this, something does go wrong, it is fitted with a parachute. Pull the appropriate knob hard and an explosive charge will blast this clear of the fuselage, allowing its canopy to open and carry the aircraft to terra firma.

无论是否有飞行执照，购买者仍然至少需要接受一些培训才能驾驶 Helix。Pivotal 坚持这一要求，尤其是因为它担心早期发生的事故将对销售造成灾难性的影响。出于同样的原因，飞行器的软件将阻止飞行员执行任何不符合其空气动力学安全范围的操作。尽管如此，如果真的出了问题，它还配备了降落伞。只需用力拉动相应的开关，炸药就会将降落伞炸出机身，从而打开舱盖并将飞机带到陆地上。

 **重点词汇:**

Pilot's licence: 驾驶执照

undertake: v. 承担；进行

insist: v. 坚持



accident: n. 事故；意外事件
catastrophic: adj. 灾难性的
sale: n. 销售
software: n. 软件
aerodynamic: adj. 空气动力学的
envelope: n. 信封；气囊；极限数据
fitted with: 配备了
parachute: n. 降落伞
appropriate: adj. 适当的；合适的
knob: n. 旋钮
explosive: adj. 易爆的
fuselage: n. 机身
canopy: n. 机舱盖
terra firma: n. 平地；陆地

 **固定搭配:**

Pilot's licence: 驾驶执照

To operate this aircraft, you need a valid pilot's licence. (要操作这架飞机，你需要有效的驾驶执照。)

undertake some training: 进行培训

All new employees are required to undertake some training as part of their onboarding process. (所有新员工都需要在入职过程中进行一些培训。)

The Helix's top speed is a respectable 100kph, but its range is only 30km. And refuelling it is a bit of a pain. Filling up from the mains takes 4½ hours, though a special high-power system similar to those employed for electric cars can bring that down to 75 minutes. Not yet quite the Jetsons, then. But a possible step on—or perhaps above—the road.

Helix 的最高时速可达 100 公里，但续航里程只有 30 公里。并且充电有点痛苦。通过电源充满电需要 4.5 小时，不过类似



于电动汽车所采用的特殊高功率系统可以将这一时间缩短至75分钟。所以，它还没有完全像《杰森一家》那样。但可能是在这条道路上迈出的一步。

重点词汇:

respectable: adj. 值得尊敬的; 体面的

range: n. 航程; 范围

refuelling: n. 补充燃料

pain: n. 痛苦; 困难

fill up: 加油

main: n. 电源

high-power: 高功率

employ for: 用于

electric: adj. 电的

固定搭配:

top speed: 最高速度

The car's top speed is impressive, reaching up to 200 miles per hour. (这辆车的最高速度令人印象深刻, 可达到每小时200英里。)

fill up from: 从...加油

I need to fill up the car from the nearest gas station.
(我需要从最近的加油站为车加油。)

bring that down to: 将...降低到

The new technology can bring that down to just a few minutes. (新技术可以将这个时间缩短到几分钟。)

