



Search for "Boston Dynamics, introducing Handle"



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## video news

Watch the incredible Handle: Handle is a research robot that stands 2 m tall, travels at 15 km/h and jumps 1.2 m vertically. It uses electric power to operate both electric and hydraulic actuators, with a range of about 24 km on one battery charge.



## designed by algorithms

Using certain requirements as parameters, the architects developed an algorithm that produced 10,000 panels for the auditorium of Hamburg's Elbphilharmonie, each with a unique shape and pattern, mapped to clear aesthetic and acoustic specifications.



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Find all **vocabulary** here:

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## regulars

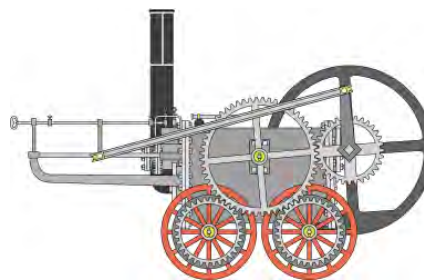
<b>editorial</b>	<b>3</b>
<b>news &amp; trends</b>	<b>6</b>
Dot has invented a smartwatch-which is designed for users who are blind.	
Japanese inventor, Akinori Ito, has created a household appliance which converts plastic bags into fuel.	
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Hard nuts to crack - machine tool safety	
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## features

<b>russian alligator</b>	<b>10</b>
The Ka-52 Alligator is powered by two Klimov VK-2500 turboshaft engines, each producing a whopping maximum take-off power of 2,400 hp.	
<b>additive manufacturing</b>	<b>14</b>
Siemens makes gas turbine blades using Additive Manufacturing (AM) technology.	
<b>stretching our imagination</b>	<b>16</b>
Hyperloop will get you from London to Edinburgh or LA to San Francisco in under 30 minutes.	
<b>bat or robot?</b>	<b>22</b>
<b>unusual engines</b>	<b>30</b>
What engines will propel humanity into the future? Here are some of the world's most unusual ideas for propulsion.	

## history - steam locomotives

The earliest railways employed horses to draw carts along railway tracks. In 1784, William Murdoch, a Scottish inventor, built a small-scale prototype of a steam road locomotive. A workable steam train would have to await the invention of the high-pressure steam engine by Richard Trevithic in 1802.



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## tanzania - untamed africa

Wildlife, beaches, friendly people, fascinating cultures, Serengeti, Ngorongoro, Mt Kilimanjaro, Zanzibar – Tanzania has all these and more wrapped up in one adventurous, welcoming package.



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## technology

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The hybrid diesel locomotive is an incredible display of power. It combines some great mechanical technology with some heavy duty electric motors.

### technical dictionary 32

Railway terminology

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We sail along at 110 miles an hour - sometimes accelerating to 150. Heavy industry, rice paddies, and blue tile roofs flicker by as we sweep from Kyoto to Tokyo. We're in the Shinkansen express train - the "Bullet Train."

## worldwide

### business partner 38

Foreign companies, foreign governments, and Iranians expect to see improvements to Iran's investment climate after implementing a nuclear deal and sanctions relief in the country.

### topic 20

Lean thinking is a business methodology that aims to provide a new way to think about how to organise human activities to deliver more benefits to society and value to individuals while eliminating waste. The term lean thinking was coined by James P. Womack and Daniel T. Jones.

## language

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