

Production-ready maker marketplace in three weeks? IBM **Cloud** Garage says ... **bring it ON.**

Holly Cummins

STSM, WW Development Lead
IBM Cloud Garage

Pete Wood

Head Technology Evangelist
RS Components

Ed Bryning

Head of 10X Innovation Consultancy
RS Components

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IBM Cloud Garage at Think 2019

Disrupt, innovate, operate, and motivate like a startup.

Get empowered with proven practices, methodologies, agile collaboration, and decision-making confidence to build the solid enterprise-strength solutions you need — fast.

People

Collaborate across disciplines to move faster and work smarter.

Platform

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Places

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Practice

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Visit us

Moscone South, Booth TT H

Connect with us

garage@us.ibm.com

IBM Cloud Garage on the Cloud and Infrastructure Campus

Meet Garage experts and personalize your cloud and AI journey in the Cloud and Infrastructure campus at the Think expo.

Visit us at IBM Cloud Garage San Francisco at Galvanize

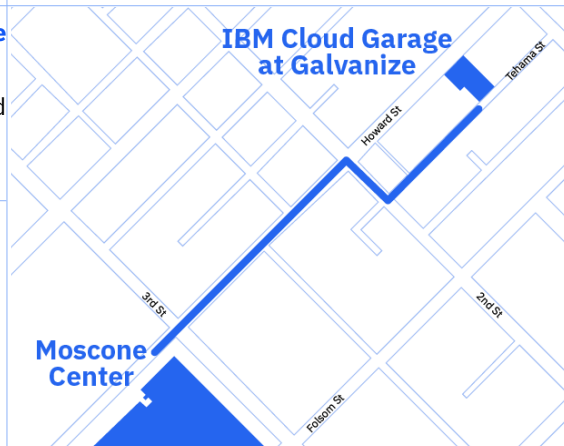
Don't miss the chance to visit our flagship Garage right in the heart of the SoMa startup community at Galvanize, a short walk from Moscone Center. Come to our IBM Cloud Garage expo booth to sign up for an **IBM Cloud Garage Practices Tour** or an **IBM Cloud Garage Framing Workshop**.

Hands-on-keyboards at Think Academy

Grab a spot at our IBM Cloud Garage expert-led labs and bootcamps. Check the Think app for our sessions!

Learn alongside IBM Cloud Garage experts

Browse our sessions in the Think app to gain maximum impact applying our method and innovation culture to your organization. Look for our sessions in the **Cloud Garage** sub-topic.



IBM Cloud Garage Keynote

Don't miss our IBM Cloud Garage Trends and Directions keynote with Stephanie Trunzo, Global Head of IBM Cloud Garage, IBM Fellow Jason McGee, and several visionary Garage clients.

From Idea to MVP: Cloud Garage Live

Session ID: 6927A

Join IBM Cloud Garage at Pier 39

Stop by the IBM Cloud Garage Beer Garden to grab a pint and meet our team.

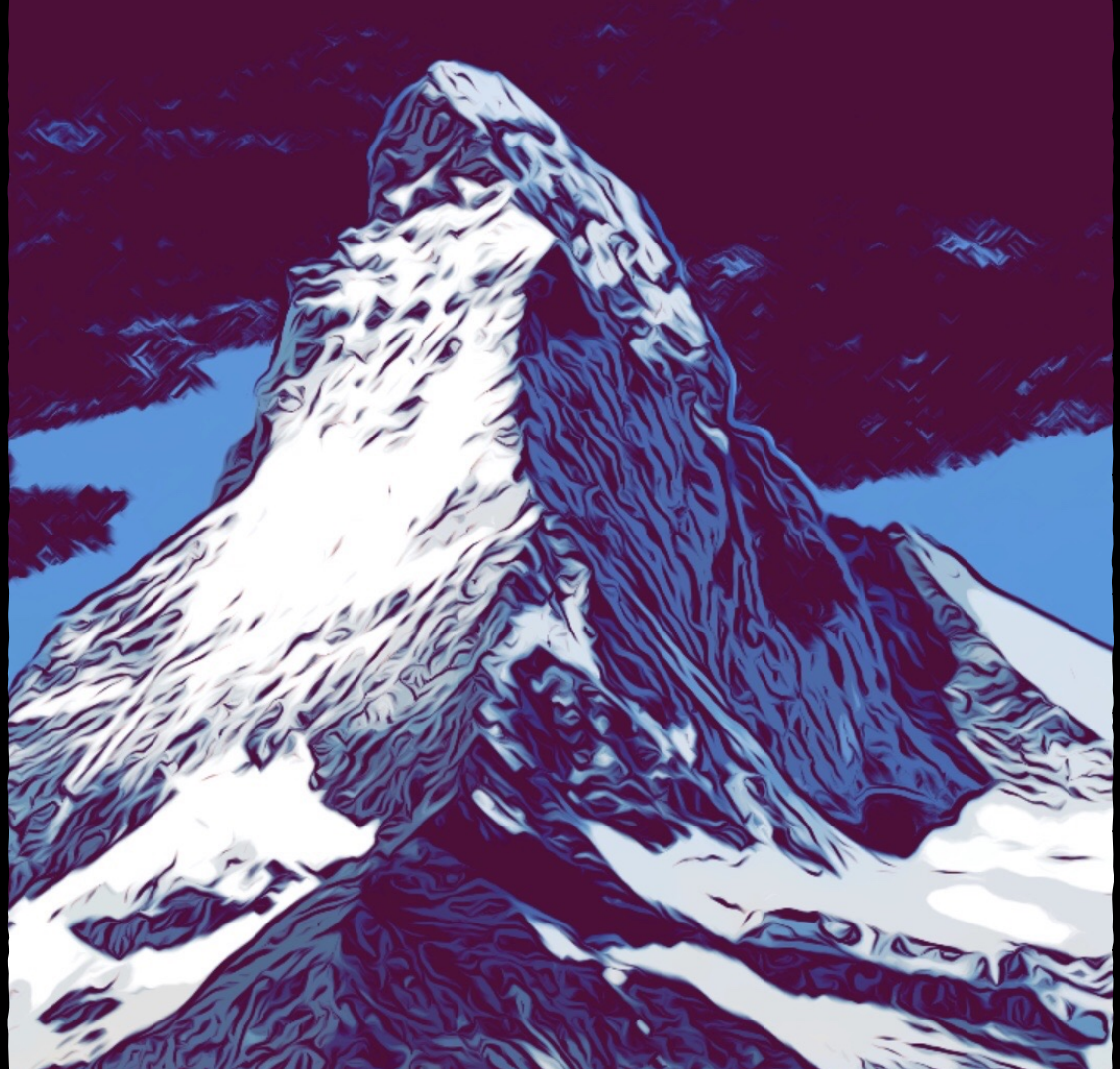


this is a story ...



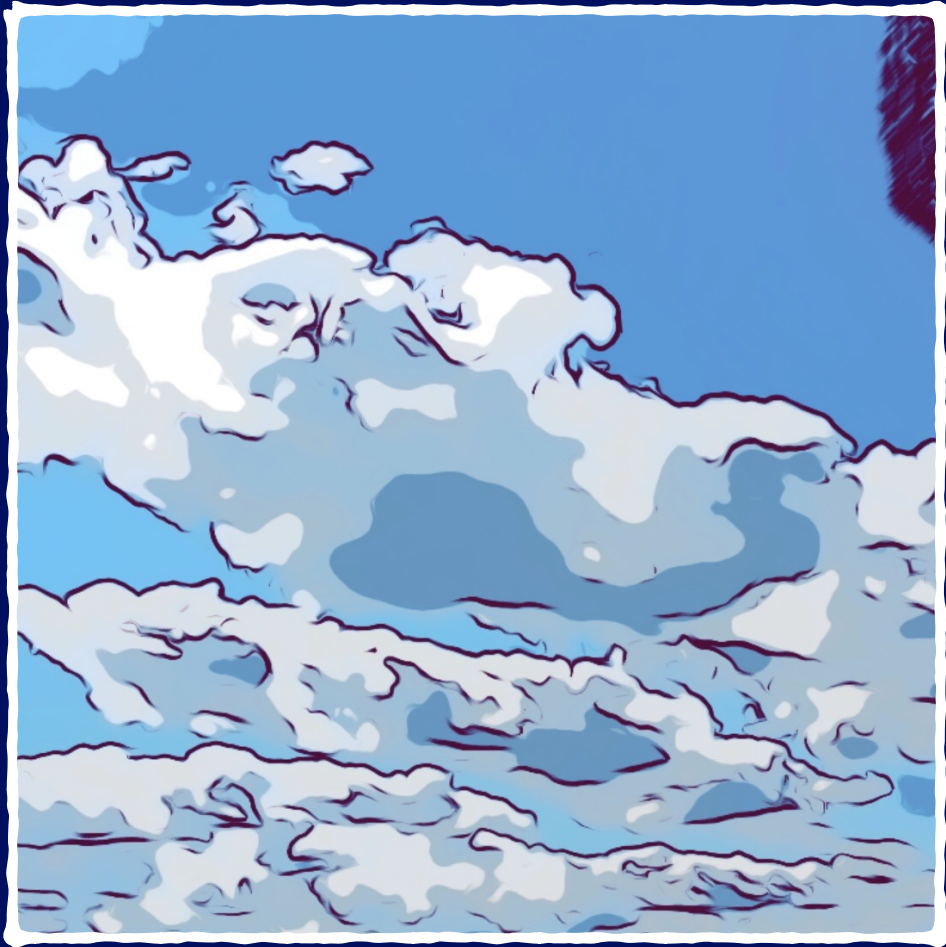
adventure

peril



The image is a full-page background with a blue color scheme. It depicts a landscape with a body of water in the foreground, a range of mountains in the middle ground, and a sky with white clouds in the upper portion. The text 'new horizons' is centered horizontally and vertically in a white, lowercase, sans-serif font.

new horizons



cloud

triumph



Credit: National Parks Service

Pete Wood
Head of Partnerships and Services
RS Components



Holly Cummins
WW Development Lead
IBM **Cloud Garage**



Ed Bryning
Head of 10X Innovation Consultancy
RS Components

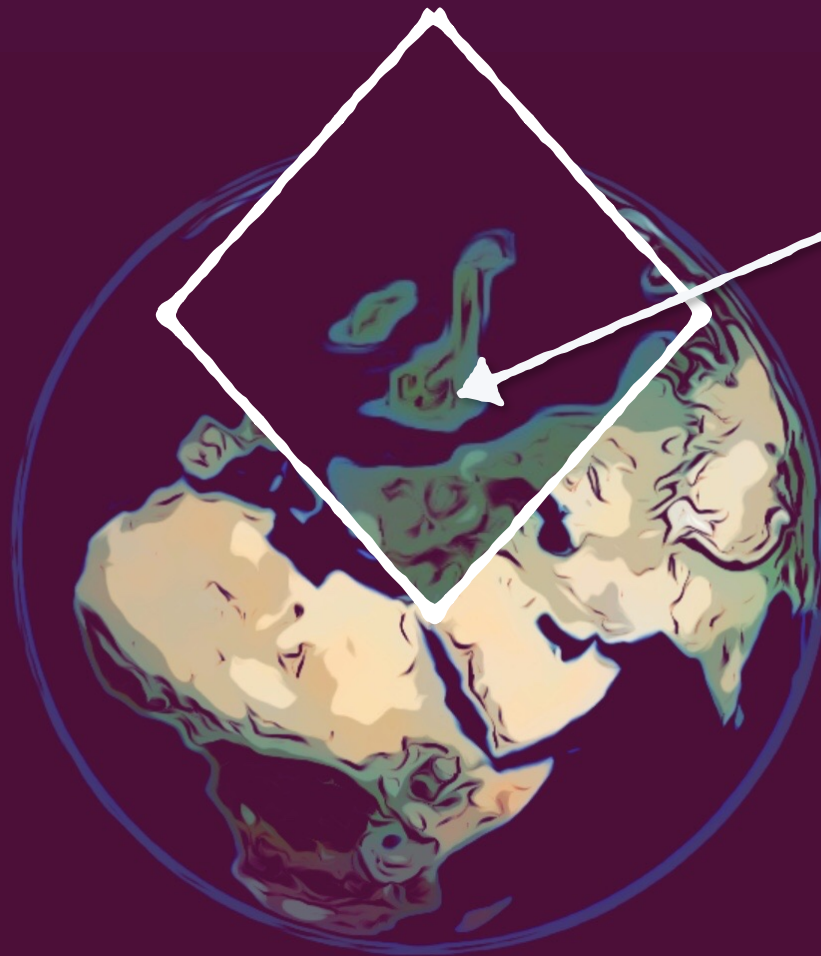




Credit: NASA Earth Observatory

@holly_cummins

IBM **Cloud** Garage



Ed Bryning and
Pete Wood are
currently here

it all
started
in 1930s
London

...



Johann Herbert Waring and Paul Martyn Sebestyen

A Replacement for Every Job!

and
A 24 Hour Service on top of it!

RADIOSPARES

LIMITED

PRICE LIST
AUGUST 1957

RADIOSPARES Ltd. 11, Brompton Road, London, N.W.2
Telephone: 244 1400

RADIOSPARES Ltd.

11, Brompton Road, London, N.W.2

CONTENTS

"Recharge" by Domestic Current		
1. 1000	1. 1000	1/0
2. 1000	2. 1000	1/0
3. 1000	3. 1000	1/0
"Recharge" by Domestic Current		
4. 1000	4. 1000	1/0
"Recharge" by Domestic Current		
5. 1000	5. 1000	1/0
"Recharge" by Domestic Current		
6. 1000	6. 1000	1/0
7. 1000	7. 1000	1/0
8. 1000	8. 1000	1/0
9. 1000	9. 1000	1/0
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"Recharge" by Domestic Current		
49. 1000	49. 1000	1/0
"Recharge" by Domestic Current		
50. 1000	50. 1000	1/0

RADIOSPARES Ltd.

11, Brompton Road, London, N.W.2

A Replacement for Every Job!
and
A 24 Hours' Service on top of it!

RADIOSPARES LIMITED

PRICE LIST
AUTUMN, 1957

Radiospares, Ltd, 44 Birchington Road, London, N.W.6.
Telephone: Maida Vale 1052

RADIOSPARES Ltd.

'Phone: Maida Vale 1052

CONDENSERS.

"Radiospares" Dry Electrolytic Condensers.

500 Volts Peak Working, in waxed Cartons.

2 Mfd.	1/1 $\frac{1}{2}$	4+4 Mfd. C.N.	1/9
4 Mfd.	1/3	8+4 Mfd. C.N.	2/0
6 Mfd.	1/4 $\frac{1}{2}$	8+6 Mfd. C.N.	2/3
8 Mfd.	1/6	8+8 Mfd. 4 Leads	2/6

"Radiospares" Dry Electrolytic Condensers.

500 Volts Peak Working, in $\frac{1}{4}$ -in. Neutral Cans.

4 Mfd.	2/0	8+4 Mfd. C.N.	3/0
8 Mfd.	2/3	8+8 Mfd. C.N.	3/6

"Radiospares" Wet Electrolytic Condensers.

500 Volts Peak Working, in $\frac{1}{4}$ -in. Neg. Cans.

8 Mfd.	2/6
-------------	-----

"Radiospares" Special Replacement Type Dry Electrolytic Condensers.

6+6 Mfd. C.N. 500 Volts (G.E.C.)	2/0
4+4+4 Mfd. C.N. 500 Volts (Ekco)	2/9
12+8 Mfd. C.N. 500 Volts (Ekco)	3/6
16+8 Mfd. C.N. 500 Volts (Various)	4/0
8+8+8 Mfd. C.N. 500 Volts (Various)	4/3
8+24+2 Mfd. C.N. 500/250 Volts (Ekco)	4/0
8 Mfd. 1-in. Neg. Can. 450 Volts (E.M.I.)	2/9

"Radiospares" Dry Electrolytic Condensers.

250 Volts Peak Working, Tubular, Wire Ends.
Suitable for Midget Sets and Anode Decoupling.

2 Mfd.	10d.	4 Mfd.	11d.	8 Mfd.	1/1 $\frac{1}{2}$
-------------	------	-------------	------	-------------	-------------------

"Radiospares" Dry Electrolytic Condensers.

Tubular, Wire Ends. Suitable for Bias.

25 Mfd. 25 Volts 8d.	25 Mfd. 50 Volts 1/0
50 Mfd. 12 Volts 8d.	50 Mfd. 50 Volts 1/2
10 Mfd. 50 Volts 8d.	10 Mfd. 100 Volts 10d.

Tubular Paper Condensers, Wire Ends.

500 Volts Working, 1,500 Volts D.C. Test, Tolerance 10%.
@ 2/6 per dozen the following capacities:

.00005	.00015	.0003	.001	.003	.005
.0001	.0002	.0005	.002	.004	.006

@ 4/- per dozen the following capacities:

.01	.02	.03	.05	.1
-----	-----	-----	-----	----

.25 Mfd.	7 $\frac{1}{2}$ d.	.5 Mfd.	8d.	.05	.1	1 Mfd.	1/2
---------------	--------------------	--------------	-----	-----	----	-------------	-----

Silver Mica Condensers, Wire Ends.

Tolerance 10%. Power Factor .1% (Low loss).
@ 4/3 per dozen the following capacities:

.00001	.000025	.00005	.0001	.00015
.0002	.0003	.0005	.001	.002

RADIOSPARES Ltd. - 44 Birchington Road, London, N.W.6

... for
radio
parts



1995

first catalogue distributor to introduce a CD-ROM version



1. ...
 2. ...
 3. ...
 4. ...
 5. ...
 6. ...
 7. ...
 8. ...
 9. ...
 10. ...

Dual Channel Arbitrary
 Position Generation



CV and OPTOPROBE
 Series LED Driver



METALBACK Out-of-View



VCSL Pencil Union



Cable & Wire Stripping
 Tools



Surface and Verticalland
 High Power LEDs



Standard and Hybrid
 Aluminum Polymer Caps



High Thermal Conductivity
 Mounting



Wire Tool Sets



Production and Touch
 Switches



Leadless Wirebond
 Connections



Termination & Redesignable
 Connectors



DESIGNSPARK

INSO

Home

Our Location

Inspiration

Community

Education Center

Products

DS University

Events

WIN!

AN ENGINEER'S
BUNDLE WORTH
OVER \$750

DesignSpark New Year Giveaway

Watch our video
Introduction to Inso
association with Mo

Join a DesignSpark
Interest group

inspire



More LOOPS series
introduced at Inso with
top 100 designers

Learn More



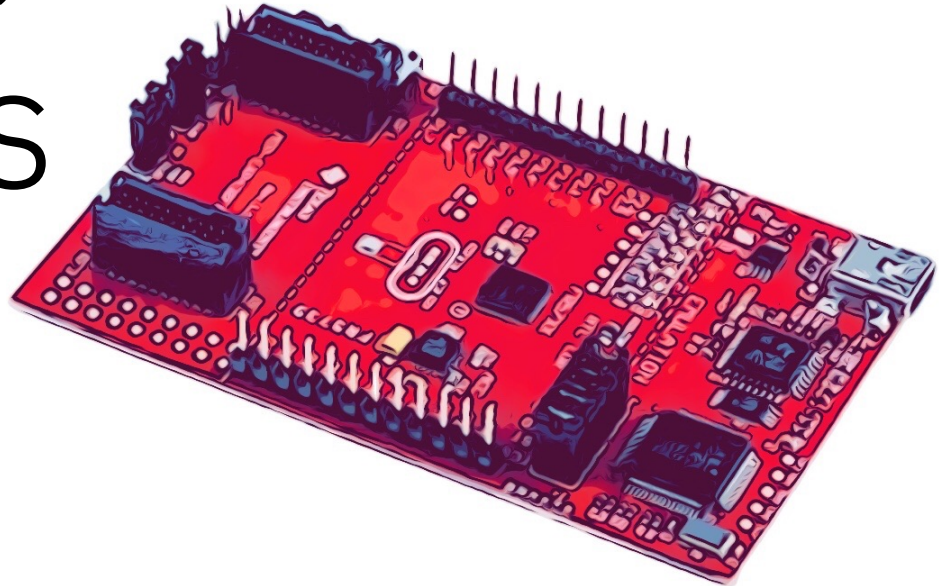
EARN WITH DSREWARDS



1M+ customers

500,000

products



£1.75
billion
revenue





14

distribution
centres



50,000+

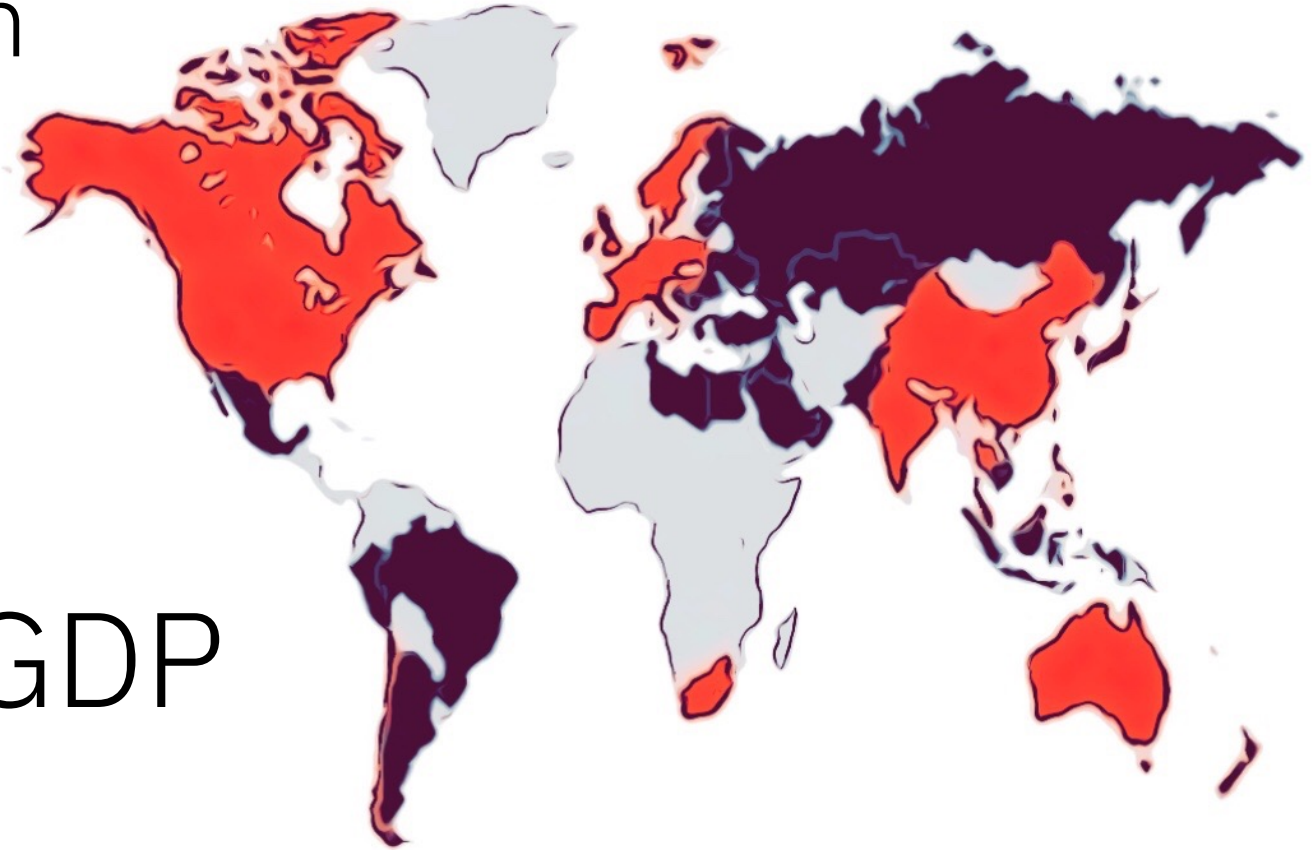
parcels

daily

presence in
markets

90%

of the
world's GDP



Sharing Tools and Resources
to Inspire Creativity

DESIGN SPARK

Brought to you by



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More LOOPS series
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top 100 engineers

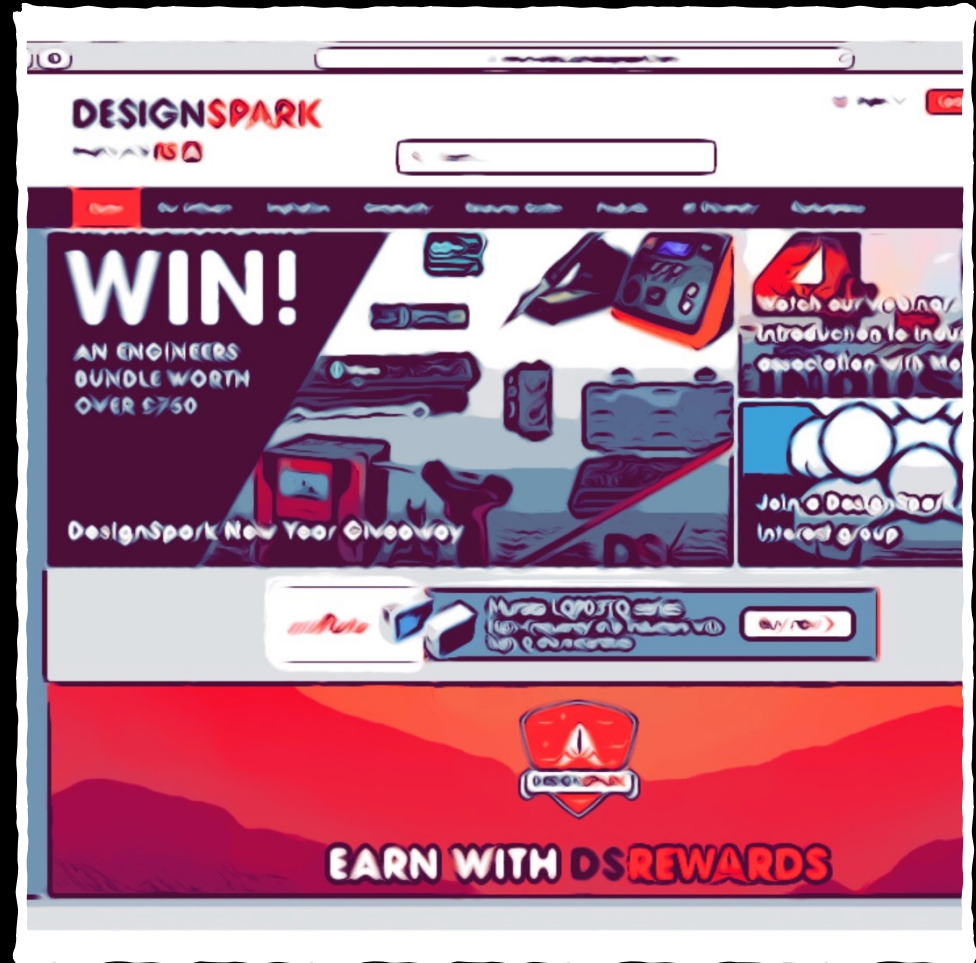
Learn More



EARN WITH DSREWARDS

designspark.com

A separate platform created in 2010 with links into RS Components



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inspiration



More LOOPS
to be found at Inso with
top 100 designers

view



EARN WITH DSREWARDS

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Inspiration

Community

Resource Center

Products

DS University

Events

WIN!

AN ENGINEER'S
BUNDLE WORTH
OVER \$750

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More LOOPS series
introduced at InVivo with
top 6 products

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EARN WITH DSREWARDS

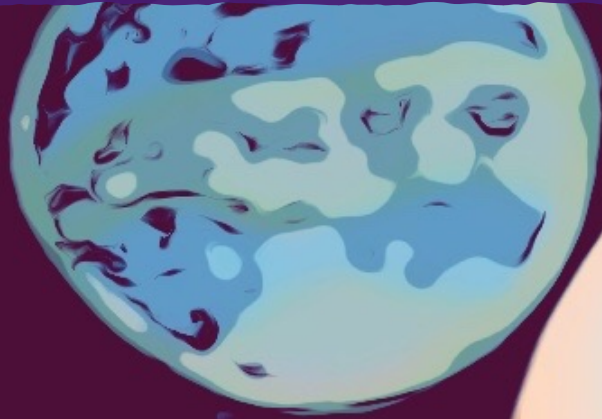
users have spent over

1 million

hours creating designs in
free tools

The Opportunity

building on the success of
our community platform...



A stylized illustration of a person wearing a VR headset, with a globe and a keyboard in the background. The person is wearing a red shirt and is looking down at the headset. The background is dark with a grid pattern and a globe. The text is overlaid on the image.

The Opportunity

building on the success of
our community platform...

become the first in our industry to create an eBay-lite style environment that enables DesignSpark
members to

sell their maker projects and designed products



maker market value:

\$4 billion



1500+

active maker spaces



190

maker faires
worldwide



190

maker fires
worldwide



maker fires
worldwide



30m

businesses leveraging
maker ecosystem by 2035

A person wearing a VR headset is shown in a dark environment. In the background, a computer keyboard and mouse are visible. The person is wearing a red t-shirt and has their hands on the VR headset.

65%

of DesignSpark
community are
'makers'

KPIs

- Site Traffic ↑
- Member Engagement ↑
- New Member Acquisition

the business challenge

finding the
right partner

our requirements



our requirements

- A credible partner that would deliver the best experience for our users



our requirements

- A credible partner that would deliver the best experience for our users
- Value for money - an MVP Beta solution that fitted our budget



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- First class hosting and support



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- Value for money - an MVP Beta solution that fitted our budget
- Clear understanding of our requirements and users
- Fast ideation & development time
- Quick time to market
- First class hosting and support
- Manage external systems to use DesignSpark's login, and for taking payments







what we liked about
IBM Cloud Garage capabilities



what we liked about IBM Cloud Garage capabilities

- Use Design Thinking methods



what we liked about IBM Cloud Garage capabilities

- Use Design Thinking methods
- Created personas to fully understand requirements



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- Use Design Thinking methods
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- Create the right cloud strategy and tools



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- Create the right cloud strategy and tools
- Utilised relevant open source offerings



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what we liked about IBM Cloud Garage capabilities

- Use Design Thinking methods
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- Rank backlogs to deliver a minimum viable product
- Build user experience prototypes, and validate with test users

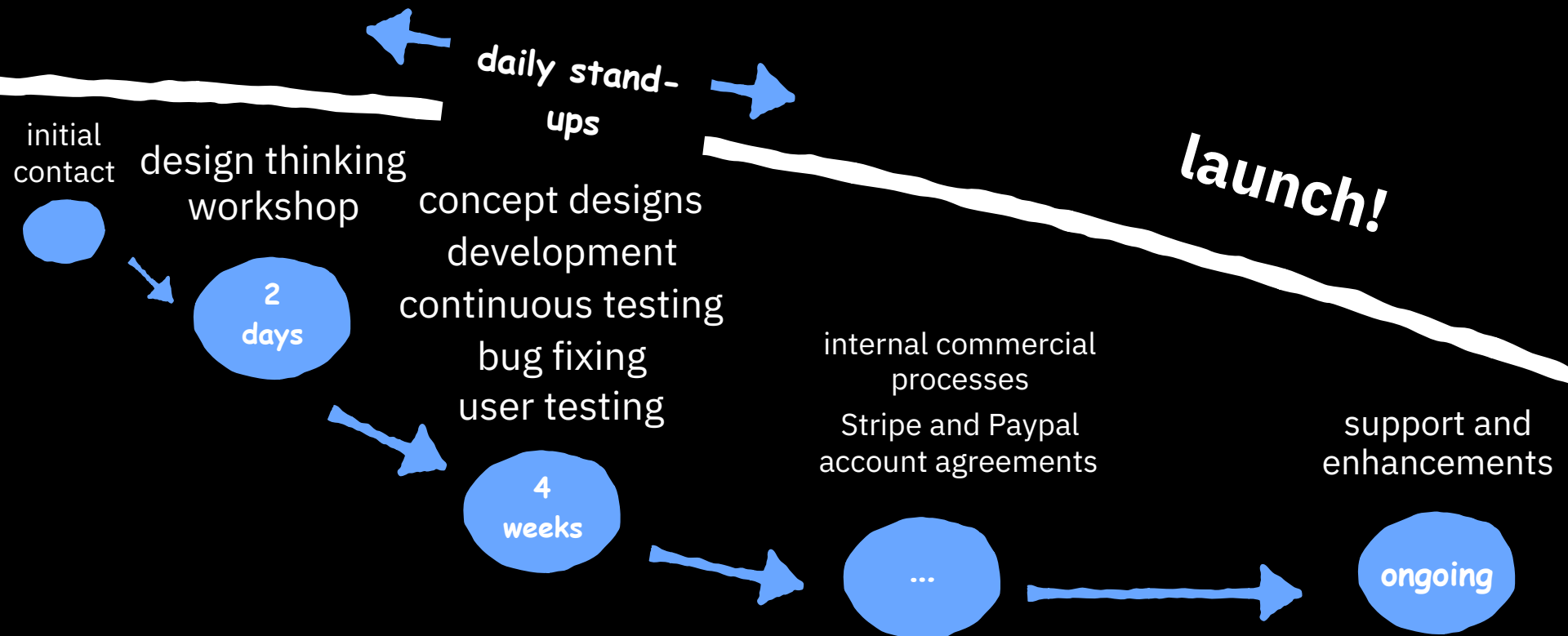


what we liked about IBM Cloud Garage capabilities

- Use Design Thinking methods
- Created personas to fully understand requirements
- Create the right cloud strategy and tools
- Utilised relevant open source offerings
- Regular contact with the client throughout the process
- Rank backlogs to deliver a minimum viable product
- Build user experience prototypes, and validate with test users
- Deliver ideas faster



the journey



this
is a very
ambitious
project ...



June

12

Mon	Tue	Wed	Thu	Fri	Sat	Sun
28	29	30	31	1 Jun	2	3
Spring Equinox Holiday						
4	5	6	7	8	9	10
Queen's Birthday						
11	12	13	14	15	16	17
X	X	X	X	X		
18	19	20	21	22	23	24
X	X	X	X	X		
25	26	27	28	29	30	1 Jul
X	X	X	X	X		
2	3	4	5	6	7	8





your
budget is
three weeks of
dev?!?







what
about off-
the-shelf?

innovation
comes in
many forms

it's not always about writing mountains of code



we
can do it.
let's do it.

demo
(we did it.)

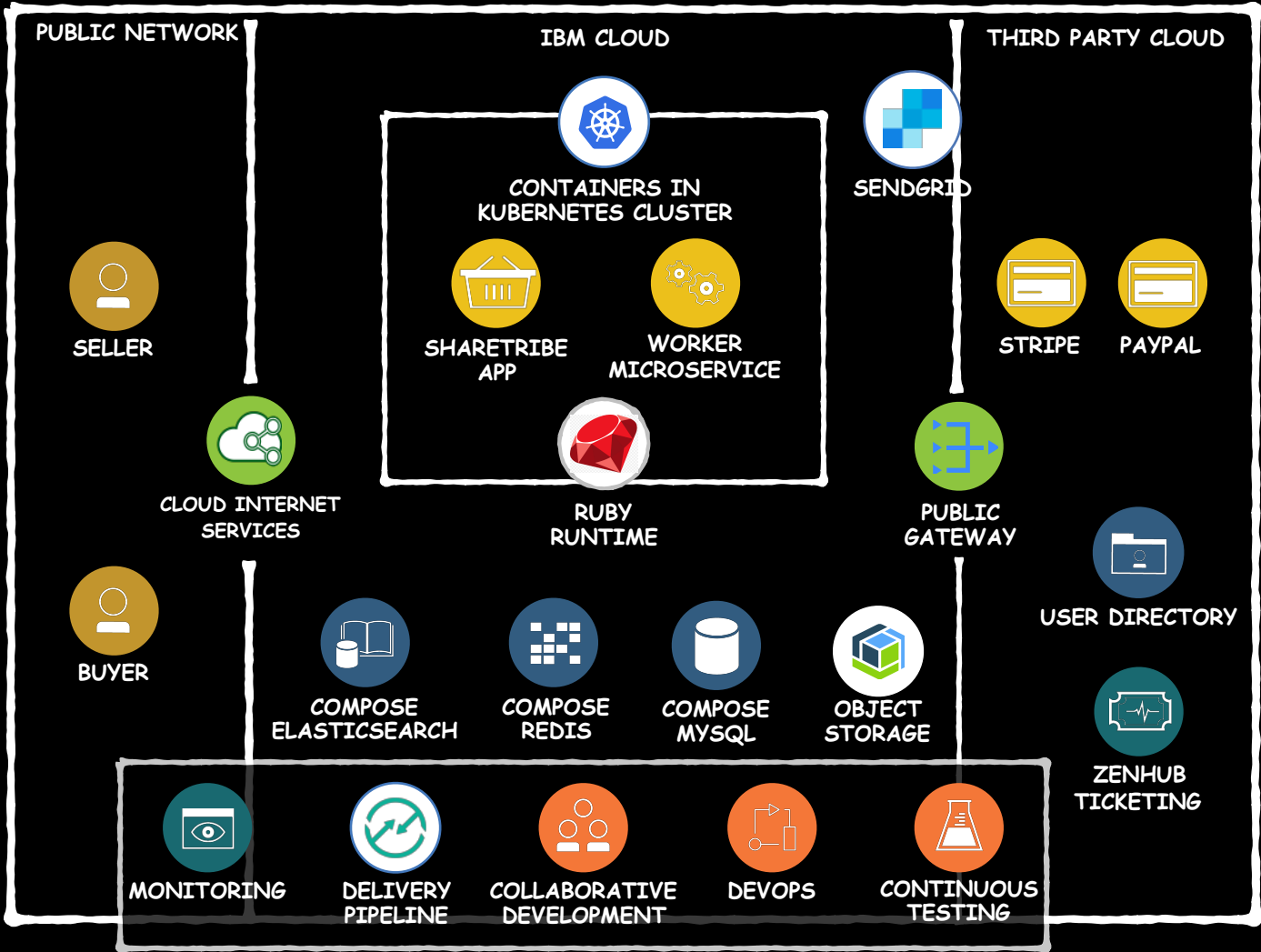
<http://designsparkmarketplace.com>

design thinking

focus on users to identify
the true problem we need
to solve



just enough
architecture

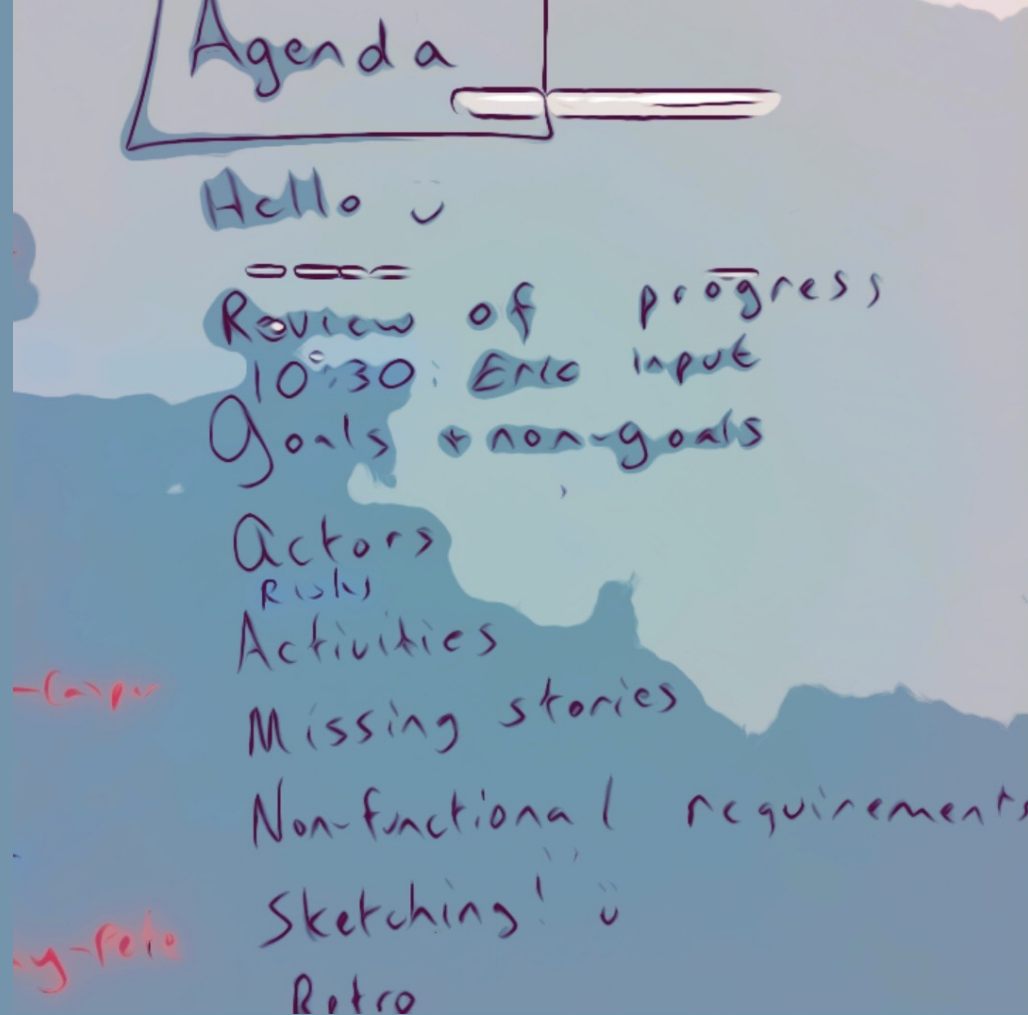


inception

break the MVP down into
user stories and put them
into a ranked backlog

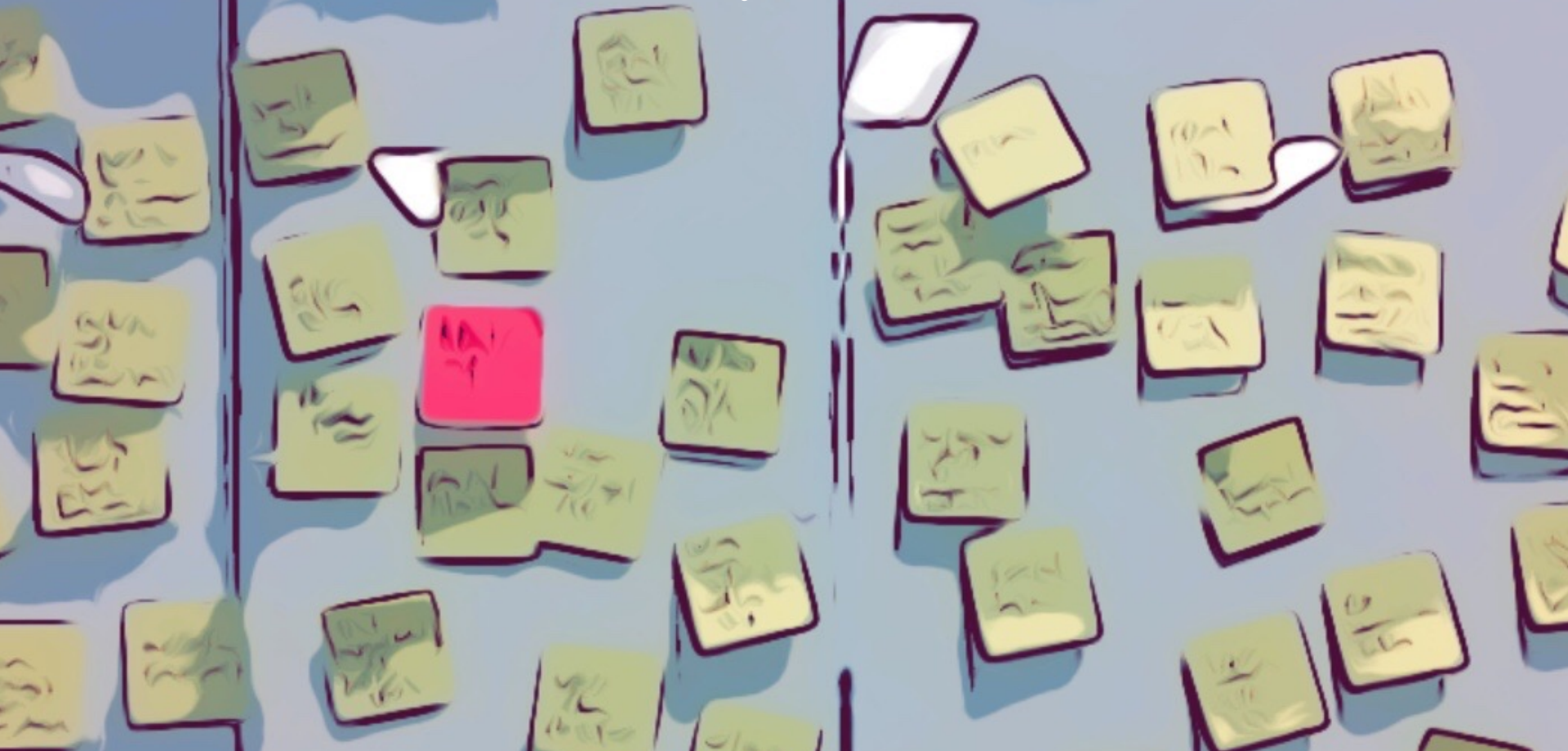


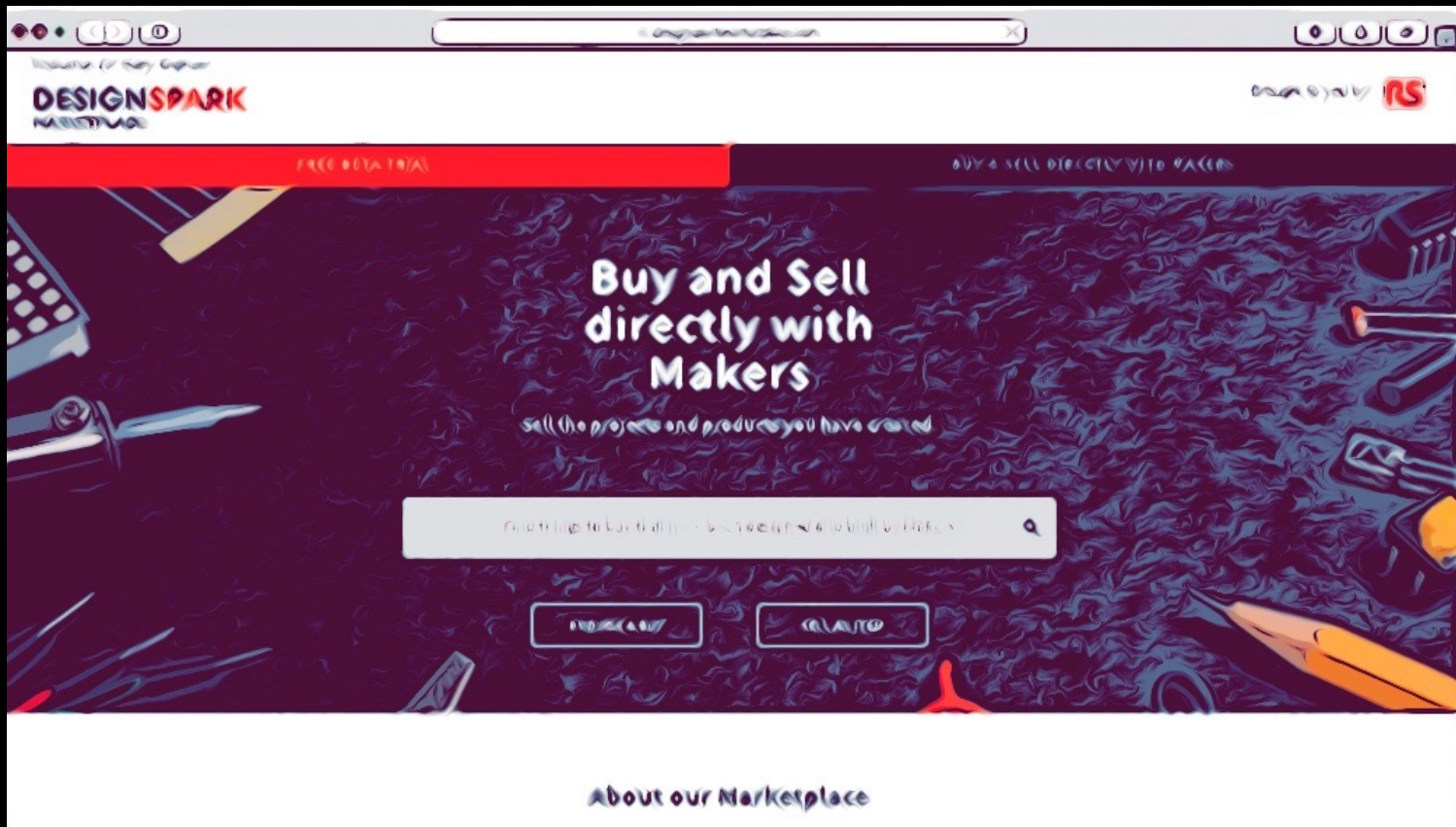
what does an
inception look
like?



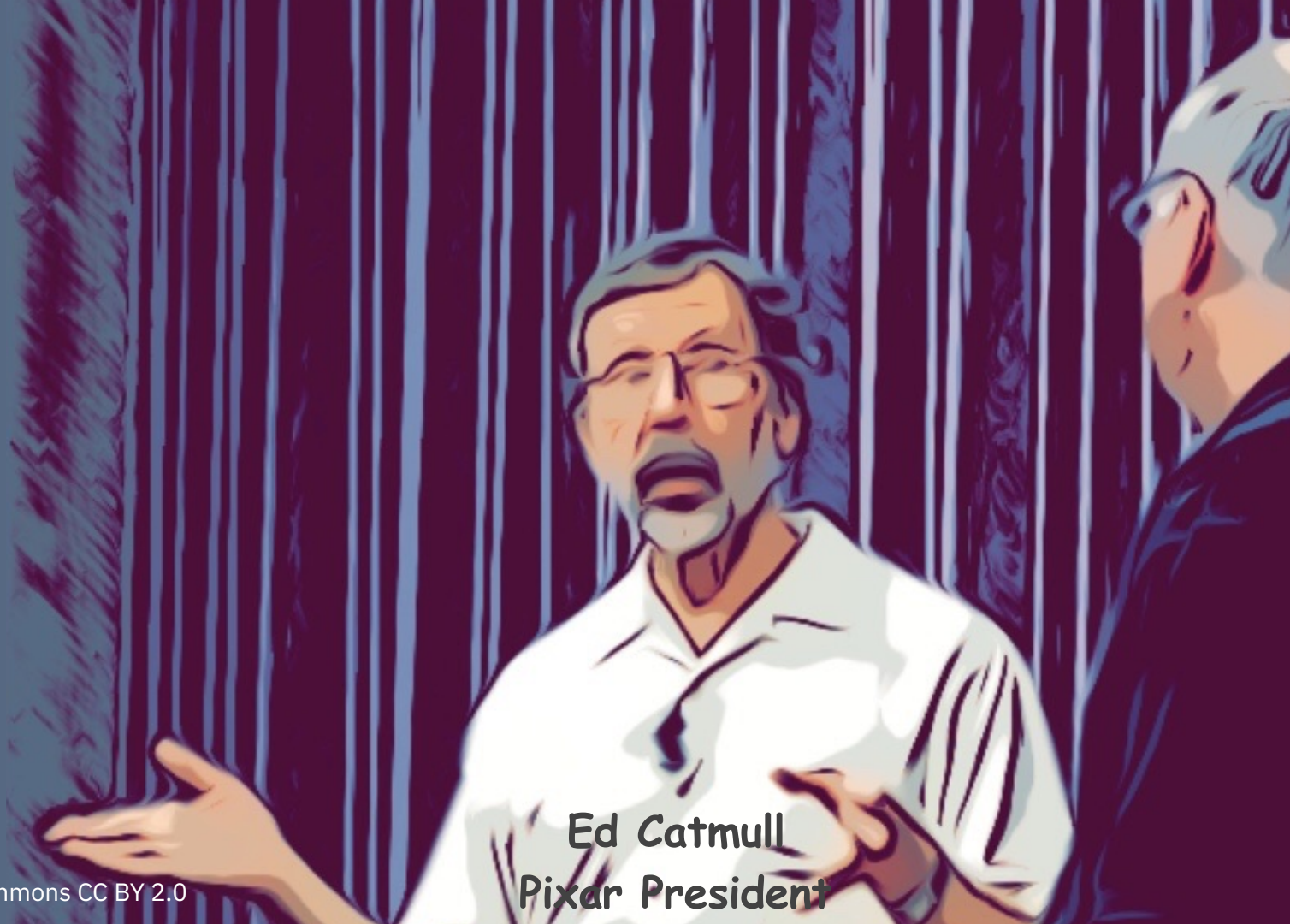
Goals

Future-Goals






build

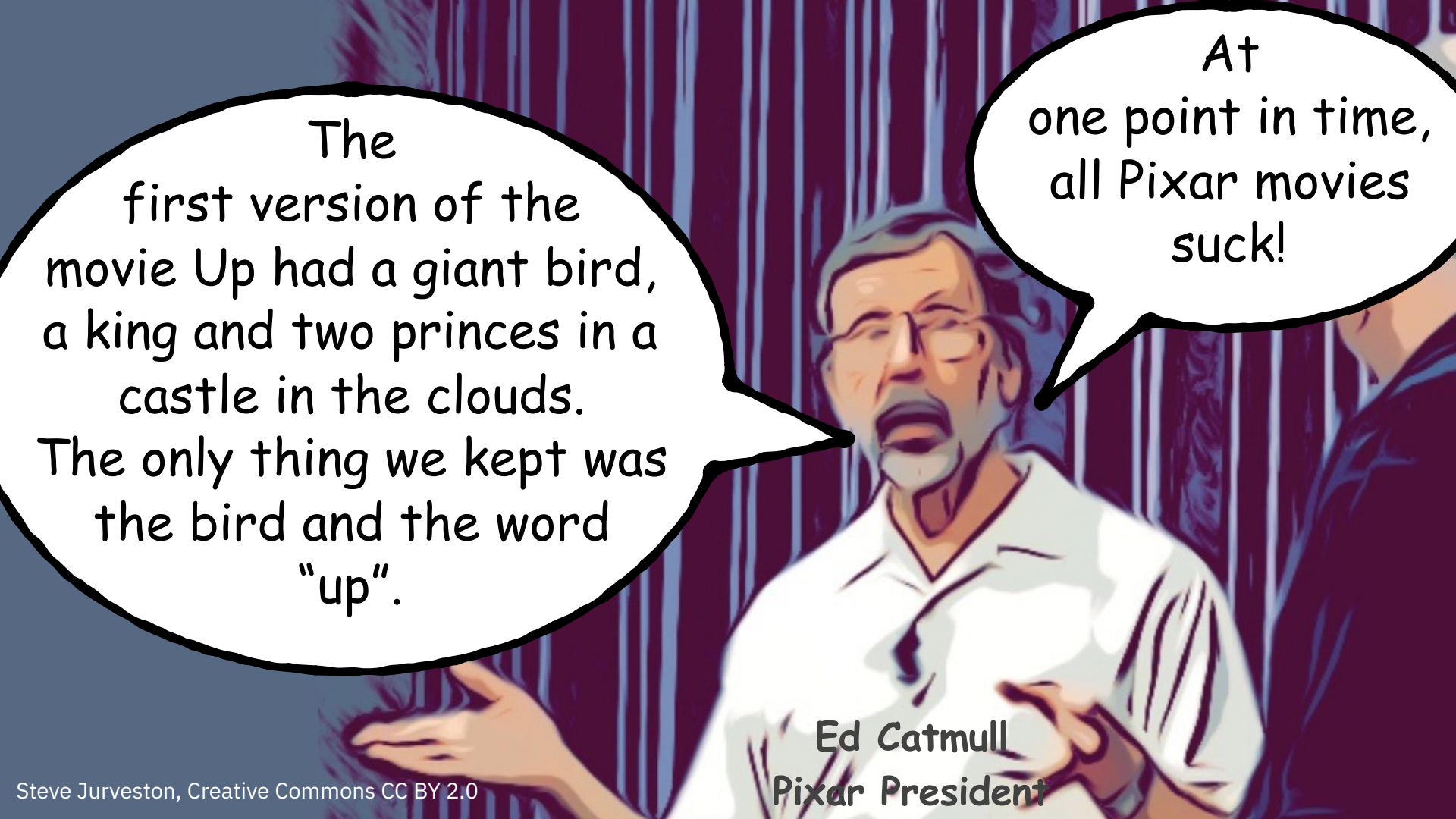


Ed Catmull
Pixar President

A stylized illustration of Ed Catmull, Pixar President, with a speech bubble. He is depicted from the chest up, wearing a white short-sleeved shirt and glasses. His hands are raised in a gesture of explanation or emphasis. The background consists of vertical blue and purple stripes. A speech bubble with a black outline is positioned to the right of his head, containing the text: "At one point in time, all Pixar movies suck!".

At
one point in time,
all Pixar movies
suck!

Ed Catmull
Pixar President

A stylized illustration of Ed Catmull, Pixar's former president, speaking. He is shown from the chest up, wearing a white short-sleeved shirt and glasses. His mouth is open as if he is in the middle of a speech. The background consists of vertical, wavy lines in shades of blue and purple. Two large white speech bubbles with black outlines are positioned around him. The left speech bubble contains text about the development of the movie 'Up', and the right speech bubble contains a humorous critique of Pixar movies.

The first version of the movie Up had a giant bird, a king and two princes in a castle in the clouds. The only thing we kept was the bird and the word "up".

At one point in time, all Pixar movies suck!

Ed Catmull
Pixar President

first week of development

MAKER 2 ...

Sign up Log in Menu Post a new listing

For Makers 2 Makers

A marketplace for RS Makers to showcase and sell their products

Find product...

Grid List Map

Estimated Shipping Time (days)

Min: 0 Max: 9999

Update view

£12.50

£10

Daedalus Flight Suit

Sample Product

first week of development

134.168.35.44:3000

MAKER 2 ...

Sign up Log in Menu Post a new listing

For Makers accessible on the web Makers

A marketplace to showcase and sell their products

Find product...

Grid List Map

Estimated Shipping Time (days)

Min: 0 Max: 9999

Update view

£12.50

£10

Daedalus Flight Suit Sample Product

first week of development

The screenshot shows a web browser window with the address bar displaying '134.168.35.44:3000'. The website header includes the title 'MAKER 2 ...', navigation links for 'Sign up', 'Log in', and 'Menu', and a green 'Post a new listing' button. The main banner features a collage of items like jeans, a purple jacket, and a blue helmet, with the text 'For Makers' and 'A marketplace to showcase and sell their products'. A search bar with the placeholder 'Find product...' and a magnifying glass icon is present. Below the banner, there are view options for 'Grid', 'List', and 'Map'. A shipping time slider is visible, labeled 'Estimated Shipping Time (days)', with a range from 'Min: 0' to 'Max: 9999' and a price of '£12.50'. Below the slider, there are two product cards: 'Daedalus Flight Suit' and 'Sample Product' with a price of '£10'. A blue 'Update view' button is located at the bottom left of the shipping time section.

our Garage visual designer was not impressed that we truncated the text

For Makers accessible on the web

A marketplace to showcase and sell their products

Find product...

Grid List Map

Estimated Shipping Time (days)

Min: 0 Max: 9999

Update view

£12.50

£10

Daedalus Flight Suit

Sample Product

first week of development

The screenshot shows a web browser window with the address bar displaying '134.168.35.44:3000'. The website header includes the text 'MAKER 2 ...' on the left, and 'Sign up', 'Log in', 'Menu', and a green 'Post a new listing' button on the right. The main content area features a large background image of various items, including a pair of jeans. The text 'For Makers' is prominently displayed, with a callout bubble pointing to the word 'Makers' asking 'who chose a photo of jeans?'. Below this, the text 'A marketplace to showcase and sell their products' is visible, with a callout bubble pointing to the word 'Makers' asking 'accessible on the web'. A search bar with the placeholder text 'Find product...' and a magnifying glass icon is present. Below the search bar, there are three view options: 'Grid' (selected), 'List', and 'Map'. At the bottom, a table displays product information:

Estimated Shipping Time (days)	Price	Product Name
<input type="range" value="0"/> Min: 0 Max: 9999	£12.50	Daedalus Flight Suit
	£10	Sample Product

An 'Update view' button is located below the shipping time range.

first week of development

The screenshot shows a web browser window with the URL 134.168.35.44:3000. The website header includes 'MAKER 2 ...', 'Sign up', 'Log in', 'Menu', and a green 'Post a new listing' button. The main content area features a large image of jeans and a purple jacket. The text 'For Makers' is partially visible, with a callout bubble pointing to it that says 'accessible on the web'. Below this, the text 'A marketplace to showcase and sell their products' is visible, with a callout bubble pointing to it that says 'who chose a photo of jeans?'. A search bar with the placeholder text 'Find product...' and a magnifying glass icon is present. Below the search bar, there are two product cards. The first card shows 'Estimated Shipping Time (days)' with a slider from 0 to 9999 and a price of £12.50. The second card shows a price of £10. A callout bubble points to the second card that says 'object storage wasn't implemented yet'. The bottom of the page shows 'Update view' buttons and product names 'Daedalus Flight Suit' and 'Sample Product'.

our Garage visual designer was not impressed that we truncated the text

accessible on the web

who chose a photo of jeans?

object storage wasn't implemented yet

second week of development

sparketplace - Community mai x

134.168.35.44:3000

Apps Bluemix GitLab JazzHub Radiator Swagger UI Chatson Fish DSV RS M2MX

Marketplace progress 42 % Next Add a slogan & description

SPARKETP... ✉ Sally S Menu Post a new listing

What are you looking for? 🔍

Grid List Map

£100
Hosted Upload
Sally S

£10
With image
Sally S

£20
Another image
Sally S

second week of development

The screenshot shows a web browser window with the URL `134.168.35.44:3000`. The page title is "sparketplace - Community mai...". The browser's address bar shows the URL and a search icon. The page features a teal header with "Marketplace progress 42 %" and a progress bar. Below the header, there's a navigation bar with "SPARKETP...", a user profile "Sally S", a "Menu" button, and a "Post a new listing" button. A search bar with the placeholder "What are you looking for?" and a search icon is present. Below the search bar, there are three product listings in a grid view. The first listing is titled "Hosted Upload" with a price of £100 and a user profile "Sally S". The second listing is titled "With image" with a price of £10 and a user profile "Sally S". The third listing is titled "Another image" with a price of £20 and a user profile "Sally S". A callout bubble points to the images in the listings, stating "hooked in cloud object storage for pictures".

second week of development

The screenshot shows a web browser window with the URL `134.168.35.44:3000`. The page title is "sparketplace - Community mai...". The browser's address bar shows the URL and navigation icons. The page features a teal header with "Marketplace progress 42%" and a progress bar. Below the header, there's a navigation bar with "SPARKETP...", a search bar, and a "Post a new listing" button. The main content area displays a grid of listings. The first listing is titled "Hosted Upload" with a price of £100 and a user profile for "Sally S". The second and third listings are titled "With image" and "Another image" respectively, both with a price of £20 and a user profile for "Sally S". Two callout bubbles are present: one pointing to the search bar with the text "visual designs complete but not implemented", and another pointing to the image thumbnails with the text "hooked in cloud object storage for pictures".

Marketplace progress 42 %

Next Add a slogan & description

SPARKETP...

What are you looking for?

Grid List Map

£100

Hosted Upload

Sally S

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With image

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Another image

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visual designs complete but not implemented

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second week of development

The screenshot shows a web browser window with the URL `134.168.35.44:3000`. The page title is "sparketplace - Community ma...". The browser's address bar shows the URL and a search icon. The page header includes a progress bar for "Marketplace progress 42 %", a "Next" button, and a button labeled "Add a slogan & description". Below the header, there is a navigation bar with the logo "SPARKETP...", a search icon, a user profile "Sally S", a "Menu" button, and a "Post a new listing" button. A search bar with the placeholder text "What are you looking for?" and a search icon is visible. Below the search bar, there are three product listings in a grid view. The first listing is titled "Hosted Upload" with a price of "£100" and a user profile "Sally S". The second listing is titled "With image" with a price of "£20" and a user profile "Sally S". The third listing is titled "Another image" with a price of "£20" and a user profile "Sally S". The grid view is selected, with "List" and "Map" options also visible. Hand-drawn callouts highlight specific features and issues: "still truncated!" points to the search bar, "visual designs complete but not implemented" points to the grid view, and "hooked in cloud object storage for pictures" points to the image thumbnails.

still truncated!

visual designs complete but not implemented

hooked in cloud object storage for pictures

second week of development (more)



Confirmation instructions to join sparketplace

your-team to: cumminsh

20/07/2017 02:25

[Show Details](#)

History:

This message has been forwarded.

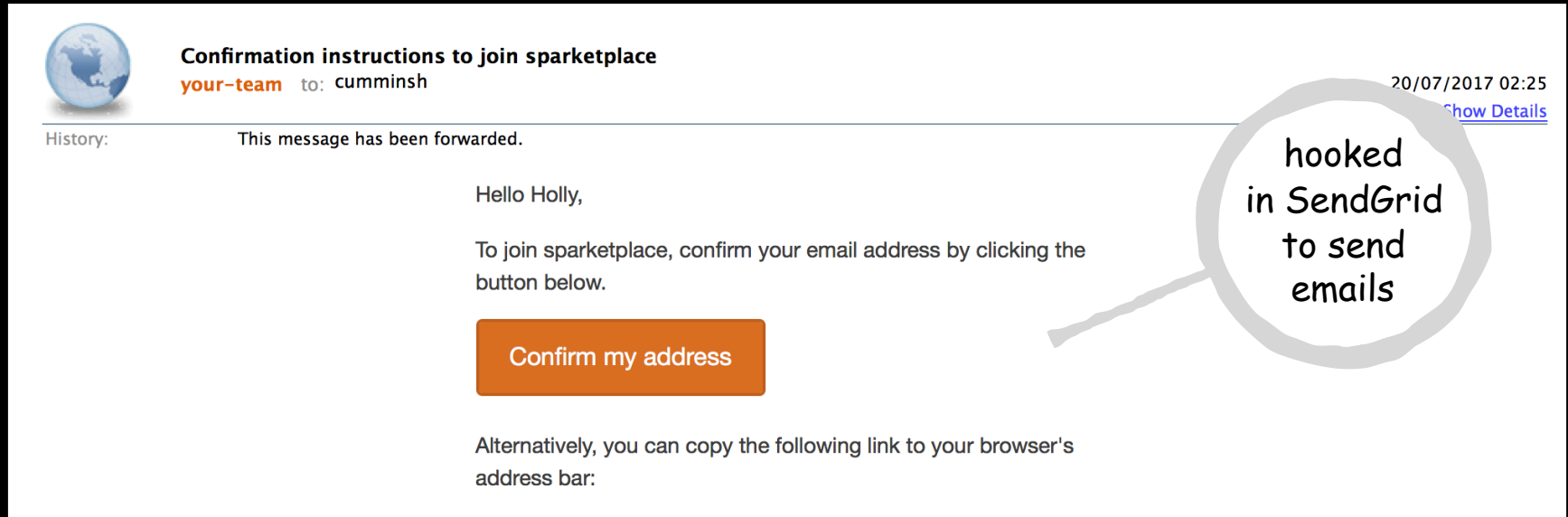
Hello Holly,

To join sparketplace, confirm your email address by clicking the button below.


[Confirm my address](#)

Alternatively, you can copy the following link to your browser's address bar:

second week of development (more)



The screenshot shows an email interface. At the top left is a globe icon. The subject line is "Confirmation instructions to join sparketplace" and the sender is "your-team" to "cumminsh". The date and time are "20/07/2017 02:25" and there is a "Show Details" link. Below the header, a "History" section states "This message has been forwarded." The main body of the email starts with "Hello Holly," followed by instructions to confirm the email address by clicking a button. The button is orange and labeled "Confirm my address". Below the button, it says "Alternatively, you can copy the following link to your browser's address bar:". A hand-drawn magnifying glass highlights the text "hooked in SendGrid to send emails" on the right side of the email body.

 **Confirmation instructions to join sparketplace**
your-team to: cumminsh

20/07/2017 02:25 [Show Details](#)

History: This message has been forwarded.

Hello Holly,

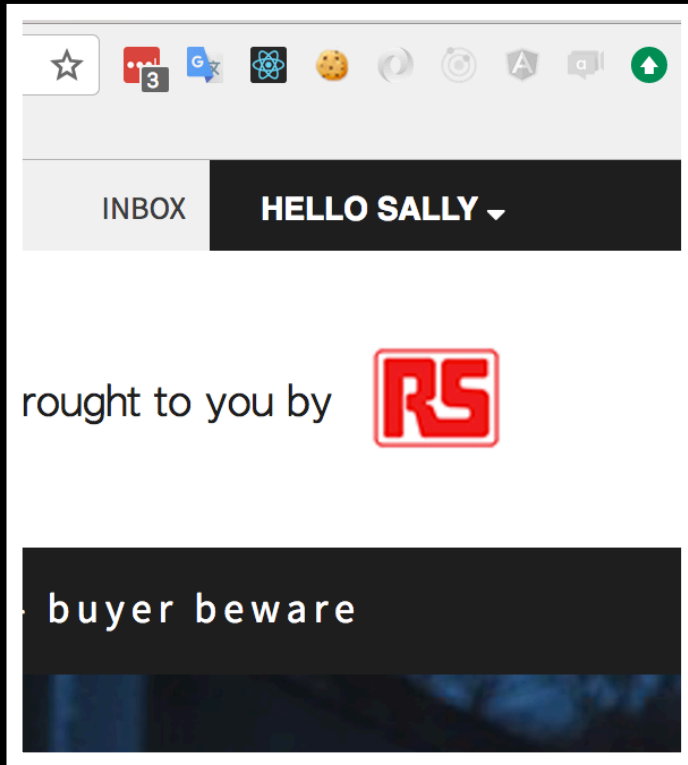
To join sparketplace, confirm your email address by clicking the button below.

[Confirm my address](#)

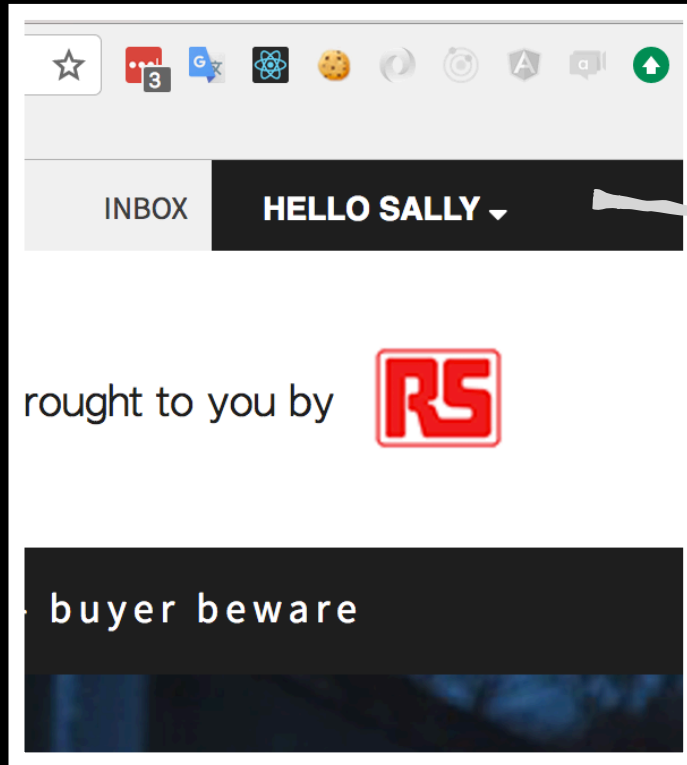
Alternatively, you can copy the following link to your browser's address bar:

hooked in SendGrid to send emails

third week of development

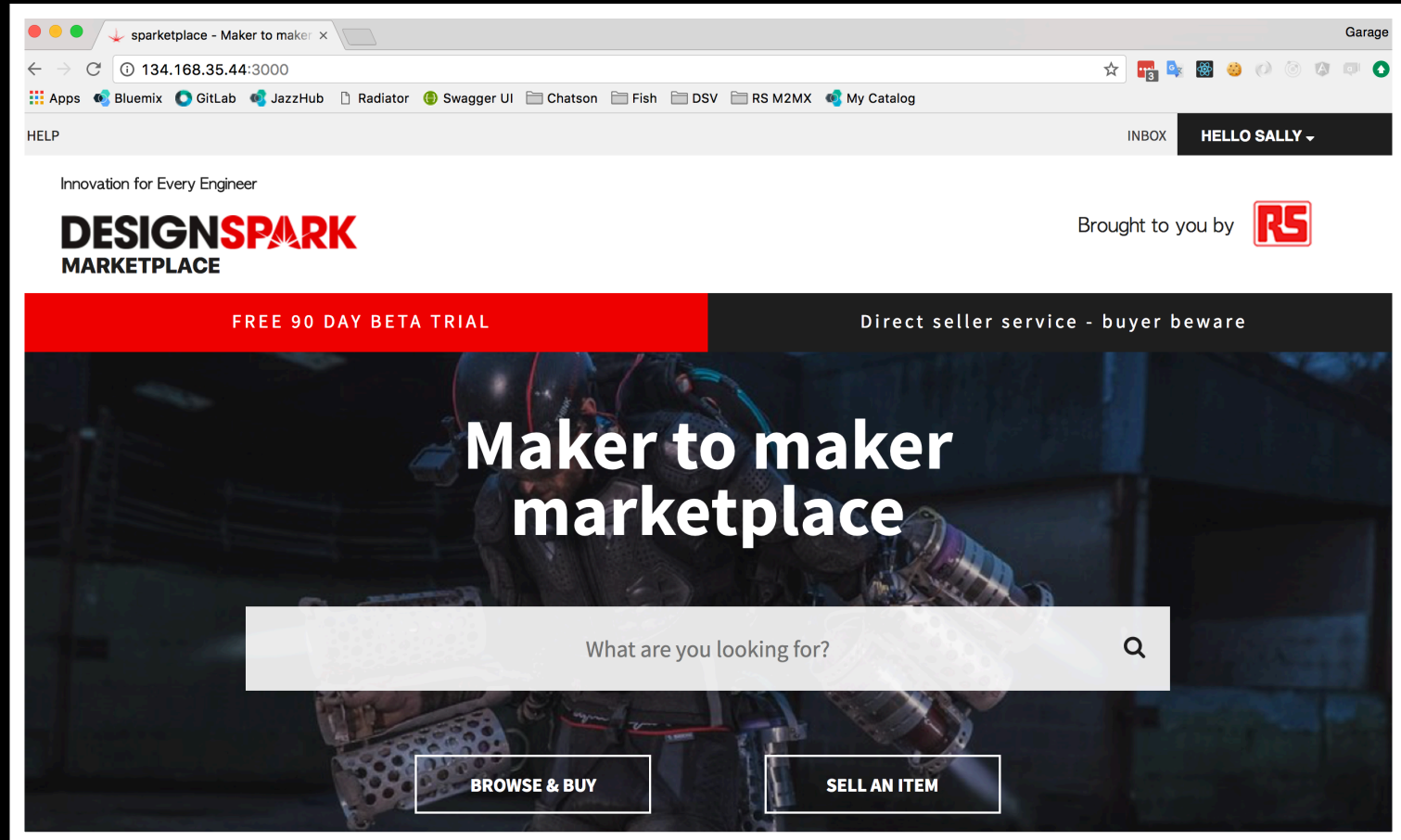


third week of development



this
integrates with
the accounts on
designspark.com

fourth week of development



The screenshot shows a web browser window with the following elements:

- Browser Tab:** sparketplace - Maker to maker x
- Address Bar:** 134.168.35.44:3000
- Navigation Bar:** HELP (left), INBOX HELLO SALLY (right)
- Header:** Innovation for Every Engineer, **DESIGNSPARK MARKETPLACE** logo, Brought to you by **RS** logo
- Hero Section:** A dark background image of a person in a helmet working with a robotic arm. Overlaid on this are:
 - A red banner on the left: **FREE 90 DAY BETA TRIAL**
 - A dark banner on the right: **Direct seller service - buyer beware**
 - Large white text: **Maker to maker marketplace**
 - A search bar with the placeholder text "What are you looking for?" and a magnifying glass icon.
 - Two white buttons with black text: **BROWSE & BUY** and **SELL AN ITEM**.

fourth week of development

sparketplace - Maker to maker x Garage

134.168.35.44:3000

Apps Bluemix GitLab JazzHub Radiator Swagger UI Chatson Fish DSV RS M2MX My Catalog

HELP INBOX HELLO SALLY

Innovation for Every Engineer

DESIGNSPARK
MARKETPLACE

Brought to you by **RS**

FREE 90 DAY BETA TRIAL Direct seller service - buyer beware

Maker to maker marketplace

What are you looking for?

BROWSE & BUY **SELL AN ITEM**

it
looks as
intended!

fourth week of development

sparketplace - Maker to maker x Garage

134.168.35.44:3000

Apps Bluemix GitLab JazzHub Radiator Swagger UI Chatson Fish DSV RS M2MX My Catalog

HELP INBOX HELLO SALLY

Innovation for Every Engineer

DESIGNSPARK
MARKETPLACE

Brought to you by **RS**

FREE 90 DAY BETA TRIAL Direct seller service - buyer beware

Maker to maker marketplace

What are you looking for?

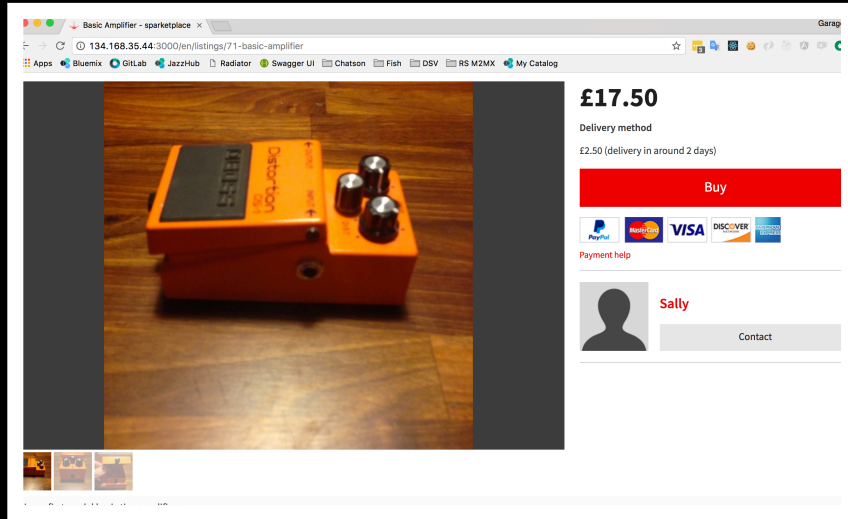
BROWSE & BUY **SELL AN ITEM**

it looks as intended!

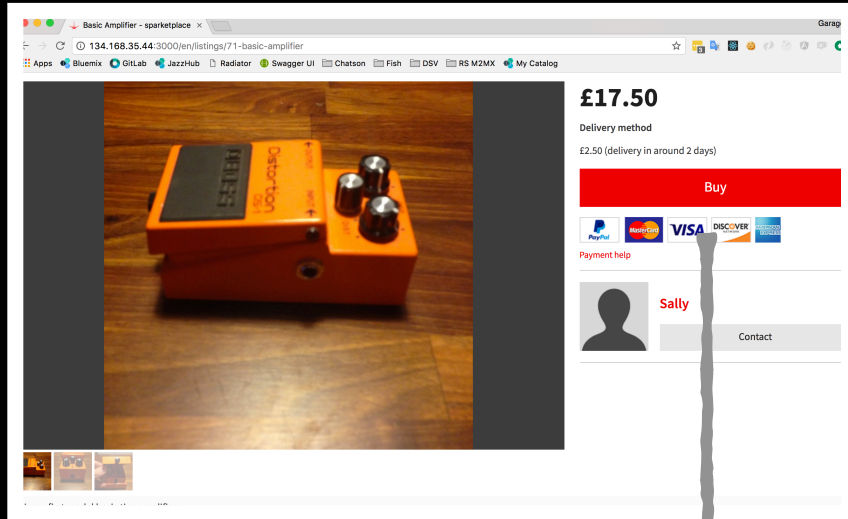
hooked in Compose ElasticSearch, so search works

fourth week of development (more)

fourth week of development (more)



fourth week of development (more)



end-
to-end
transaction flow!

fourth week of development (more)

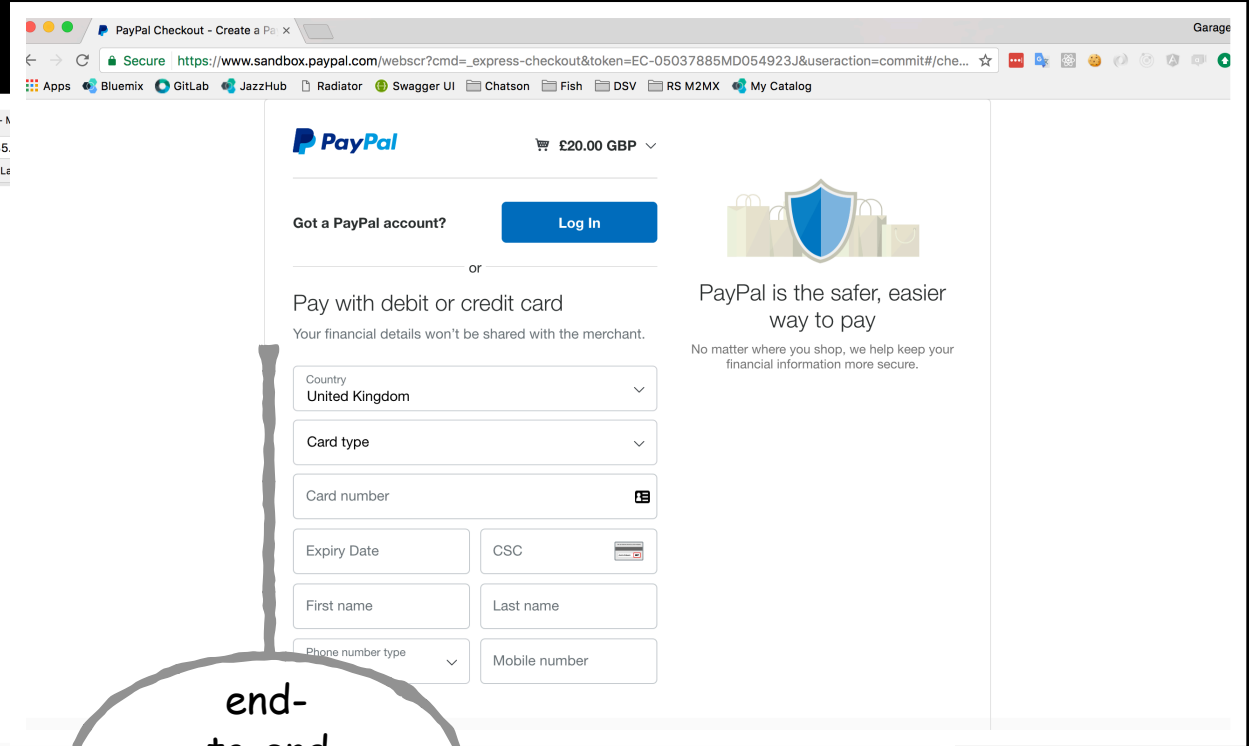
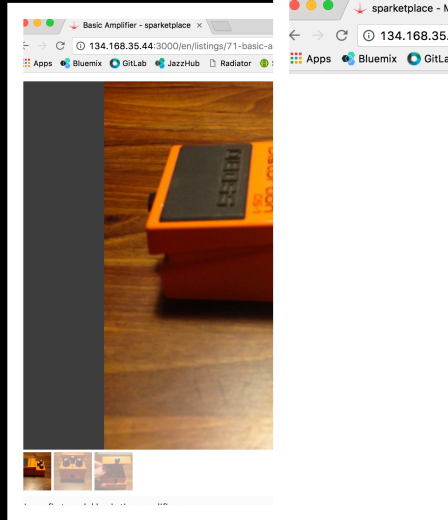
The screenshot shows a web browser window with the URL `134.168.35.44:3000/en/listings/71/initiate`. The page displays the details for a product named "Basic Amplifier by Sally". The price breakdown is as follows:

Subtotal:	£17.50
Shipping:	£2.50
Total:	£20

Below the price breakdown, there is a section for an "Optional message to Sally" with a text input field containing the text "Could you send it as fast as possible, please?". A red button labeled "Proceed to payment" is visible below the message field. Underneath the button are logos for various payment methods: PayPal, MasterCard, VISA, DISCOVER, and AMERICAN EXPRESS. Below the payment logos, there is a "Payment method" section with a note: "You will be charged only if Sally accepts the transaction. Sally will be charged only if you complete the transaction within 3 days. If Sally declines or you cancel the transaction, you will not be charged."

end-
to-end
transaction flow!

fourth week of development (more)



end-to-end transaction flow!

fourth week of development (more)

The screenshot displays the DesignSpark Marketplace interface. At the top, the navigation bar includes the text "Innovation for Every Engineer" and the "DESIGNSPARK MARKETPLACE" logo. A secondary navigation bar lists various tools and services: Apps, Bluemix, GitLab, JazzHub, Radiator, Swagger UI, Chatson, Fish, DSV, RS M2MX, and My Catalog. On the right, it says "Brought to you by" followed by the RS logo.


The main content area is titled "Inbox" and features a background image of a person in a futuristic, dark suit with multiple rocket-like thrusters on their back. Below this header, there is a list of three transactions, each with a user profile icon, name, and timestamp:

- Bobby**, 2 days ago: accepted the request, received payment for £120. Listing Lifelike Precision Butterfly Replica. Status: Waiting for Bobby to mark the order completed.
- Bobby**, 2 days ago: received payment for £20. Status: Waiting for Bobby to mark the order completed.
- Bobby**, 2 days ago: received payment for £20. Status: Waiting for Bobby to mark the order completed.

A hand-drawn white oval with a black border is superimposed over the transactions, containing the text "end-to-end transaction flow!". A white line extends from the top of this oval, pointing to the "accepted the request" text in the first transaction entry.

Caspar Schoenmakers
product owner



An illustration of two men in a meeting. The man on the left is wearing glasses and a blue shirt, leaning forward. The man on the right is also in a blue shirt, resting his chin on his hand. They are sitting at a desk with a laptop and a cup. The background shows a window and office furniture.

Caspar Schoenmakers
product owner

We
had our first
conversations about this
with IBM at the end of May,
and 3 months later we have a
transactional platform
ready to use. It's
incredible.

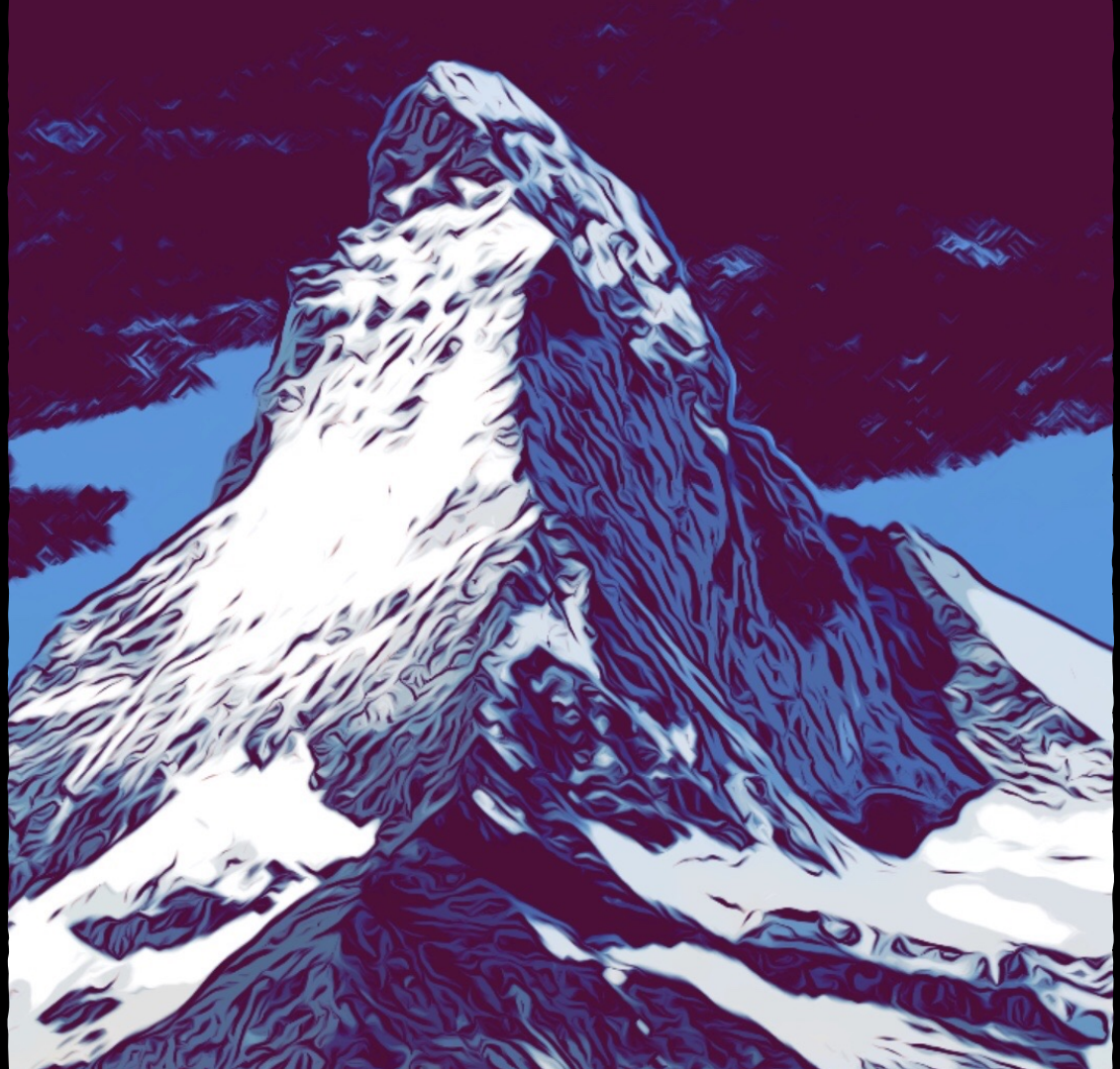
key enablers in delivering a credible and stable MVP in 4 weeks

- Using **IBM managed Kubernetes** Containers service the team deployed the OpenSource commerce marketplace - **ShareTribe** - within days.
- The Cloud Garage were then able to modify ShareTribe to the DesignSpark requirements.

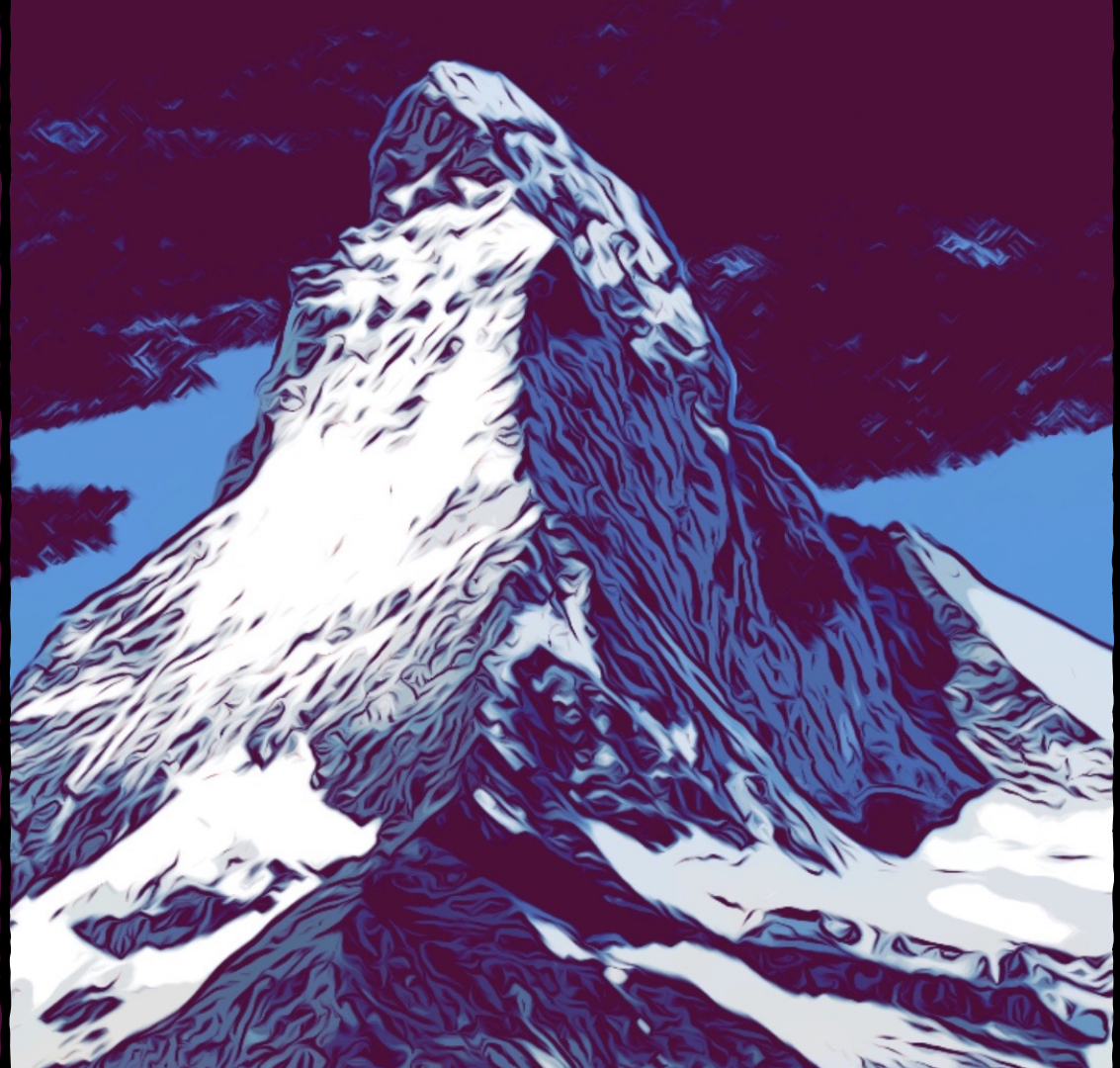
other technical components used in solution :

- **MySQL** - that database used to back the website
- **Cloud Object Storage** - Used for site images
- **ElasticSearch** - send to replace the search functionality across the site
- **SendGrid** - the thirdparty service available IBM Cloud used for sending emails from the site and within the site
- **Redis** - used for caching from the server to make the site as fast as possible and alert in case of issues
- **Continuous Delivery** - Used to enable the DevOps pipeline
- Marketplace **integrated into DesignSpark registry** for smooth user experience

peril



challenges

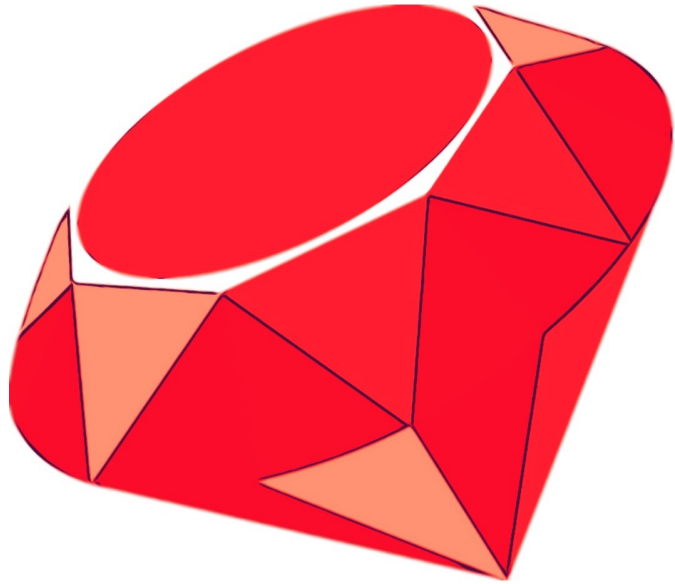


Sharetribe

Sharetribe

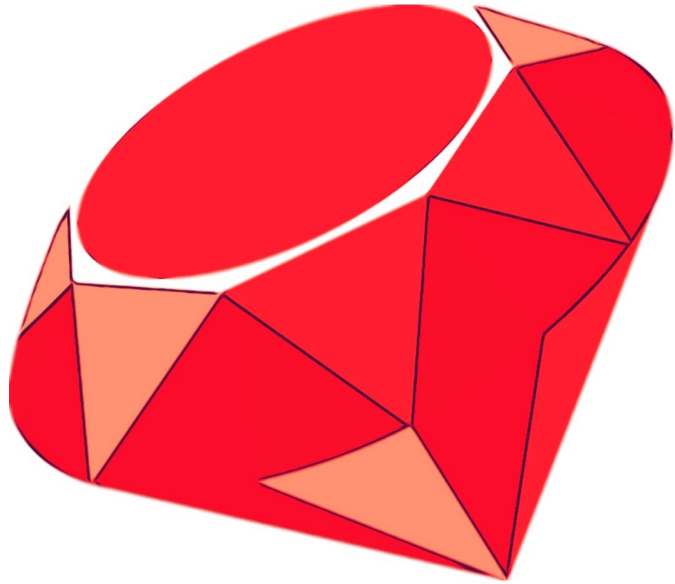
- best platform for the requirements

Sharetribe



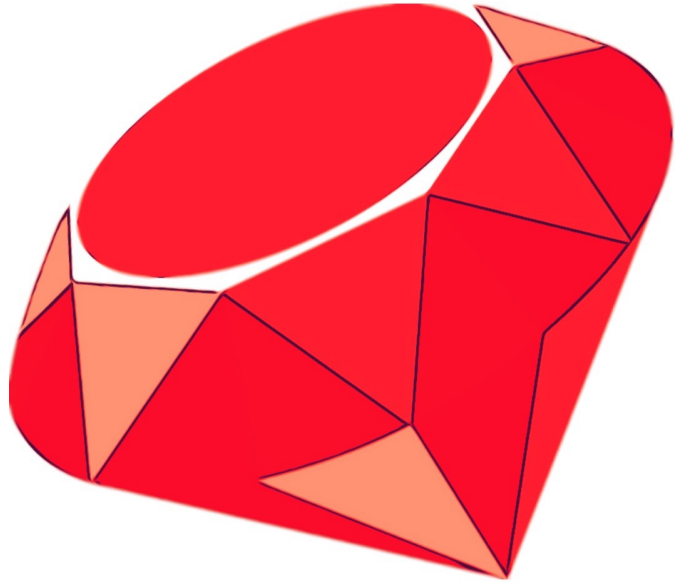
- best platform for the requirements
- written in Ruby on Rails

Sharetribe



- best platform for the requirements
- written in Ruby on Rails
- we had skills in many languages...but not Ruby

Sharetribe



- best platform for the requirements
- written in Ruby on Rails
- we had skills in many languages...but not Ruby
- so we learned Ruby :)

Kubernetes is powerful...

but **complex**

some defaults didn't work

well for a **big** Ruby on Rails

app

what happens
once an MVP
is 'done'?

A flock of ten birds, possibly geese or swans, is flying across a clear, light blue sky. The birds are scattered across the frame, with some in the foreground and others further back, creating a sense of depth and movement. The text is positioned in the lower right quadrant of the image.

**nothing stands
still in the cloud**



sunsets happen

IBM
Cloud
Container
Service

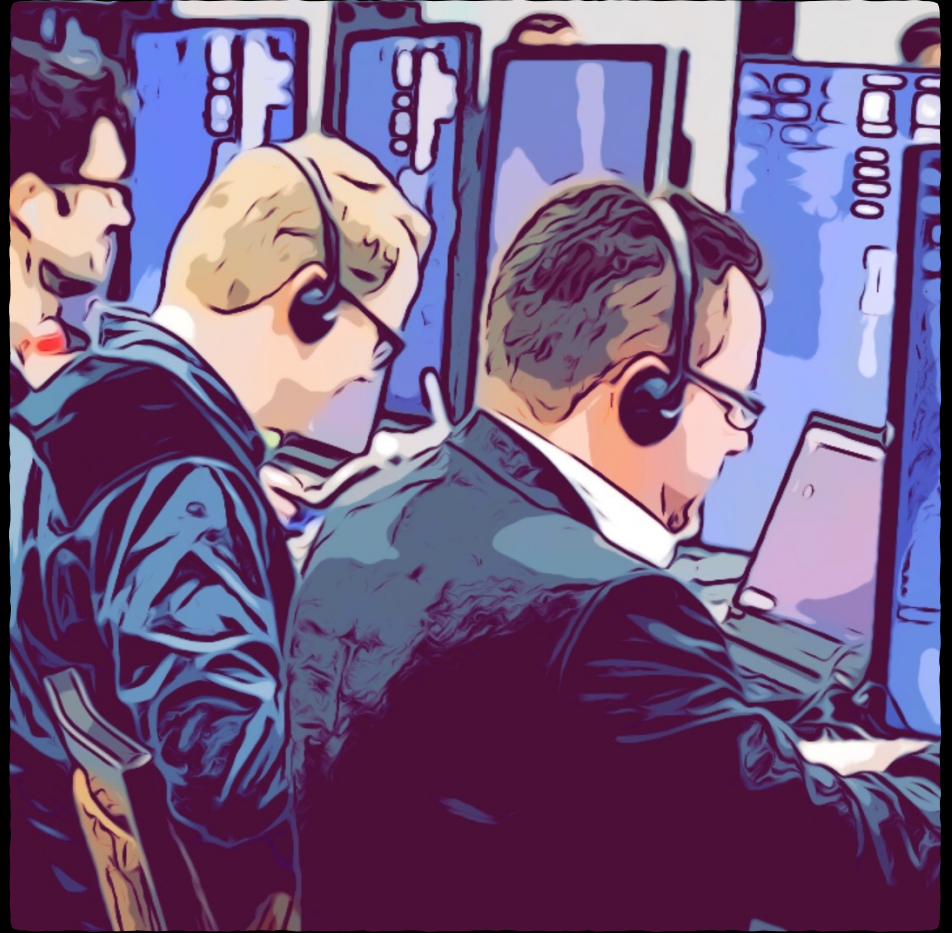
IBM
Cloud
Kubernetes
Service

we had to move
container orchestrator

...and object storage

it's important
to think about
maintenance

round the
clock
support
needs lots
of people



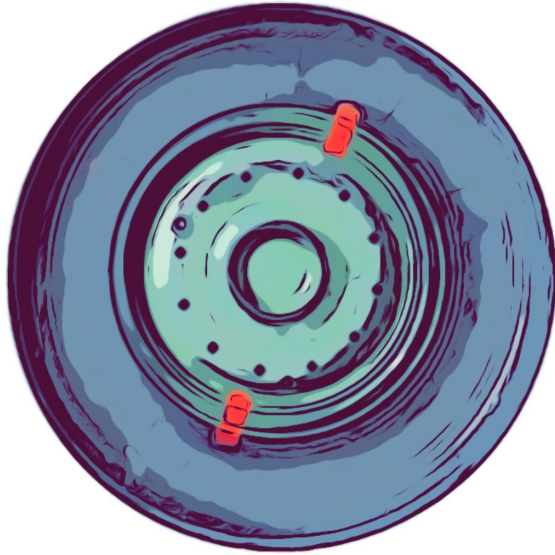
what's the right SLA for **your** business?

enable people in-house, or find a partner who
can work at the scale you want

The image features a monochromatic blue color scheme. The foreground is filled with the textured surface of water, showing small ripples. A dark horizontal line separates the water from the background. The background consists of a range of mountains or hills under a sky with soft, white clouds. The overall mood is calm and contemplative.

things to **think** about

open is great



no reinventing wheels
no platform lock-in



roll your own

off the shelf



:(:	:)
	Share the feedback complex to work	
Build problem means no one else can see DesignSpark begin working (MC)	Slipping to ongoing (J)	
	I think I know a way to the service binding issues we're seeing, James) (MC)	Thanks for the feedback on the work from DesignSpark - thank you! (AM)
CS lots of work still necessary at RS end, will be pressed for time (legal, finance, makers) (-PW)	Lots of stories are topped by other pieces of functionality waiting to complete (JC)	Concept design looks awesome! (PW) - (JC) - (OC) CS
	Frameworks they slow you	Stick a great tool to use for some

frameworks -
they speed you up, and
they slow you down



Weekly retrospective
Second week of development

Cloud Foundry

- super-easy
- not flexible enough for the framework we chose
- multi-buildpack can be done, but it's hard work

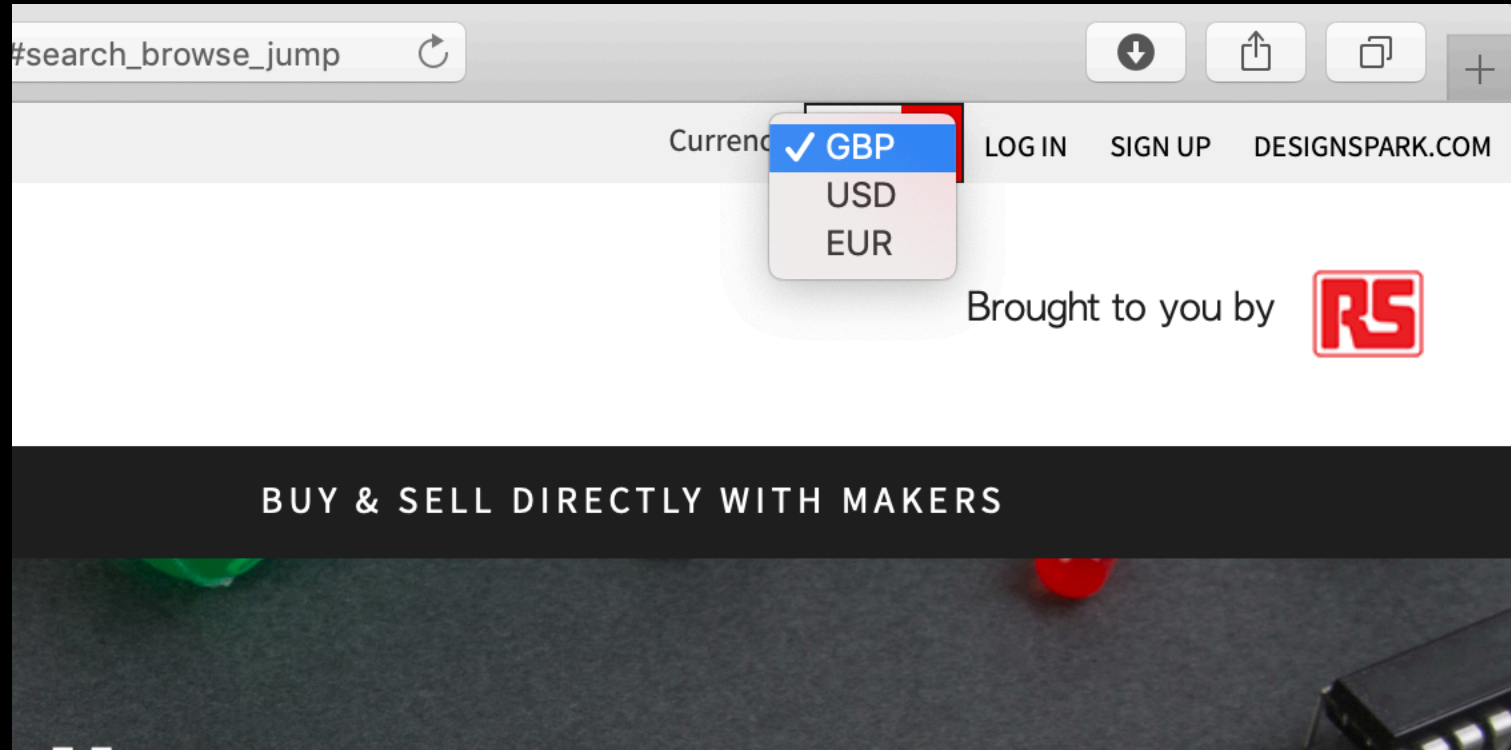
Kubernetes

- highly flexible
- flexibility has a cost
- devs need to understand more ops
- needs much more configuration

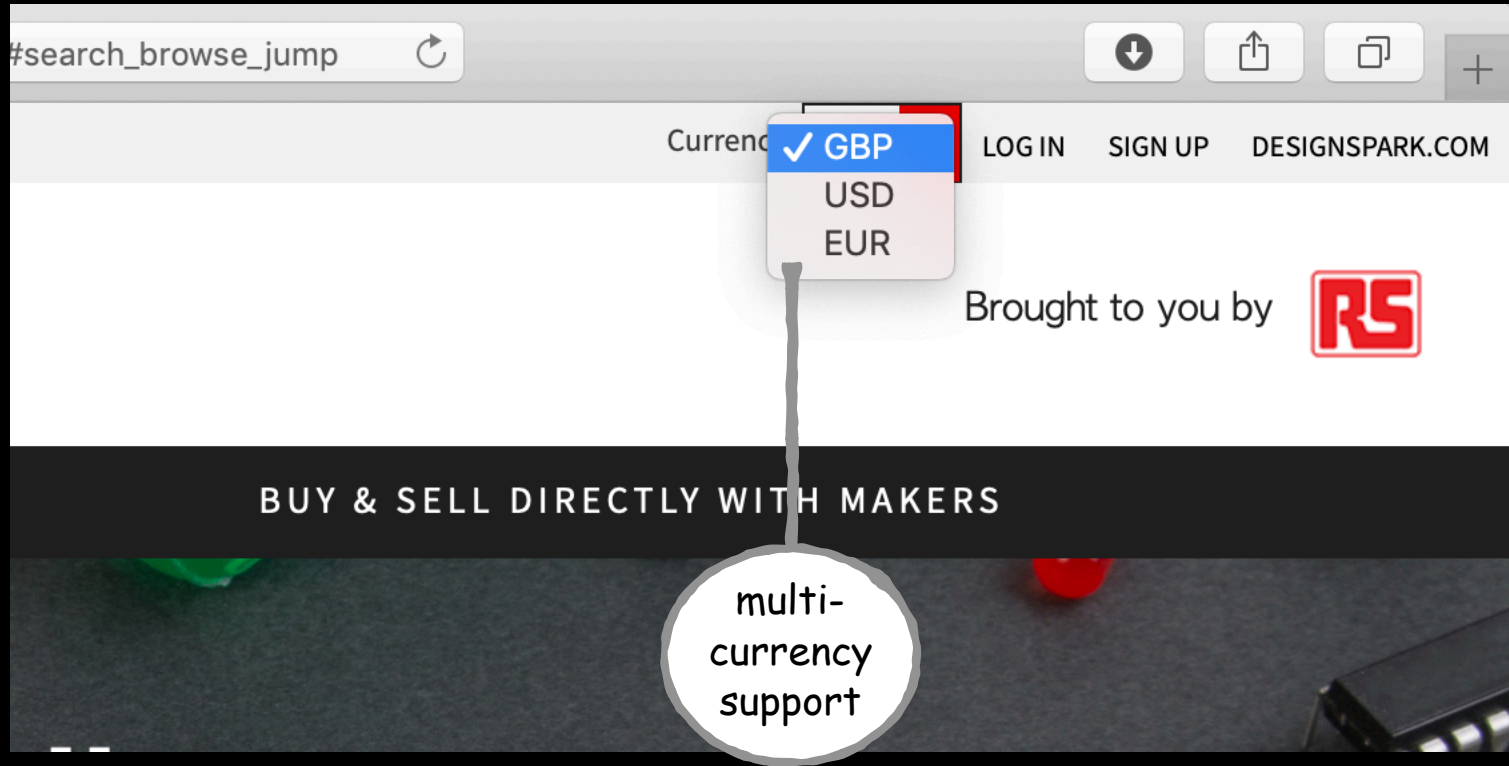
the most **meaningful**
way to innovate is to
get to **production**

... and things don't
stop once you're in
production

thirty-sixth week of (very part-time) development



thirty-sixth week of (very part-time) development



success



Credit: National Parks Service

key RS business benefits

- increased site traffic – new and returning visitors
- new DesignSpark member Acquisition
- market differentiation
- increased engagement with the Maker and Pro Maker Community



IBM Cloud Garage



IBM Cloud Garage



Design Thinking Workshop



The IBM **Cloud** Garage ...





The IBM **Cloud** Garage ...

- showed a clear understanding of our requirements and users





The IBM **Cloud** Garage ...

- showed a clear understanding of our requirements and users
- fast ideation in an inspiring environment





The IBM **Cloud** Garage ...

- showed a clear understanding of our requirements and users
- fast ideation in an inspiring environment
- delivered a credible and reliable platform that gives a great user experience for our users





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- smooth interaction with our DesignSpark developers and 3rd party applications





The IBM **Cloud** Garage ...

- showed a clear understanding of our requirements and users
- fast ideation in an inspiring environment
- delivered a credible and reliable platform that gives a great user experience for our users
- an MVP Beta platform that fitted our budget
- smooth interaction with our DesignSpark developers and 3rd party applications
- quick time to market



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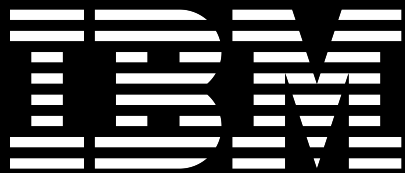
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@petenwood



DESIGNSPARK

Thank you

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www.ibm.com/cloud/garage/