Kevin Li Ying (CTO)
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Enabled by technology

FUTURE

Overall an agile, lean, robust, scalable and proprietary tech stack

FUTURE

Why is our **tech stack** important?

Our tech stack allows:

Our websites to exist and grow - scalable

Our people to easily move around brands and roles - efficient and flexible

Our business to further diversify sites revenue streams - scalable
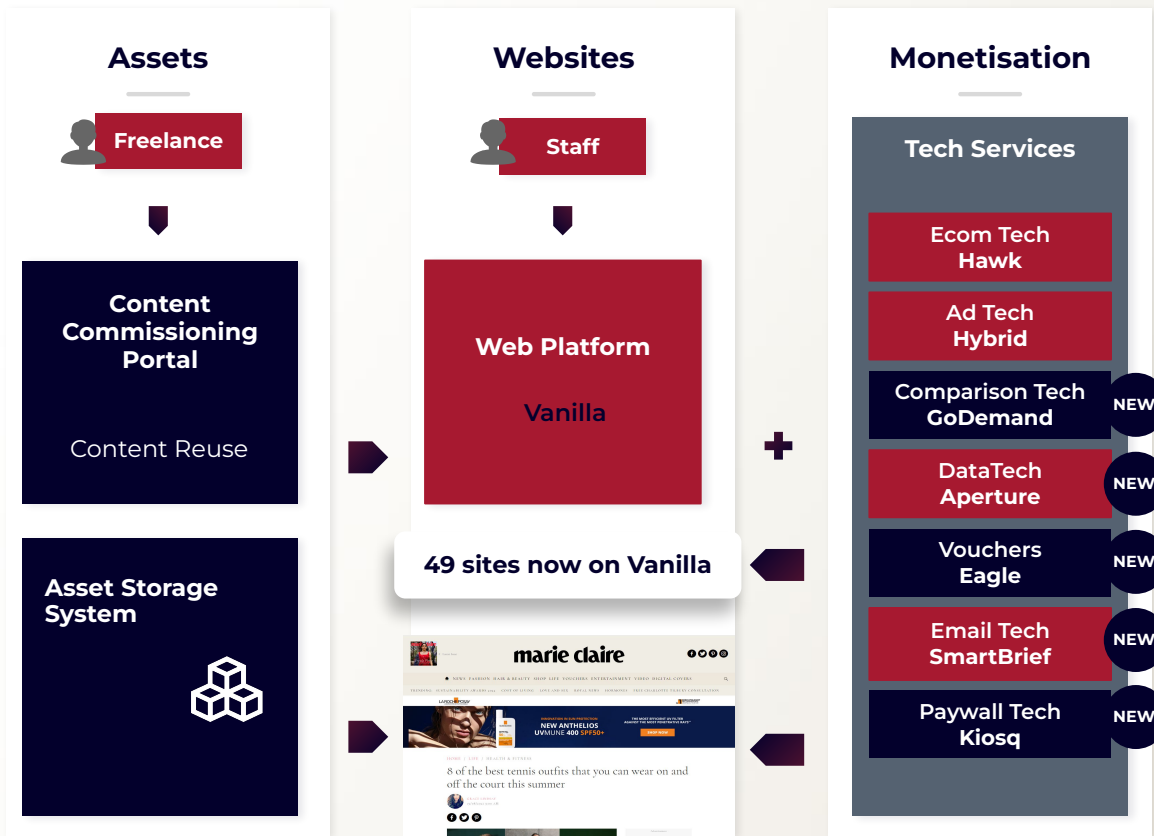
Our organisation to operate efficiently - robust

Overall an agile, lean, robust and scalable tech stack

Our tech stack is a strategic enabler and gives us competitive advantage

FUTURE

Our tech stack

Fortunate to have an end to end capability which makes it unique in our media industry

Assets

Freelance

Content Commissioning Portal

Content Reuse

Asset Storage System

Websites

Staff

Web Platform

Vanilla

49 sites now on Vanilla

Monetisation

Tech Services

Ecom Tech Hawk

Ad Tech Hybrid

Comparison Tech GoDemand — NEW

DataTech Aperture — NEW

Vouchers Eagle — NEW

Email Tech SmartBrief — NEW

Paywall Tech Kiosq — NEW

Vanilla is our single modular web platform, it has a single content management system

Hawk is our our eCommerce service that enables the monetisation of our content through product affiliates

Hybrid is our advertising system and is a server side open auction marketplace dealing with yield management

GoDemand is our our eCommerce service that enables the monetisation of our content through service affiliates

Aperture our customer audience data platform

Eagle is our voucher technology that sits on our owned and operated websites

SmartBrief our email curation and delivery platform for email products. Offering hyper audience cohort targeting and advertising capabilities

**Kiosq** our new proprietary reusable paywall service for monetising gated editorial content

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Tech stack strategy aligned with the business

Protect
Invest in the health of the platform to maximise resilience, availability, scalability, maintainability and cost effectiveness

Optimise
Data validated product development approach driving continual improvements to revenue per session (RPS) and per user (RPU)
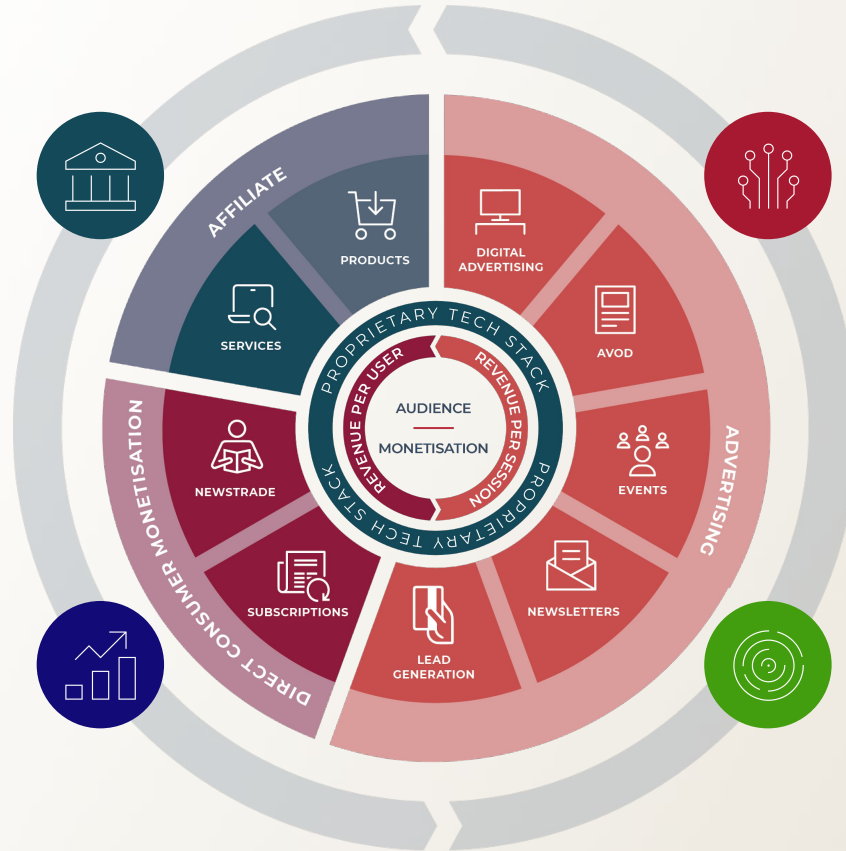
Platform Effect
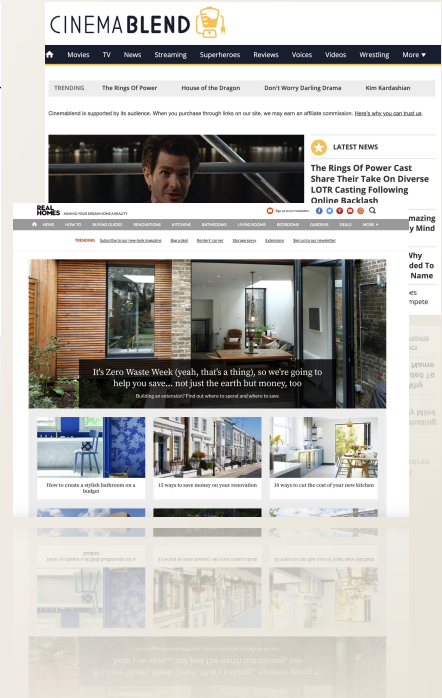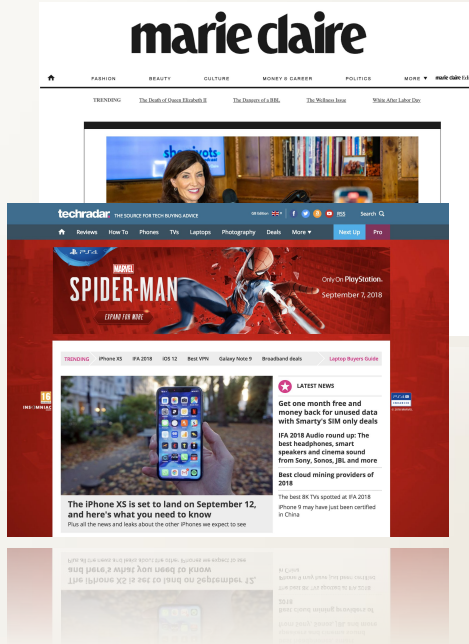Realisation of platform benefits through deployments of platform agnostic capabilities - Hawk as a service and Hybrid as a Service and migrations to Vanilla

New Capabilities
Development of new tech products and assets or integration of acquired tech assets into our tech stack which are then leveraged through the platform effect

AFFILIATE

PRODUCTS

SERVICES

PROPRIETARY TECH STACK

REVENUE PER USER

REVENUE PER SESSION

AUDIENCE

MONETISATION

PROPRIETARY TECH STACK

DIGITAL ADVERTISING

AVOD

ADVERTISING

EVENTS

NEWSLETTERS

LEAD GENERATION

SUBSCRIPTIONS

NEWSTRADE

DIRECT CONSUMER MONETISATION

5

FUTURE

Vanilla Web Platform Overview

Proven web platform supporting growth of 49 core brands. A highly optimised cohesive publishing modular platform offering excellent user experiences, SEO performance and stable vehicle for Future's, Hawk (affiliate) and Hybrid (advertising) services.

- **Highly resilient**
  - The platform has been extensively refined and enhanced over the last seven years

- **Highly SEO effective**
  - Driving low acquisition cost

- **Modular design allowing reuse and speed to market**
  - Utilising a modular "service oriented architecture" allows teams to focus on a clearly defined area and iteratively improve rapidly

- **Rich in audience monetisation and engagement functionalities**
  - Vanilla is comprised of multiple proprietary components each delivering a specific benefit. From delivering live blogging down to a catalogue of templates and paywall service offering

Vanilla's growth since 2020...

	2020	2022	Change %
Domains on Vanilla	25	49	+96%
Published articles	~1.7m	~2.5m	+47%

A site running on Vanilla can maintain all the benefits of the "platform effect" and yet retain a unique and strong brand identity. For example the premium lifestyle brands of Marie Claire and Ideal Home

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Vanilla Web Platform
Acquisition positives

Acquisitions bring more than just audience...

Each synergy brings hard won knowledge and proven innovation which can be selectively applied to existing brands or holistically. This integration process can enable a positive feedback loop of growth...

Tuned processes

Data led editorial workflow processes and techniques which increase the speed of content creation offering efficiencies across the platform and can be augmented by our own machine learning derived data (Waive)

Advanced specialisms

Specialisms in specific content areas have driven SEO niche strategies which can be integrated appropriate brands

WHO WHAT WEAR

Dennis

FUTURE

Connectors. Creators. Experience Makers.

Purch

waive
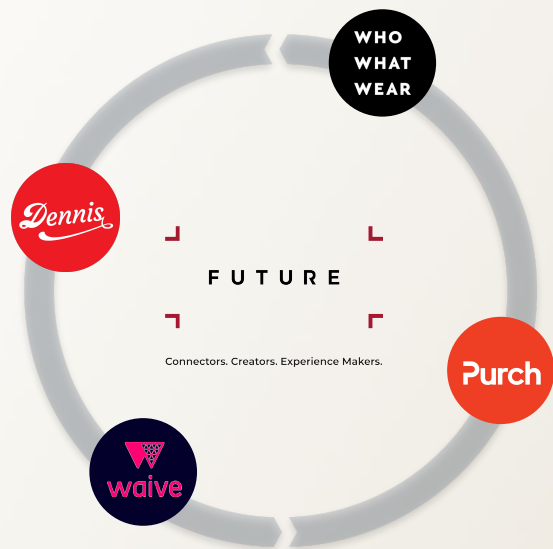
New revenue channels

Innovative approaches to previously untapped audience and revenue channels, challenging internal assumptions and expanding opportunities across multiple brands

Back-office innovation

Integration of highly effective back office UI(user interface) components which are the product of extended testing which we can adapt and bring into our systems

Talent and experience

Absorption of engineering and development knowledge as well as delivery processes. Skilled publishing focused team members who bring fresh approaches to existing challenges

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Vanilla Web Platform **Innovation**

As the platform scales the scope for applying new techniques and approaches grows and the opportunities increase justifying the engineering investment. Images shown is a sample of the initiatives in progress...

Data is at the heart of what we do...

CONTENT RECOMMENDATIONS
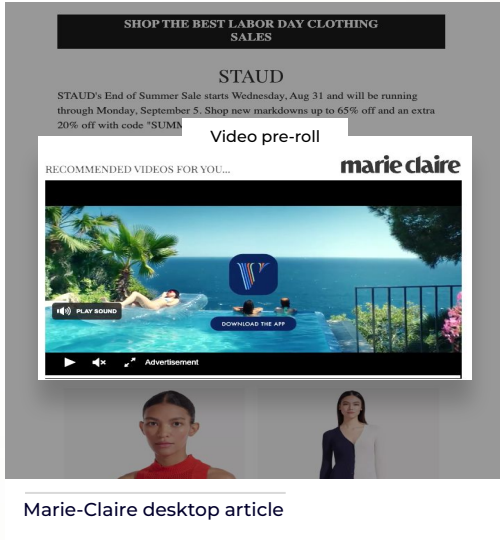Predict the next area of interest ahead of the masses and push the same knowledge to users via our machine learning driven data services.
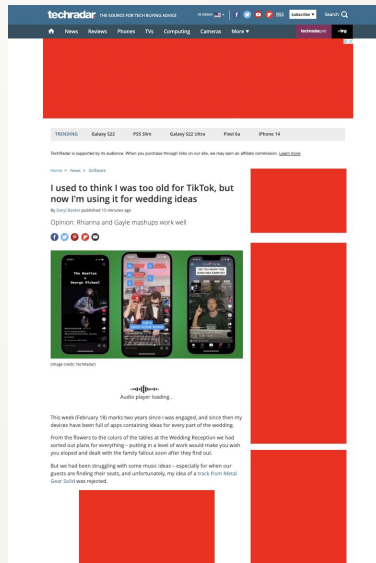
VANILLA DECISION ENGINE
Utilise the wealth of data we hold to predict the best use of page slots to enhance conversion based on the users past behaviour, location and the properties of the page
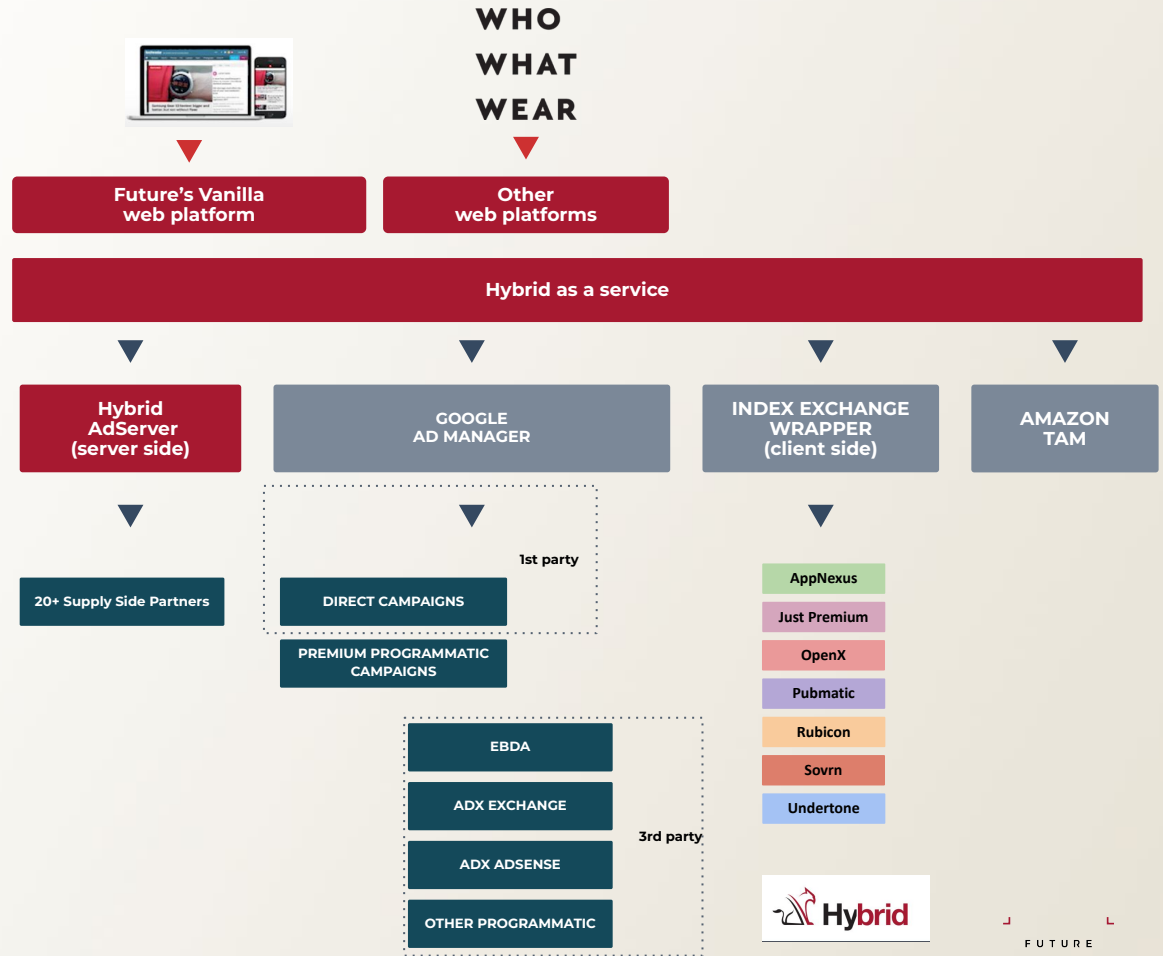

ENHANCED LIVE BLOGGING
Google prioritises live blogs for many search terms and advancing this functionality helps brands across the platform during key events like Black Friday

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Video pre-roll

SHOP THE BEST LABOR DAY CLOTHING SALES

STAUD

STAUD's End of Summer Sale starts Wednesday, Aug 31 and will be running through Monday, September 5. Shop new markdowns up to 65% off and an extra 20% off with code "SUMM...

marie claire

RECOMMENDED VIDEOS FOR YOU...

Marie-Claire desktop article

Adtech Hybrid

Hybrid is a robust advertising monetisation stack built out from the best third-party and proprietary ad technologies. It provides optimal, large scale, high-availability, display and video ad delivery services that power Future digital brands and partnering publishers

WHO WHAT WEAR

Future's Vanilla web platform

Other web platforms

Hybrid as a service

Hybrid AdServer (server side)

GOOGLE AD MANAGER

INDEX EXCHANGE WRAPPER (client side)

AMAZON TAM

20+ Supply Side Partners

1st party

DIRECT CAMPAIGNS

PREMIUM PROGRAMMATIC CAMPAIGNS

EBDA

ADX EXCHANGE

3rd party

ADX ADSENSE

OTHER PROGRAMMATIC

AppNexus

Just Premium

OpenX

Pubmatic

Rubicon

Sovrn

Undertone

Hybrid

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Hybrid consistently delivers upside as we continue to protect, optimise and add new capabilities to it

Continuous improvement drives cost-effectiveness

Over last 3 years, the Hybrid technology stack has been massively improved: performance optimisation, increased robustness, reduced technical debt and optimised our cloud based infrastructure in order to deliver maximized advertising revenue with cost-effective and scalable infrastructure and operation processes.

Scalability

This lean solution allowed to deploy Hybrid across all legacy digital brands and all new acquisitions with optimal time to market while generating gains in yield and overall revenue from display and video inventories on every single brand.

Combined with Vanilla, the complete stack has consistently delivered major increases in revenue across verticals*:

Entertainment	Women's Lifestyle	Homes
cinemablend.com	*marieclaire.com*	*idealhome.co.uk*
+43%	**+103%**	**+23%**
In Revenue Per '000 User session 180 days post migration	In Revenue Per '000 User session 140 days post migration	In Revenue Per '000 User session 60 days post migration

*Advertising revenue per '000 user session
Brands have different time frame driven by different migration date

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Hybrid **Competitive advantage**

Why Hybrid?

RUNS ANYWHERE
Plug & play "as-a-Service" architecture on any web platform and optimise audience monetisation

YIELD OPTIMISATION THROUGH AD SLOT COMPETITION
One tech to manage the adstack (1st party, PMP, PG, 3rd party)

Demand sources are fully diversified from first-party clients, premium programmatic and private marketplaces to the open market, maximizing inventory value and enabling upsell

EFFICIENT ONE PIPELINE
It integrates a wide range of programmatic Supply Side Platforms direct integration on client and server side, maximizing competition for our inventory across all verticals

SPEED TO MARKET
A typical site deployment is executed within weeks which allows to deliver incremental revenue well ahead of full site migration

FUTUREPROOF
Hybrid has a modular architecture, enabling continuous improvement of the platform by plugging new components and services

FLEXIBLE
It allows a high degree of customisation in terms of configuration (display, video, etc) allowing brand identity

YIELD OPTIMISATION THROUGH AD SLOT COMPETITION

- **Increase in yield** for direct deals and programmatic guaranteed
- **Increase in CPM** for open auction as a consequence of market pressure

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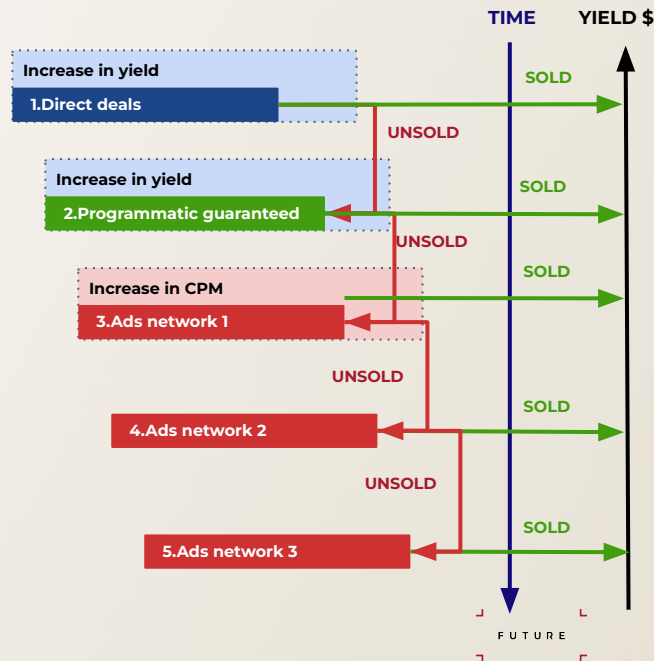
Developing a console to Hybrid

Automation of parts ad ops manual task in setup and optimisation of advertising on web pages to drive:

- Effectively providing operational scale
- Rapidly validating ROI targets
- Cost efficient: Permitting non technical/admin staff to administer
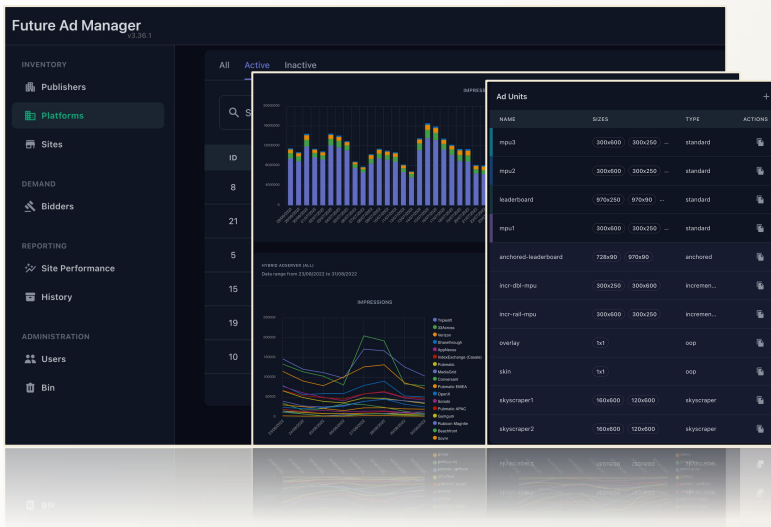
Launching Hybrid's ad scout

Scout for display advertising revenue opportunity across all Future sites using data to leave no stone unturned

Dynamic robust technology to deliver best, cheapest product offer recommendation.
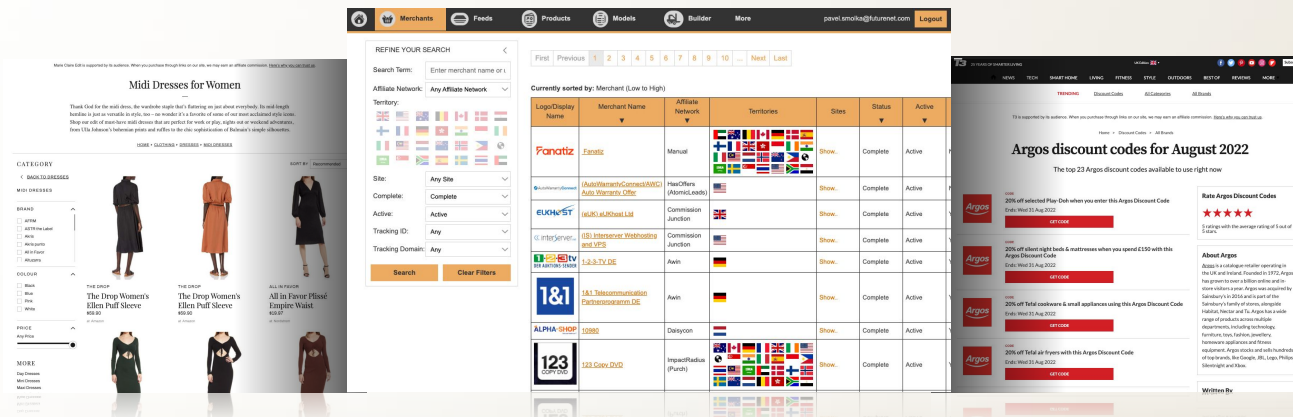
4,300+	Up to **3,500**	**27**	**~2,800**
Active affiliate merchants	API or asset requests per second	Territories covered	Product updates per second

Entertainment	**Women's Lifestyle**	**Homes**
cinemablend.com	*marieclaire.com*	*idealhome.co.uk*
+228%	**+53%**	**+65%**
In revenue per '000 User session 180 days post migration	In revenue per '000 User session 140 days post migration	In revenue per '000 User session 60 days post migration

*Affiliate revenue per '000 user session
Brands have different time frame driven by different migration date

FUTURE

Why Hawk?

ROBUST MATCHING ALGORITHM
Which finds the best deals for specific models (such as Dell XPS 13) as well as categories (Dresses, ...)

MERCHANT PREFERENCE SCORE SYSTEM
which determines the best deals to show in order to maximise yield without compromising the user experience

SCALABLE AND ROBUST
Centralised database of **~500,000,000 products**, which allows selecting and showing the best deals without fetching ad-hoc data from affiliate networks

PROVEN TAILORED USER EXPERIENCE
Smart labeling system, so that users can narrow down their search based on specific criteria (screen size for TVs, brand for fashion products, ...)

Working across retail products, subscriptions, multimedia (shows, movies) and discount offers/vouchers across **80 affiliate networks** and direct affiliate relationships

Range of **35 different affiliate widgets** (further customisable with AB-testable widget features)

GEO-TARGETED, TAILORED SET OF DEALS IN LOCAL CURRENCY
Ability to enter different markets

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Hawk **Innovation**

ADVANCED MERCHANT PREFERENCE SCORE SYSTEM
Merchant Preference Scoring, per category or even individual models. Based on the commission rates and conversion rate of individual retailers, Hawk ranks the products in widget so the best ones show. This also allows Future to run bespoke campaigns to promote a retailer for a certain vertical

EDITORIAL EFFICIENCY THROUGH SMART DYNAMIC SPECS/LABELS
Hawk combines the knowledge of millions of products and the editorial input to provide dynamic specifications information for most models

DISCOUNTS AND VOUCHERS
In 2022, we enriched Hawk with discount and voucher data, which we are rolling out across Vanilla sites

FUTURE

Emailtech - SmartBrief

End-to-end platform for email newsletter publishing and monetising

1.8bn
Emails sent in last 12 months

337
Newsletters in total

8m
Subscribers and growing…

50
Newsletters launched in last 12 months

+48%
B2C 3rd party ad network commercial revenue across all platforms from FY 21 to FY 22 (for emails)

4.5x
Number of B2C publication on SmartBrief grow from 8 in FY 21 to 36 in FY22

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SmartBrief Competitive advantage

RESILIENT & SCALABLE

Unlike third-party email service providers - ESPs, the platform can scale to meet the needs of the business due to agile dev and without significant investment costs.
System availability is reliably 99.95%; trusted pool of delivery IPs; proven template designs which can accommodate multiple first-party and third-party ad products

SPEED TO MARKET + CURATION AT THE CORE

Unique email newsletter publishing and monetisation platform. Content curation is built into the CMS allowing editors to seamlessly surface content from thousands of external sources or across multiple Future sites, greatly reducing the timing of newsletter creation.

BUILT FOR B2B, SCALED TO B2C

Originally designed for B2B publishing, we've scaled the platform across our consumer portfolio allowing for direct communication with and monetisation of our B2C audience and growing our first-party data pool for leverage elsewhere in the business.

FLEXIBLE ADVERTISING CAPABILITY

"Pace" ad serving across a set timeframe for yield optimization. This ensures a better user experience and optimum advertiser performance.Delivers both endemic and demographic ad targeting for both sponsored and dedicated send/solus email newsletters

DATA ACCURACY

Industry-leading click filtering and bot identification to ensure the most accurate engagement data is available to the business and our advertisers

CONTENT	CMS	ADVERTISING	DISPATCHER	SUBSCRIBERS	CRM
	EDITORIAL	ADOPS / SALESOPS			
Automated Content Scraping / Automated Content Categorisation	SMARTBRIEF PRODUCTION — Create, curate, validate, add editorial content	AD MONETISATION	SMARTBRIEF DISPATCHER EMAIL DISPATCHER SYSTEM	SMARTBRIEF SUBSCRIBERS SUBSCRIBER DATABASE — Associations + Direct Signups	SMARTBRIEF CLIENTS SALESFORCE CRM DATABASE — Advertisers
1,500+ content sources					

Comparison Pre vs Post Migration onto SmartBrief

100%

Re-platforming doubled the marketable audience for Kiplinger dedicated sends by introducing vertical newsletter sponsorship opportunities which did not exist on the previous platform

↑2.5x

Increase in ad CTR (click through rate) as a result

Kiplinger dedicated send - **BEFORE** migration to SmartBrief

Kiplinger dedicated send - **AFTER** migration to SmartBrief

FUTURE
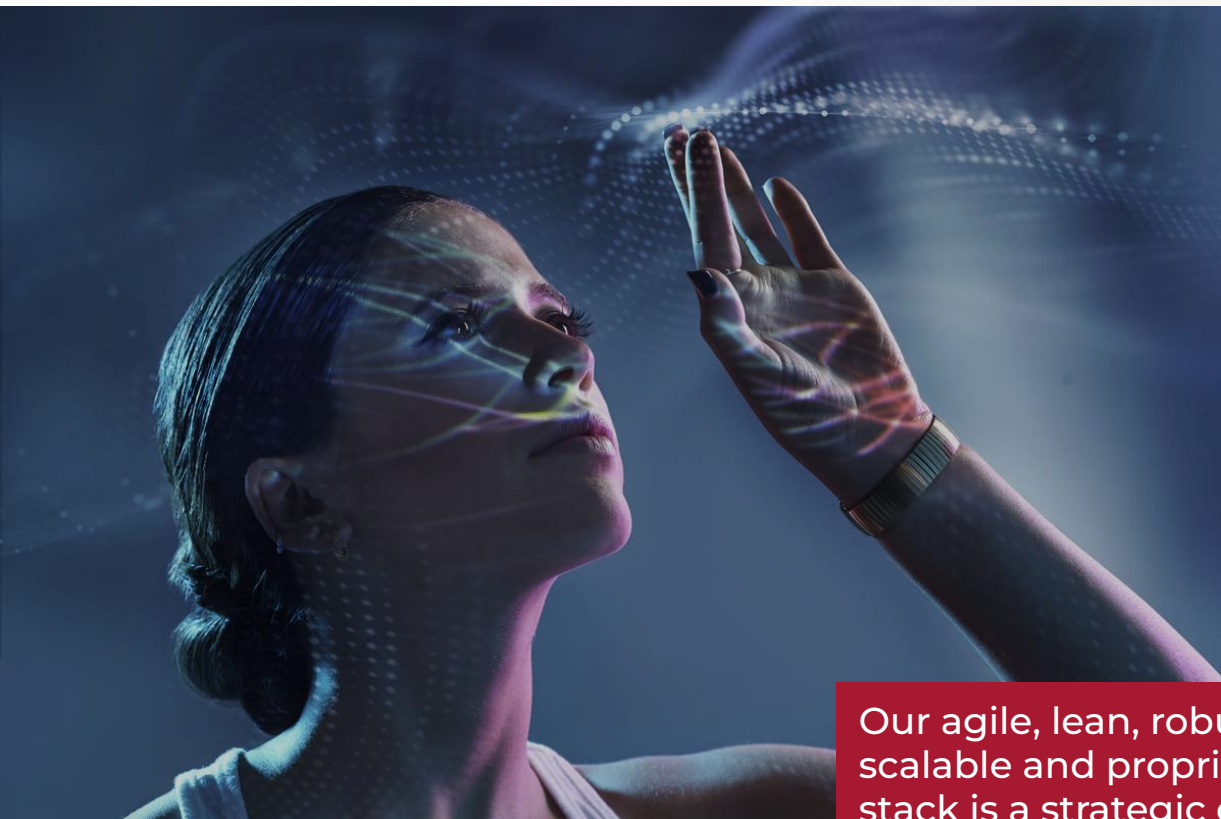
Looking Forward

More intelligent tech stack by utilising all our data points

Personalisation : Subliminal recommendations to increase retention and engagement and build loyal communities

Content forecasting: Predicting/ anticipating demand through data analysis near real time

Our agile, lean, robust and scalable and proprietary tech stack is a strategic enabler and gives us competitive advantage

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