



Augmented Reality : the way towards enriched user experience

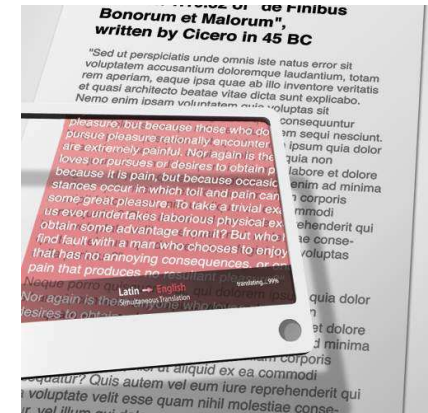
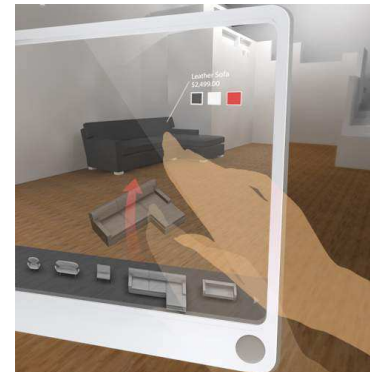
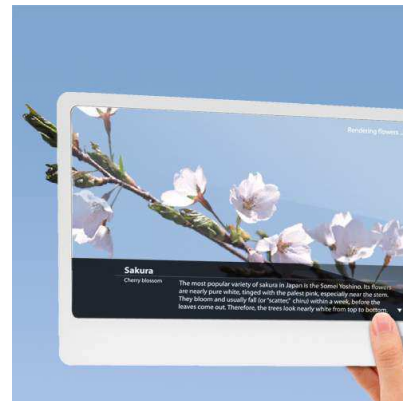
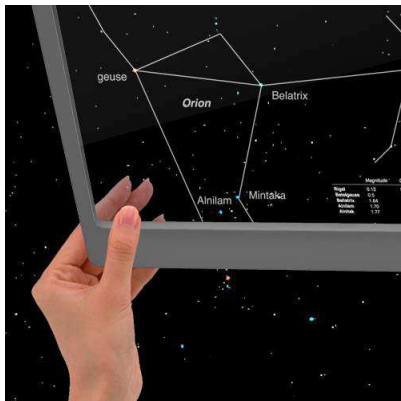


Vincent Marcatté, VP Open Innovation Orange Labs
Celtic Plus Event, 23 April 2014



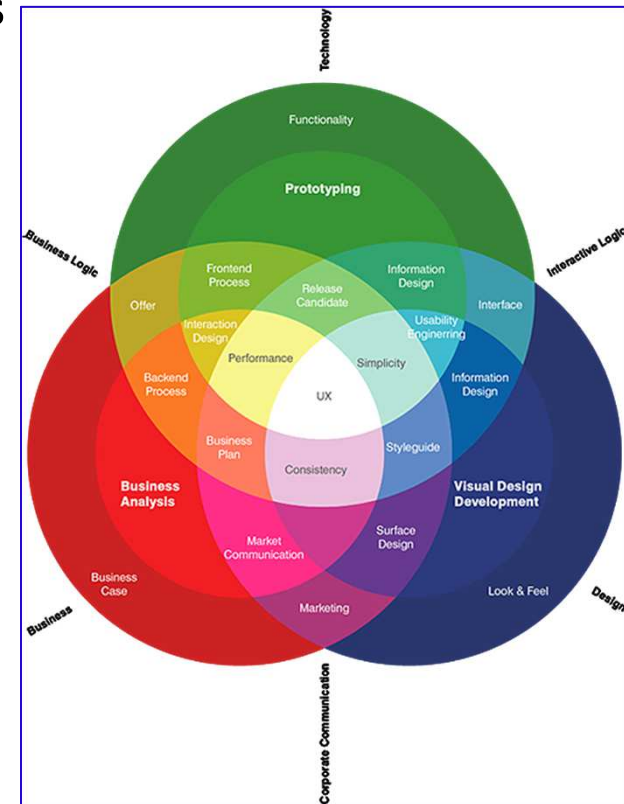
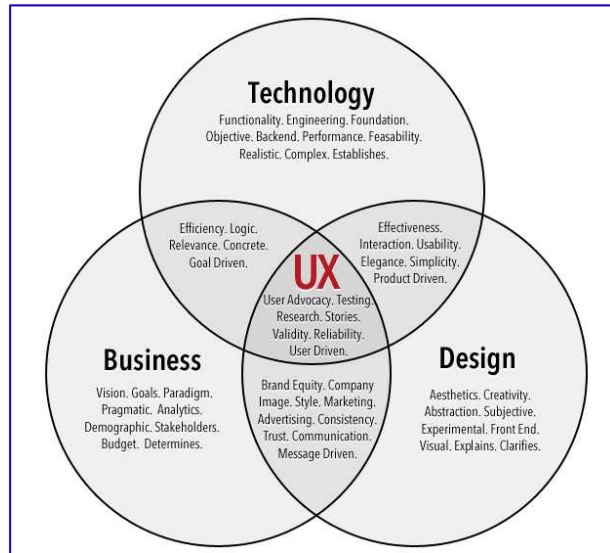
What is Augmented Reality ?

- Real-time « enrichment » of our perception of reality (what we see, what we hear, what we feel, ...) by digital and contextual information





UX: User Experience, is at the border of technology, business and design





Efficiency (performance) is highly correlated to enhanced user (customer) experience

80%

of viewers leave if a video buffers once

20%

of performance improvement for France Televisions will immediately generate an increase of audience and revenues by **10%**

69%

of viewers leave a website if pages are too long to load

Some impacts on performance

Google discovered that an increase of change of **0,5 seconds** in page loading time decreased traffic and ad revenues by

20%

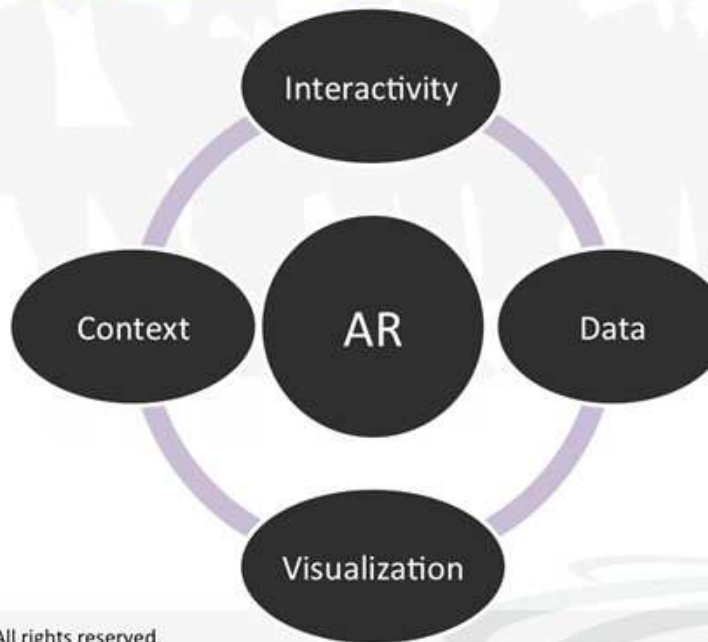
Every **100ms** increase in load time of Amazon.com decreased sales by

1%



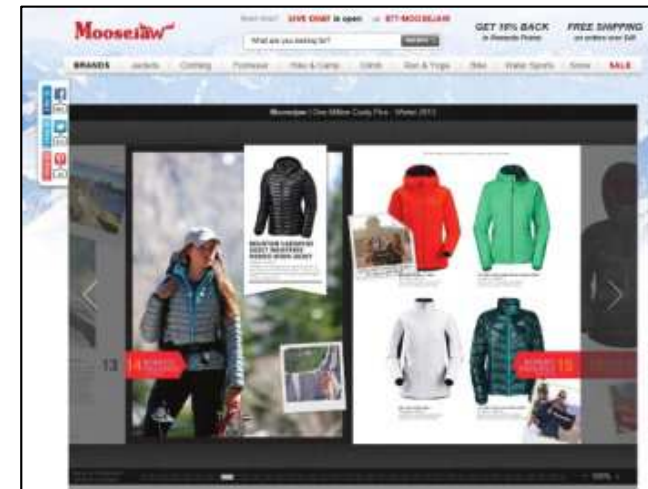
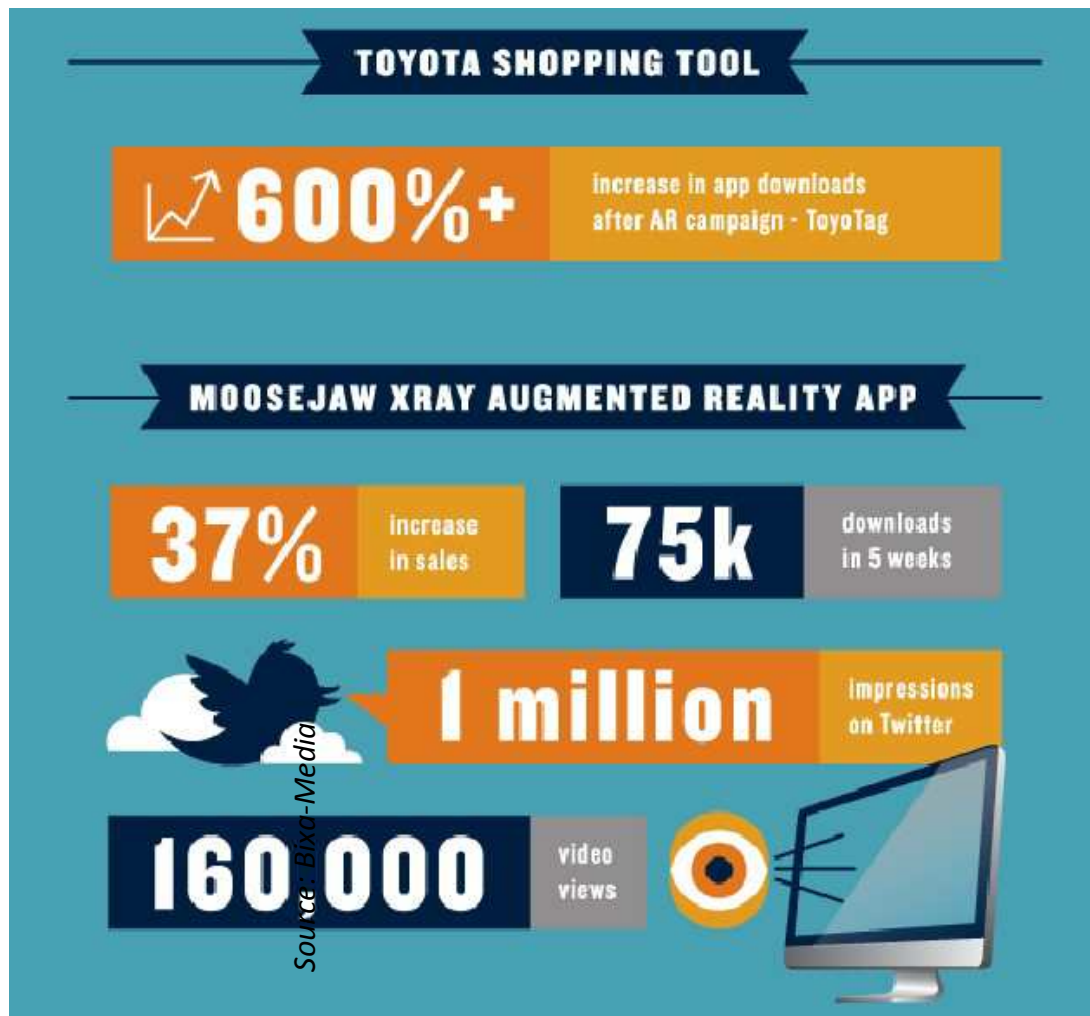
AR allows fine synchronization between virtual and real worlds for the best customer/operator experience

Augmented reality brings contextual experiential models to life

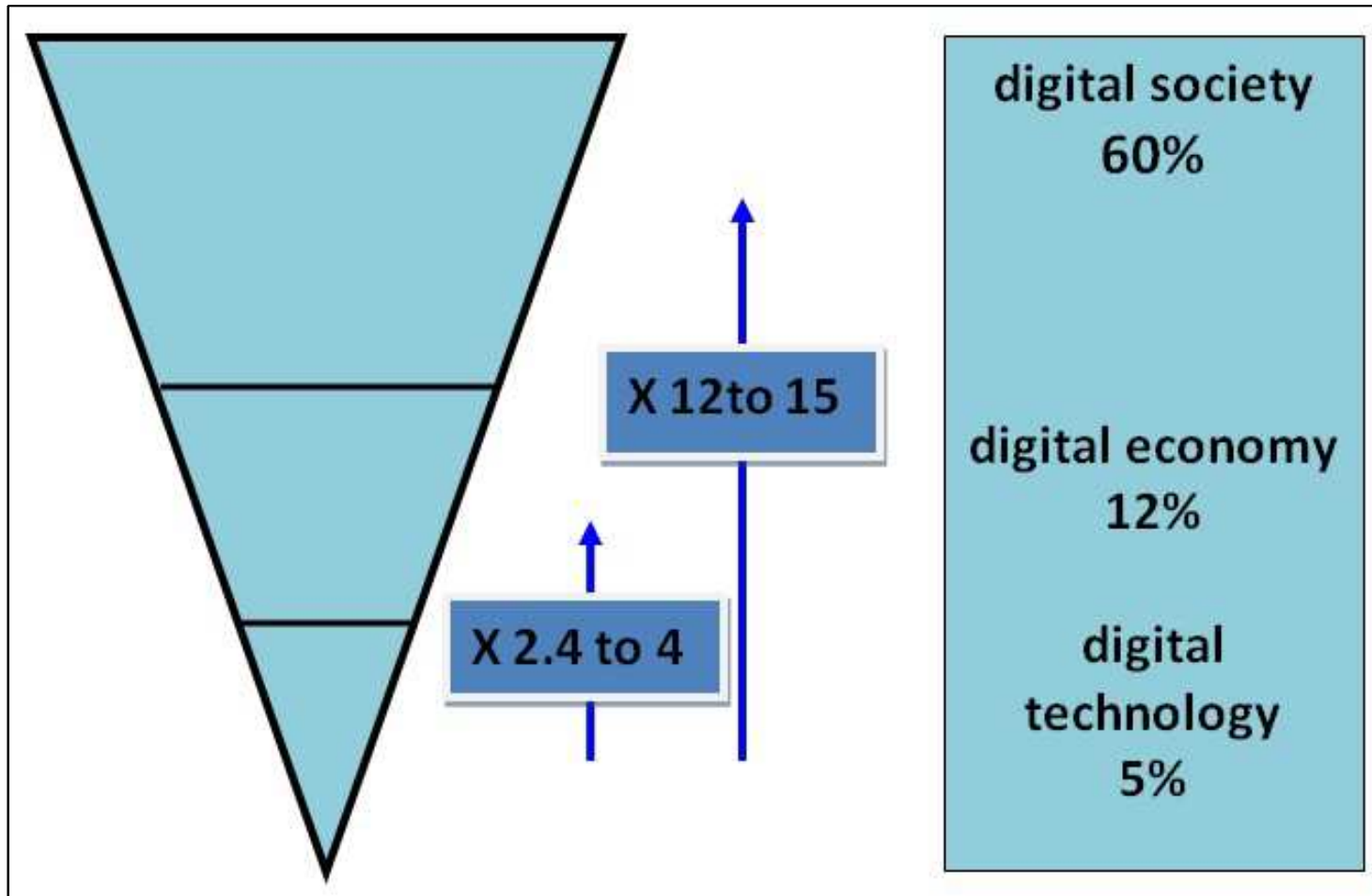


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Some examples of Success stories



digital technology, digital economy, digital society





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5 top industry sectors



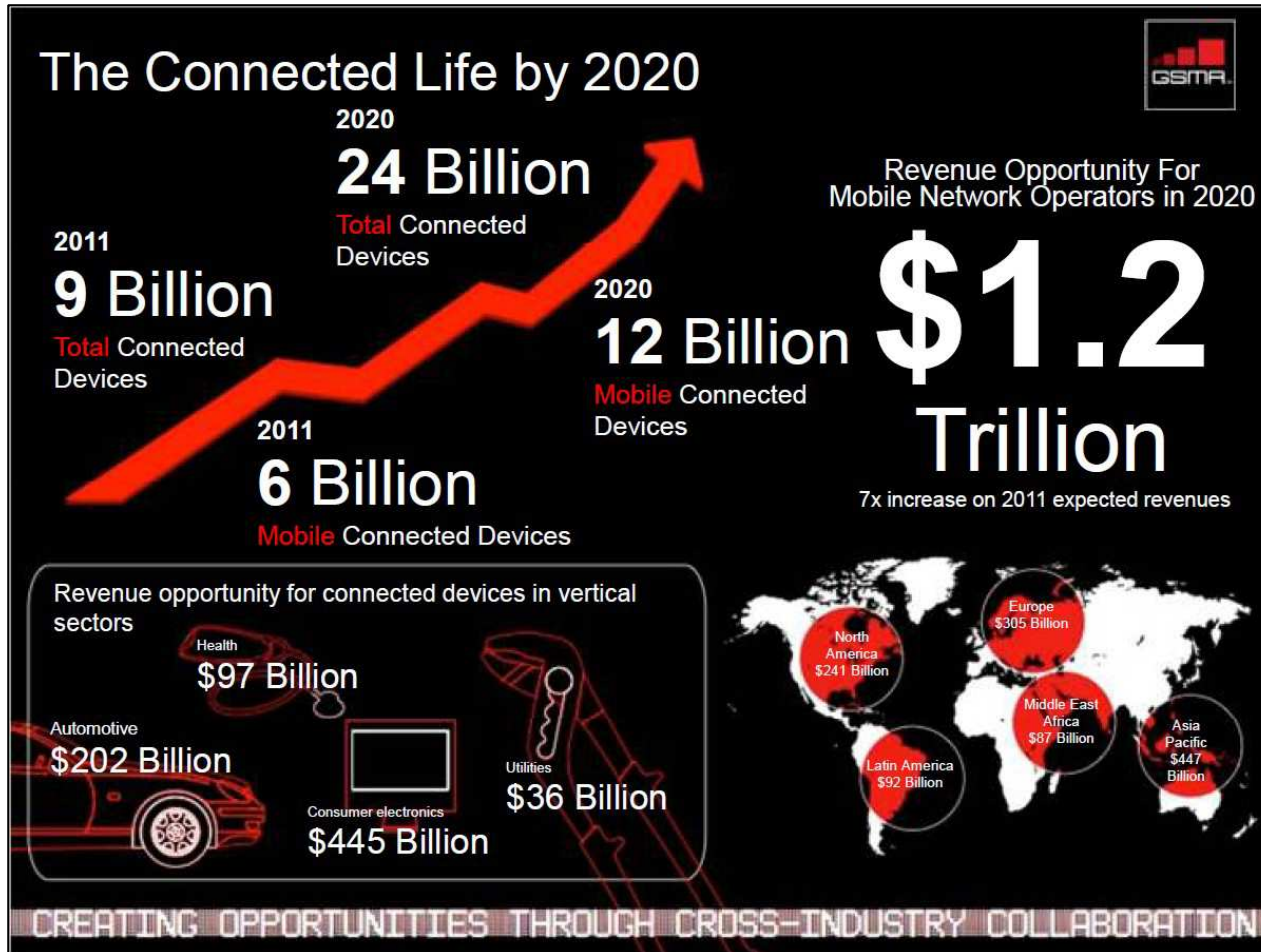
- The 5 top industry sectors to become the AR favorite domains are:
 - creative & cultural Industries (including Entertainment);
 - e-Commerce, m-commerce, retail, ... commerce of the future, branding and marketing;
 - smart Industry;
 - smart home, smart cities, smart territories, urban and architecture;
 - autonomous vehicles, automotive;
- and also :
 - education, learning, training,
 - healthcare and well being,
 - (Military & Gov.)

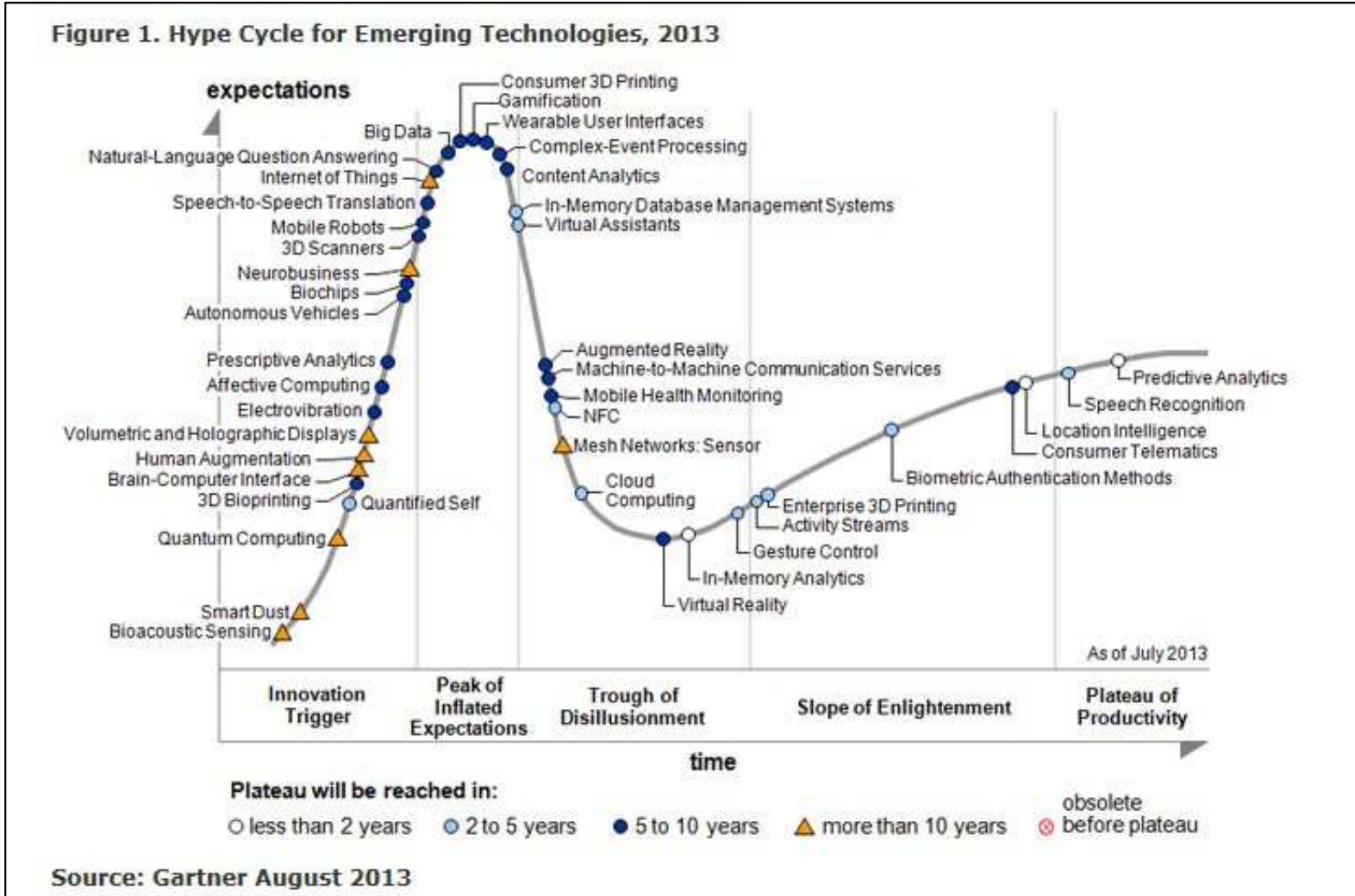
And all of them need high bandwidth and low-delay networks !



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For the best

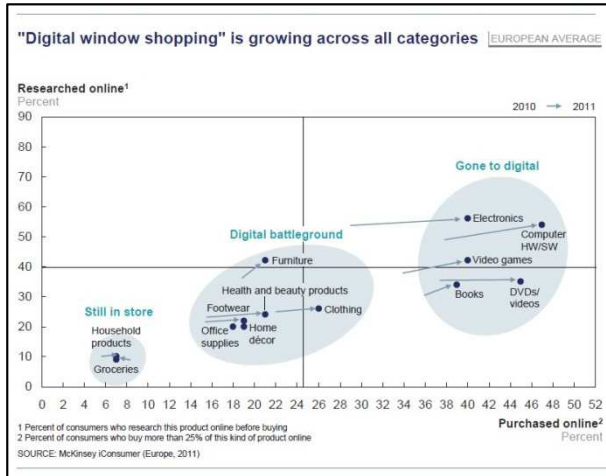






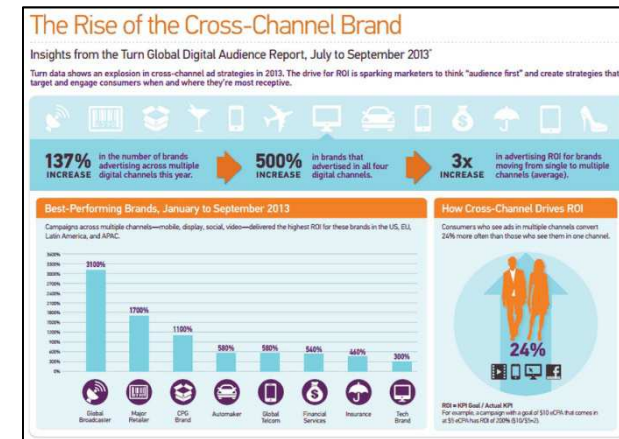
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Commerce of the future



ROPO (Research on-offline, Purchase off-online), from store-to-Web or from Web-to-store, « digital window shopping » is gaining momentum.

Cross-Channel is also gaining Momentum.



- + On-demand marketing
- + Analytics & big data
- + ...



AR is one of the only ROI based (and measured) emerging technologies.



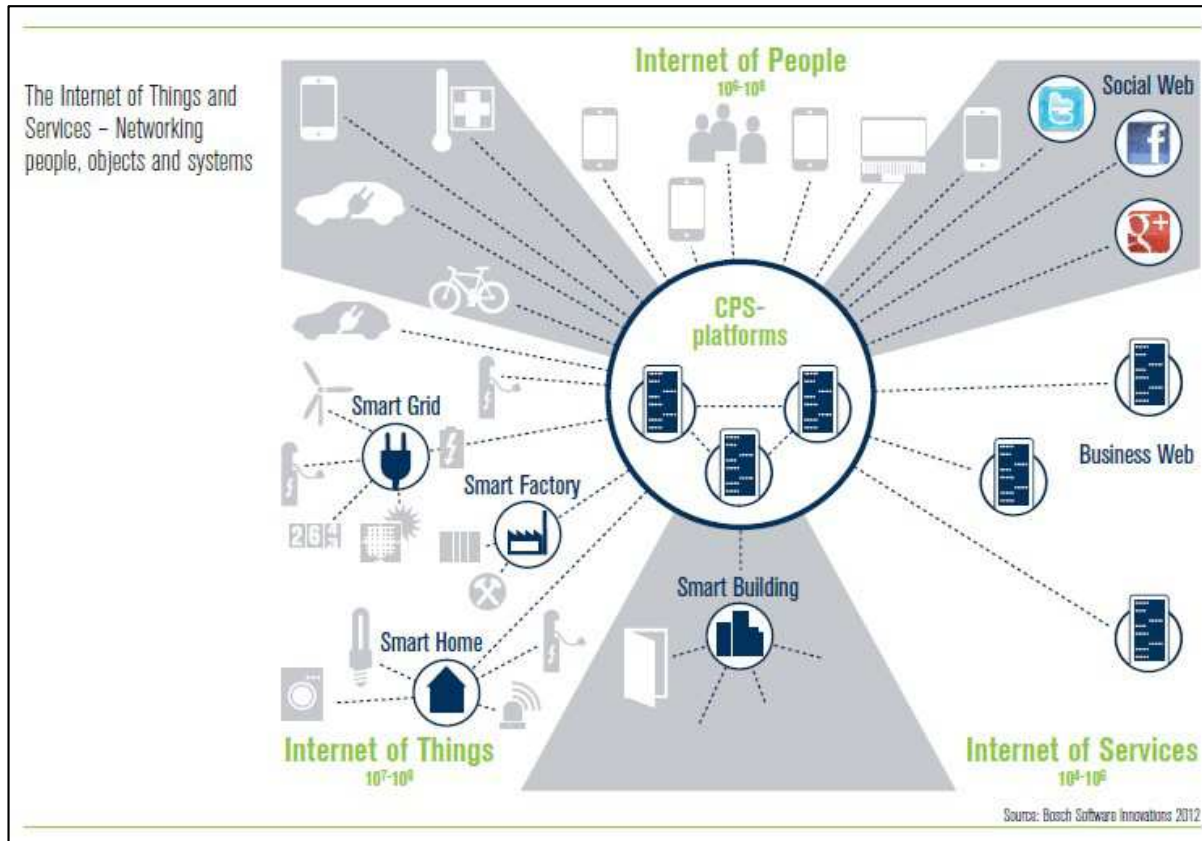
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Commerce of the future



Exhibit I: Ten-Year Forecasts of AR-Related Retail and Promotional Activities (\$ Millions)(1)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
AR-enhanced conventional retailing	8.0	11.6	16.8	24.4	35.4	51.3	74.4	107.8	156.3	226.7
AR-enhanced advertising and media	30.0	48.6	78.7	127.5	206.6	334.7	542.3	878.5	1,423.1	2,305.5
AR-enhanced Web retailing (Software + service revenue)	5.0	9.3	17.1	31.7	58.6	108.3	200.4	370.8	686.0	1,269.2
Total (\$ Millions)	43.0	69.5	112.7	183.6	300.6	494.4	817.1	1,357.1	2,265.5	3,801.3



CPS Platforms – Cyber Physical Systems – at the border of IoT, IoP and IoS.
CISCO, INTEL, GE, SIEMENS, IBM, ..., are preparing the next steps.



GE Reports
<http://files.gereports.com/wp-content/uploads/2012/11/ge-industrial-internet-vision-paper.pdf>

FEATURED

New "Industrial Internet" Report From GE Finds That Combination of Networks and Machines Could Add \$10 to \$15 Trillion to Global GDP

The Industrial Revolution radically changed the way we use energy and make things. The Internet Revolution altered...

Building

Moving

Powering

Curing



#NFI29 At the border of commerce, retail and industry



THE VALUE PROPOSITION OF AR

✓ New content channel for consumers



✓ Consumers interact in both digital & physical worlds



✓ Mobile-native



✓ Convergence of social, location & context



✓ Highly inexpensive, interactive & targeted



✓ Extends life of direct mail (DM) campaigns



✓ More measurable & trackable results from DM campaigns

✓ High emotional & repeat engagement



- Urbanism and Architecture,
- Tourism,
- Public transportation,
- Utilities (water and energy distribution, energy management),
- Healthcare, e-Health,
- Home monitoring,
- Field engineering, maintenance,
- ...

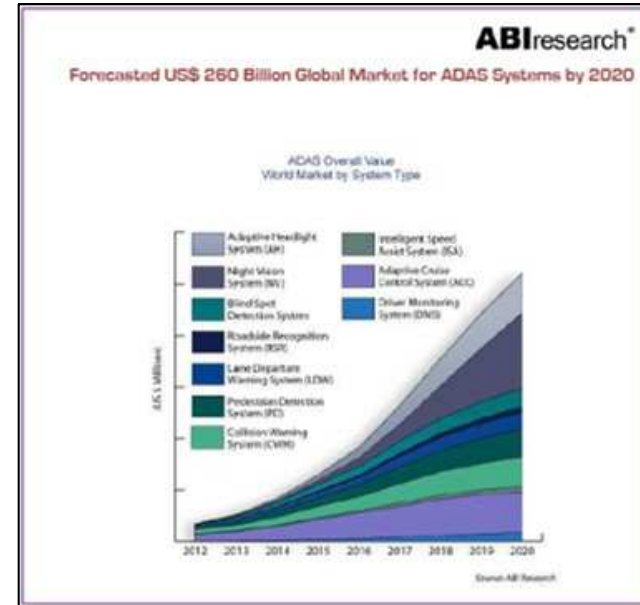
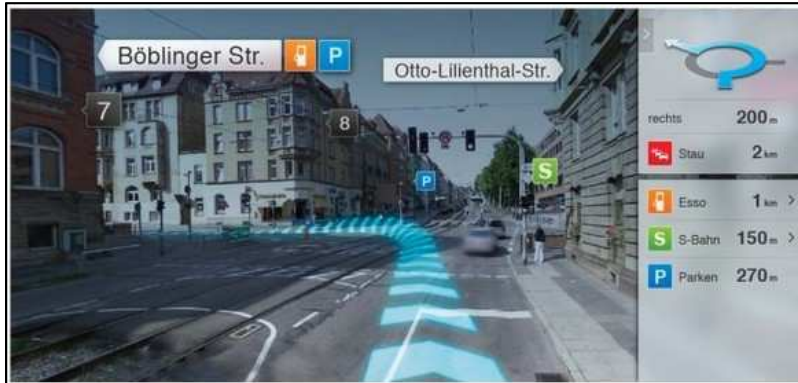
Architecture for the Augmented City





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Vehicle of the future



Source: Bixa-media

...AND AUTOMOBILES

103 million automobiles will contain AR technology by 2020

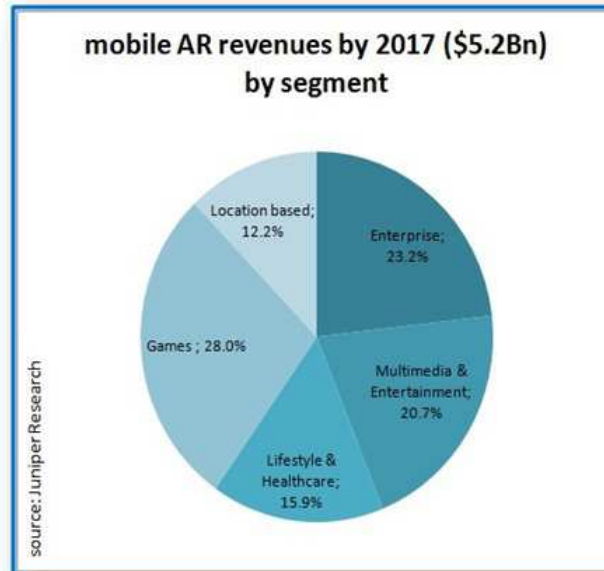
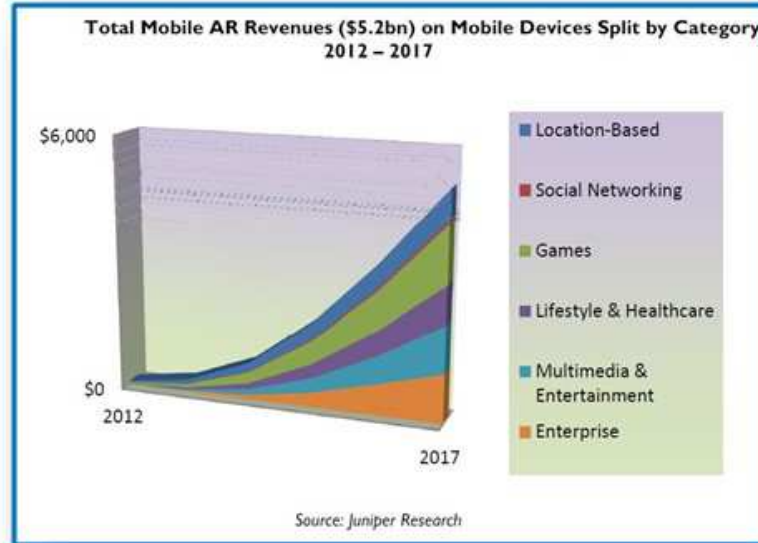


As of today, only 0.1% of the users are using augmented reality (AR) products in the total market of products under study. It is estimated that in the coming five years, 1% of the population will be using this application; which is an exponential rise in the overall market.

The growth of the augmented reality market is expected to be exponential with the revenue growth from \$181.25 million in 2011 to \$5,155.92 million by 2016, at a CAGR of 95.35% from 2011 to 2016.

The most attractive of all the segments is the smartphones segment; followed by the tablets, and so on.

The major players that provide software for augmented reality are Total Immersion (France), Metaio (Germany), Wikitude (Austria), Zugaro (U.S.), and Layar (The Netherlands).





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Key AR competitors



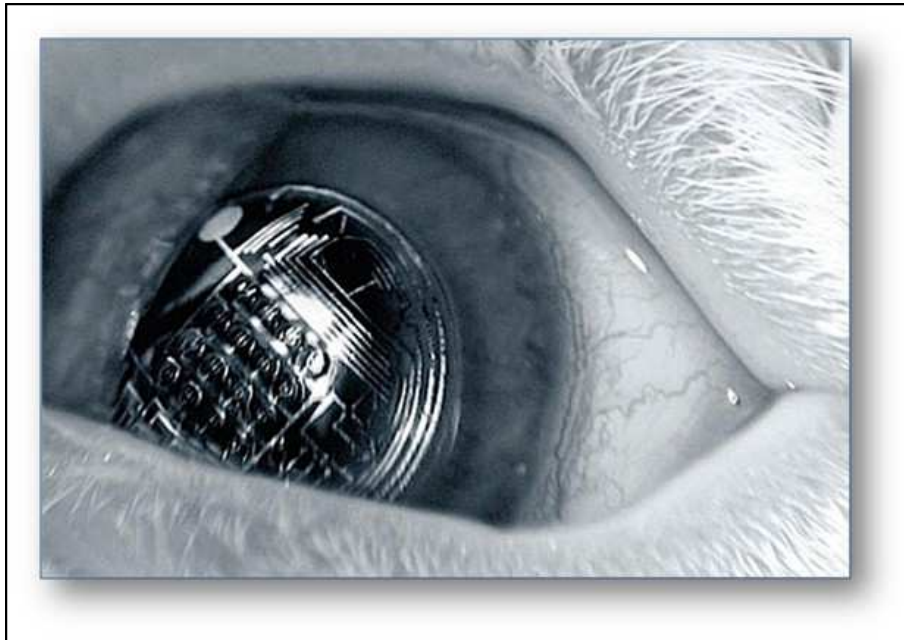
KEY AR COMPETITORS

LOCATION-BASED INFO	INTERACTIVE PRINT MEDIA, SHOPPING & GAMES	ENHANCED PRINT MARKETING CAMPAIGNS
   Nokia's City Lens 	  	  



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The next step



AR is also at the border of bio, neuro, brain and information technologies. It means that the next step will cross the border in order to reach:

- augmented body,
- augmented vision,
- augmented sense,
- augmented ...

And augmented emotion !

will augmented reality change our digital lives ?



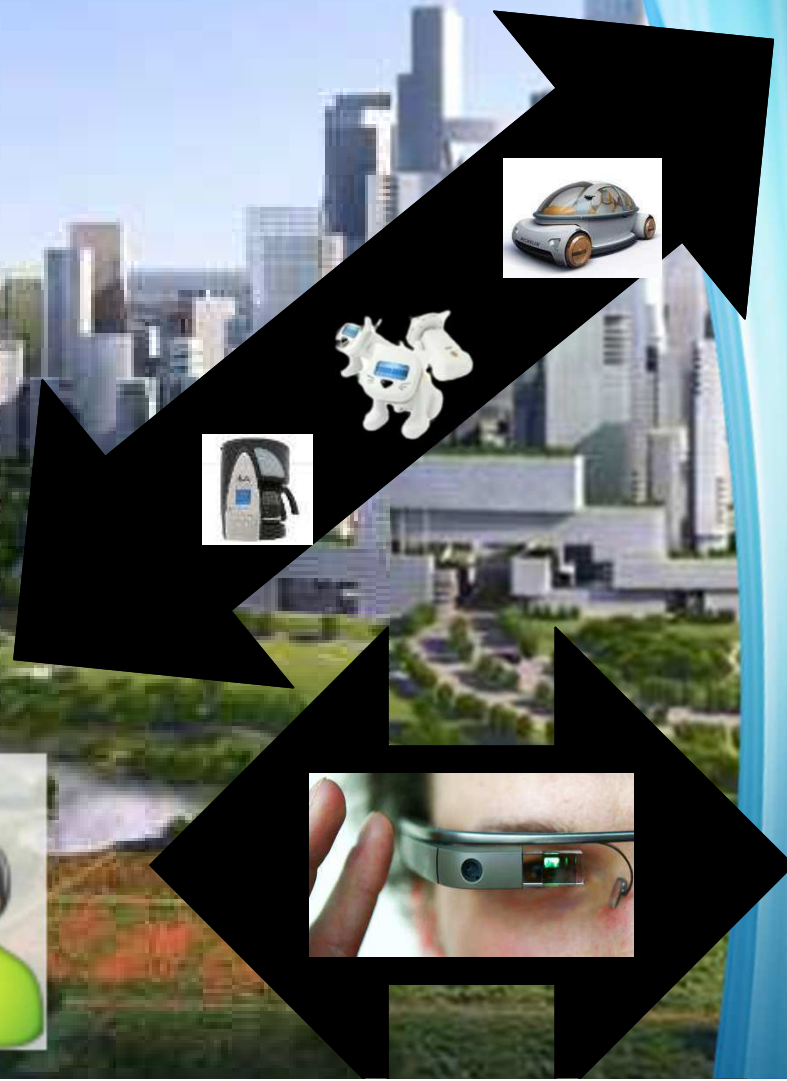


my services



my data /
mycontent



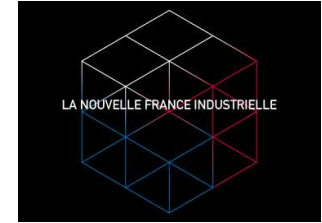


augmented
services



my digital Self

What are the proposals of the « Nouvelle France Industrielle» AR plan ?



- show that it works by launching usage centric quick-wins projects for each of the relevant markets :
 - Creative & cultural Industries
 - Commerce of the future
 - Industry of the future
 - Urbanism & smart cities
 - Autonomous vehicles, automotive
 - Education, training
 - Healthcare and well being

- set-up an ARaaS platform to ease the development , use and dissemination of AR services
- prepare next technologies (real-time technologies, contextual information, new devices, ...)
- ease the emergence and international development of AR champions
- communicate, communicate and communicate on the benefits of AR for the whole economy
- and many more ...

Why wouldn't we launch similar projects at the Celtic level ?



Thank you !

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