Roland Berger

Cultural Content in the online environment: analyzing the value transfer

Overview

Brussels, November 2015

Forewords

- This report was prepared with the support and upon the request of GESAC (European Grouping of Societies of Authors and Composers) and supported in France by SACEM, SPPF, Scam, Saif, Adami and Spedidam, and in Italy by SIAE
- This report is based on publicly available figures and Roland Berger Analysis. In addition, 4 country-specific usage studies have been performed in France (Google usage study in February 2015 and Facebook usage study in March-April 2015) and in Italy (Google usage study in March 2015 and Facebook usage study in June 2015) which have been the basis for Search Engines and for Social Networks analysis
- This report is mostly an enhancement over usage studies aiming at assessing the share of Technical Intermediaries revenues directly generated by all usages (access, talk, e-commerce…) related to all Cultural Contents. A first estimate of the indirect impacts (i.e. related to the implicit effect such as stickiness and usage frequency) is also conducted in the report
- When public figures were not available (such as country-level revenue for most players), Roland Berger estimates have been used, based on publicly available figures (including population, households, share of connected population, advertising market data,…)

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1. Technical Intermediaries Value Creation

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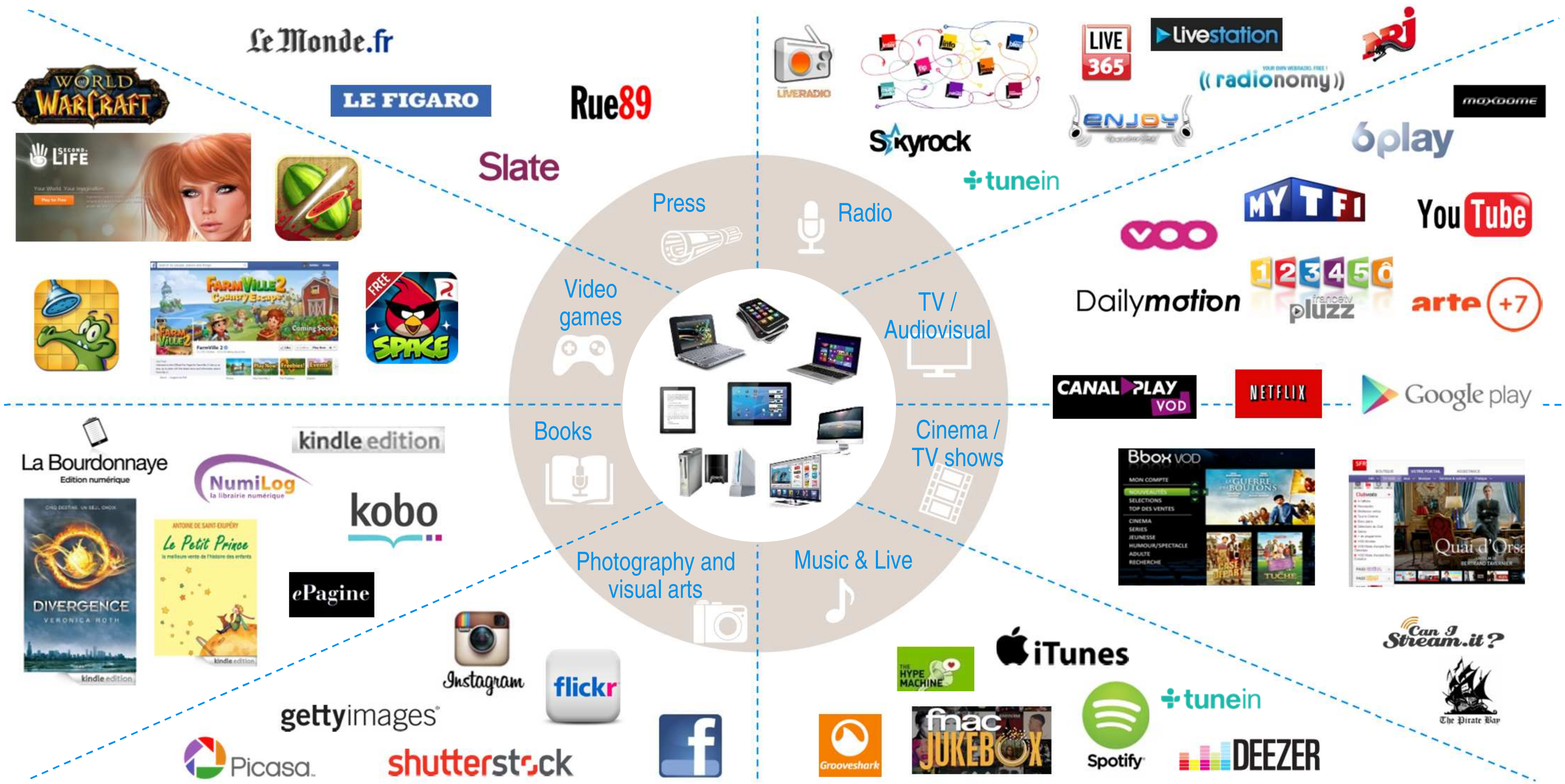
Cultural content offer available through connected usages is now particularly abundant

Cultural content offer panel available from a connected device



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Technical Intermediaries cover a wide range of players and models

Mapping of major intermediaries in the digital ecosystem

Source: Roland Berger analysis

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Technical Intermediaries are located in the Internet Value Chain between content publishers, telcos/device manufacturers and users

Technical Intermediaries : typology and definitions

	Definition	Examples
Search Engines	Web services **indexing** contents on the Internet and allowing users to **search** within them thanks to algorithms evaluating the Web page relevance	Google, bing
Social Media	Web applications allowing users to **share** contents with groups of acquaintance or mutual interest	facebook, twitter
Personal Lockers	Web services allowing users to **upload in the cloud** and **access** their contents from any connected device	box
Public video platforms (audio or public)	Web services allowing users to **upload** and **publicly share** contents, accessing them from multiple connected devices	YouTube
Content aggregators	Web applications **indexing** and **streaming** dedicated types of cultural contents (radio, TV…)	tunein, 8tracks

Source: Roland Berger analysis

Total market revenues for Tech Intermediaries in Europe are around **€22 bn**, mainly focused on Search Engines and Social Media (88%)

Quantification of the Explicit Value Creation [€m in 2014; estimates]

	Market Explicit Value Creation	Examples	
Search Engines	**16 140**	Google	15 470
Social Media	**3 160**	facebook	2 450
Personal Lockers	**1 740**	box	100
Video Platforms (audio or public)	**845**	YouTube	720
Content Aggregators	**100**	tunein	20
Total	***21 985***		

Source: Companies, Roland Berger estimates and analyses

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Benchmarked pure online licensed digital content distribution players from music and video industries show comparable value sharing approaches with right holders

Benchmarks summary on online content streaming [2014]

Audio

Spotify

Average royalty repayment [% of revenue]

70%

Annual revenue per user[1)]
EUR 17

Annual net revenue per user[1)] (after royalties)
EUR 5.1

Annual net revenue per premium user[1)] (after royalties)
EUR 42.7

Annual net revenue per free user[1)] (after royalties)
EUR -7.4

Royalties per digital listen
EUR 0.006

Video

NETFLIX

Average content acquisition cost [% of revenue]

73%

Annual revenue per user[1)]
EUR 62

Annual net revenue per user[1)] (after content costs)
EUR 16.6

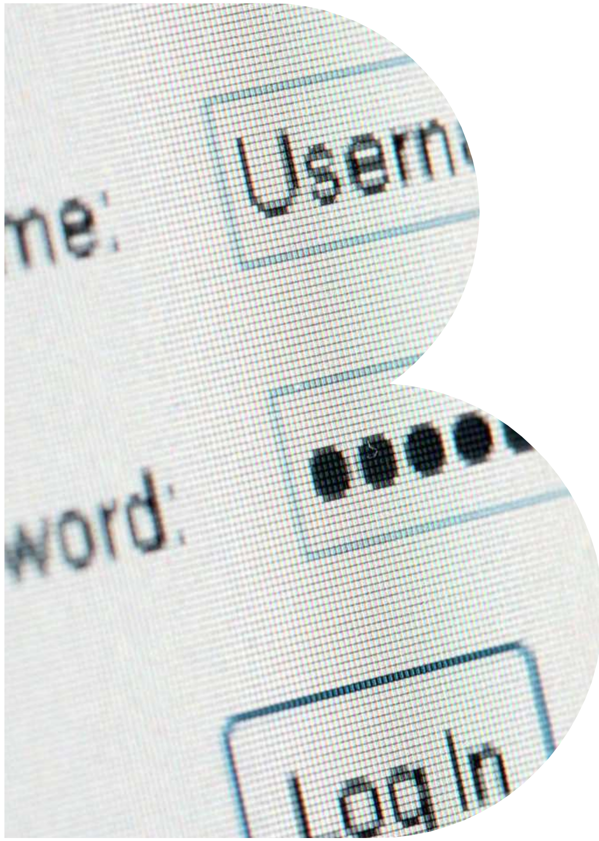
Annual net revenue per US streamer (after content costs)
EUR 22.2

Annual net revenue per streamer (excl. US) (after content costs)
EUR 4.7

1) Number of users: end of period

Source: Roland Berger analysis

2. Cultural Contents: Usage Studies



Roland Berger Strategy Consultants

Passive and declarative studies were conducted by specialized agencies in order to understand usages on Facebook and Google

Methodology for Cultural Contents usage identification in Usage Studies

	Research type	Process	Period
Search Engines Google	**Passive** Study by mediametrie // NetRatings + Sépage	> Constitute a representative **panel** of users and **track** their search journeys > **Scrap** data from all clicked Web pages > Analyze data thanks to **Semantic Web** (after a Machine Learning phase) > Identify destinations	**France**: Week 4 - Week 8 of 2015 (February 2015) **Italy**: Week 9 - Week 13 of 2015 (March 2015)
Social Media facebook	**Declarative** Study by Ipsos	> Draw up a **questionnaire** to address to Facebook's **Active users** > Collect **usage data** from the **panel** (Post/Share, Open, Comment & Like) > Analyze results through **cross tabulations** > Identify actions and consumption	**France**: Week 14 of 2015 (March-April 2015) **Italy**: Week 27 of 2015 (June 2015)

Source: Roland Berger

4 usage types and 11 categories of cultural contents were identified

Definition of different usage types and categories of cultural contents

	Usage types considered in surveys	Categories of cultural contents
Search Engines Google	> **Access:** digital works downloads and streaming > **E-commerce**: physical goods e-commerce and ticketing > **Social**: interactions via social media and forums > **Other**: encyclopedia and other information, illicit contents	✓ Press ✓ Books ✓ Music ✓ Live (incl. Music) ✓ Radio ✓ TV ✓ Cinema ✓ Video Games ✓ Visual Arts (incl. Architecture)
Social Media facebook	> **All previous items** > **Access** only: – Digital works downloads and streaming, licit and illicit alike – The questionnaire did not distinguish between licit and illicit contents > **4 types of actions** considered : – Open – Post/Share – Comment – Click on "Like" button	✓ All previous items ✓ Advertising ✓ Internet videos

Source: Roland Berger

3. Cultural Contents Direct Impact on Technical Intermediaries Value Creation

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There are 2 ways of estimating Cultural Contents Direct Impact, either as a % of revenues or a relationship to assets accumulation

Estimation of Cultural Contents Direct Impact

	Explicit Value Creation	Implicit Value Creation
Focus	**Revenues** (quantitative) %	**Assets** (qualitative)
Estimation Approach	**DIRECT Impact (%)** > Revenues generated from the direct monetization and direct commerce of Cultural Contents or related advertising inventory > *Analogy: the FNAC stops selling cultural goods, direct impact on the revenue*	**Impact scale** from 0 to 8 > Level of relationship of Cultural Contents with each of the Implicit Value Creation levers (Market Capitalization, Metadata…)

Source: Roland Berger

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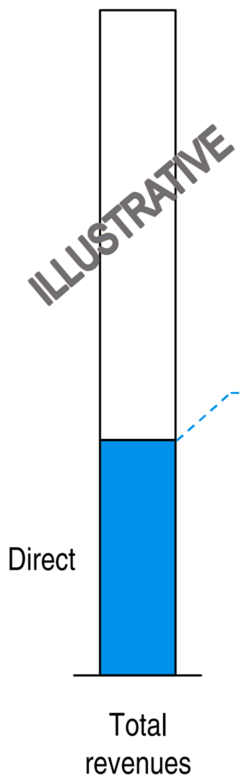
The overall value gap yields from a bottom-up and segmented approach

Methodology

1. Analysis of the Value Chain and identification of key players per typology

2. Assessment for main players, of the share of revenue directly and indirectly generated / due to cultural content



Direct : revenue generated from the direct monetization and direct commerce of cultural content or related advertising inventory

3. Extrapolation of the results to build the European and country picture

> **Extrapolate** data either for an **industry** (eg music) or to a given **typology** of players (eg search engine)

> **Example** : Google has 92% of market share (# users in France, 2014), which easily provides a reliable picture of search engines

Source: Roland Berger

Roland Berger

In Europe, Cultural Contents directly contribute to 23% of Technical Intermediaries Explicit Value Creation

Estimation of Cultural Contents Direct Impact on the Explicit Value Creation [€m in 2014]

	Market Value	Direct Impact	DIRECT (vs. Others)
Search Engines	16 140	2 960	18%
Social Media	3 160	1 340	43%
Personal Lockers	1 740	50	3%
Video Platforms	845	555	66%
Content Aggregators	100	75	75%
Total	21 985	4 980	23%

Source: Companies, Roland Berger estimates and analyses

Cultural Contents have a significant impact on the revenue generation of Facebook and YouTube, moderate as for Google

Cultural Contents Direct Impact on Technical Intermediaries Value Creation Overview

	Cultural Contents Direct Impact on Revenues [€bn]	Share of Total Revenues	Comments
Google	2.8	18%	> ~18% of the sponsored clicked links lead to webpages related to Cultural Contents (18% for Italy and 19% for France)
facebook	1.04	43%	> All in all 51% of the posted and shared contents on Facebook are related to Cultural Contents (39% for France and 62% for Italy) > These contents generate some inventory for native advertising (84% of total revenues) which is then totally impacted (vs 0% for display)
YouTube	0.48	66%	> Cultural Contents represent 66% of YouTube total views which directly generate advertising revenue
Implicit Value Creation levers		High	> Cultural Contents directly contribute to exhaustiveness and relevance of Technical Intermediaries enabling user adhesion and their levels of usage. These elements are reflected in their market share, market capitalization and brand image among other things

Source: Google, Facebook, Roland Berger analysis

4. Cultural Contents Direct and Indirect Impact on Technical Intermediaries Value Creation

Roland Berger

There are 2 ways of estimating Cultural Contents Impact, either as a % of revenues or a relationship to assets accumulation

Estimation of Cultural Contents Direct Impact

	Explicit Value Creation	Implicit Value Creation
Focus	**Revenues** (quantitative) %	**Assets** (qualitative)
Estimation Approach	**DIRECT Impact (%)** > Revenues generated from the direct monetization and direct commerce of Cultural Contents or related advertising inventory > *Analogy: the FNAC stops selling cultural goods, direct impact on the revenue* **INDIRECT Impact (%)** > Additional role played by Cultural Contents in the business models of Intermediaries (for instance user adhesion, use development effect…) > *Analogy: customers come less often, indirect loss of revenue* > *Work hypothesis: without any Cultural Content, every user behaves like a small Cultural Content consumer* **DIRECT + INDIRECT Impact (%)** > Total revenue could be lost if the Cultural Contents disappear from the Web	**Impact scale** from 0 to 8 > Level of relationship of Cultural Contents with each of the Implicit Value Creation levers (Market Capitalization, Metadata…)

Source: Roland Berger

In Europe, Cultural Contents directly contribute to 23% of Technical Intermediaries Explicit Value Creation, and 40% indirectly

Estimation of Cultural Contents Impact on the Explicit Value Creation [€m in 2014]

	Market Value	Impact	DIRECT	INDIRECT	*Non-Cultural*
Search Engines	16 140	65 %	18%	47%	
Social Media	3 160	70 %	43%	28%	
Personal Lockers	1 740	3 %	3%	0%	
Video Platforms	845	92 %	66%	26%	
Content Aggregators	100	85 %	75%	10%	
Total	21 985	62 %	23%	40%	

Source: Companies, Roland Berger estimates and analyses

Appendix

A. Methodology

Categories in the value chain of cultural content exploitation – Glossary

Licensed content distributors	
> OTT services	> Digital content rental/ purchase services operated by OTT players (streamed or downloaded)
> Managed networks	> Digital video content rental/ purchase services operated by TV groups and networks (TV VoD platforms) (streaming-based)
Technical intermediaries	
Search Engines	> Cloud-based solutions designed to search on the internet through indexing of all sources and redirecting users
Content aggregators > Publisher-based content interface	> Indexing and streaming service of publication-based content i/ nterface for online content (radio networks, radio stations, TV, …)
> Redirection platforms	> Indexing service of video/ audio content from public cloud patforms and services
> P2P portals and Redirection platforms	> Indexation services of peer to peer content sharing (each peer is both user and host) and indexing service of video/audio content,
Social Networks	> Internet-based interactive applications allowing users to create, share or exchange all types of content (incl. UGC[1]) as well as cultural content)
Cloud Services > Lockers	> Hosting services allowing users to upload personal content to a cloud so that it may be accessed or shared from multiple devices
> Public video/ audio platforms	> Online content distribution services based on content posted by owners (online/streaming based)
> Rip-based public video/ audio platforms	> Online content distribution services based on content mostly ripped from other sources
Private Cloud > Cloud player services	> Personal cloud-based music storage and streaming services available for personal or shared usage
> nPVR (nDVR, RS-DVR)	> TV content recording services accessible from multiple devices, stored on operators servers (nPVR) or on a NAS provided by the operators (NAS based DVR)
> Devices / Backup based	> File computer data storage server connected to a computer network (NAS) / online NAS back-up services

1) User Generated Content

Source: Roland Berger analysis

The share of Cultural Contents in the activity of Google users was measured with an automatic qualification algorithm

Passive Study Methodology on Search Engines

Search Engines

Google

	Objectives		Details
1	Constitute a representative **panel** of users and **track** their search journeys	*By*	mediametrie // NetRatings nielsen
2	**Scrap** relevant data (title, text, media) from all clicked Web pages	*By*	sacem *(developed internally)*
3	Analyze data thanks to **Semantic Web**	*By*	Sépage
	Gold Standard Leverage human natural knowledge to qualify usage data		Human approach: 10 experts from different fields (FR); 4 experts from different fields (IT) Panel of 2 x 150 Search Engines users (FR/IT) 5,955 lines of qualified data in France 3,000 lines of qualified data in Italy
	Machine Learning Develop algorithms to match Gold Standard results		> Iterative approach of tests and corrections > Using priority rules and White Lists
	API (Application Programming Interface) Apply the algorithms to a much larger sample of usage, towards Big Data…		> Automatic approach Panel of 2 x 2,000 Search Engines users (FR/IT) 72,818 lines of qualified data in France 141,537 lines of qualified data in Italy

Par mediametrie // NetRatings + Sépage

A three-step method was implemented to determine the share of Cultural Content in the daily activity of Facebook's active users

Declarative Stud Methodology on Social Media

	Objectives	Results
Search Engines **facebook**	**1 Draw up the questionnaire** Determine the profile of **"active users"** and assess their proportion + Test the **questionnaire**	*(France)* ***1,008 Online** interviews + **12 qualitative** interviews, of people representative of the French population (aged from 16 to 75)* *(Italy)* ***1,084 Online** interviews*
	2 Collect data from the panel Recruit at least **1,000 participants** corresponding to the profile and willing to complete the questionnaire	***Active users** must connect to Facebook at least once during the week and make at last one action*
	3 Analyze the results Recover participants' **daily log books** (Facebook activity reports) then compile and analyze it (cross-tabs)	*(France)* *Out of the 1,000 recruited participants, **670** filled in their reports **at least once a week** and **370 every day** of the week* *(Italy)* *Out of the 2,000 recruited participants, **1,573** filled in their reports **at least once a week** and **1,120 every day** of the week*

NB

There are **4 action types**:
- > Post/Share
- > Open (click on a content)
- > Comment
- > Like (click on the "Like" button)

There are **3 content categories**:
- > Culture
- > News and non-cultural entertainment
- > Personal content

Par Ipsos

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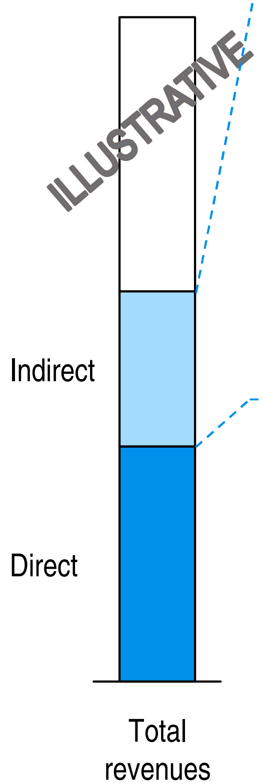

Indirect : role played by cultural content in the economic model of the player (i.e. **additional revenue that may disappear if not for cultural content**)

> **Is there an unfair / unjustified value gap that needs to be adjusted ?**

Direct : revenue generated from the direct monetization and direct commerce of cultural content or related advertising inventory

> **Is it a "normal" commercial deal ?**
> **Is the distribution legal ?**
> **Is there an agreement with right holders ?**
> **Is there a value generation gap ?**

3. Extrapolation of the results to build the European and country picture

> **Extrapolate** data either for an **industry** (eg music) or to a given **typology** of players (eg search engine)

> **Example** : Google has 92% of market share (# users in France, 2014), which easily provides a reliable picture of search engines

Source: Roland Berger

Methodology (1/5)

Global methodology (1/2)

> **Cultural content** is considered in a broad sense, covering:
  - Press
  - Music
  - Radio
  - Books
  - Live art performances (including music)
  - TV
  - Cinema
  - Video Games
  - Visual Arts (incl. architecture)
  - Advertising
  - Internet Videos

> **Usage** covers different types of activities related to cultural content such as access, e-commerce, showcasing and discussing on social media, and describing and providing information around cultural content. Those terms are used in a broad sense, meaning that the usages on the considered site may requiring up to 1 click to access streaming, downloading, buying, discussing,… cultural content (i.e. potentially through another site)

Global methodology (2/2)

> **5 typologies of technical intermediaries** have been considered in the digital ecosystem:
  - Search engines
  - Content aggregators
  - Social media
  - Personal cloud
  - Public video platforms

> **One key player** has been picked per typology of intermediaries:
  - Google for search engines
  - TuneIn for content aggregators
  - Facebook for social media
  - Box for personal cloud
  - YouTube for public video platform

> **Share of revenue directly (and indirectly) generated** with a role played by cultural contents has been assessed for all these players and a **scale-up of the results** to the full market has been done in order to build the full picture for each type of intermediaries.

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Methodology (2/5)

Sources

> All revenues estimates and extrapolation of the results were based on **3 types of sources**:
- **Publicly available data** from players
- **4 studies** specifically performed in **France** (Google study in February 2015 and Facebook usage in March-April 2015) and **Italy** (Google study in July 2015 and Facebook usage in August 2015)
- Usage studies have been run with Nielsen/Médiamétrie and Sépage (search engines, passive study based on semantic machine learning) and with Ipsos (social networks, declarative study)
- **Other publicly available data** related to usage and markets (including population, households, share of connected population, advertising market data,…)

> **Typology of impact**

Technical intermediaries create value thanks to cultural content in three ways:

> **Direct impact** covers the generation of revenue through direct monetization (such as through advertising enabled by cultural content-generated inventory, or sponsored links directing to sites monetizing cultural content, sale of cultural content,….) or direct commerce of cultural content. *Analogy: if a general retailer stops selling cultural goods, the direct impact would be the revenue lost instantly due the shutdown of this part of its operations*

> **Indirect impact** covers the additional revenue that would disappear if there was no cultural content available to the service, due to impact on service stickiness, usage intensity and usage repetition,… *Analogy: if a general retailer stops selling cultural goods, its customers may shop less frequently, and not go through the whole store in search of cultural goods, thus leading in the medium term to an additional decrease in revenue*

> **Implicit or collateral impact** (qualitative): in a fast-moving, technically complex, oligopolistic and usage-driven competition, market leaders derive increased future revenue generation capabilities, consumers knowledge and market valuation from those same usages that are significantly driven by cultural content. Collateral impact has been assessed qualitatively

> **We consider Direct impact to be more significant than Indirect impact in terms of economics understanding**, as it can be assessed very directly based on usage data, rely on very few hypothesis, and directly represent a material link between revenue generation and usages related to cultural contents

Methodology (3/5)

Estimation of impact on revenues

As 2 impacts were identified, 2 types of calculation were made:

> Revenue generated from the **direct monetization** and **direct commerce** of cultural content or related advertising inventory is considered as direct impact. This impact is very material and can be assessed with rather strong accuracy thanks to a direct identification of the role of cultural content and thanks to usage studies

> Indirect impact is the amount of **additional revenues likely to disappear if cultural content was to disappear** from the web. This impact has been estimated thanks to hypothesis on the evolution of customer usages and is more difficult to assess due to the absence of "like-for-like" examples.

1. Google and the search engine market

> **Google revenue** in a given geography is either a public data or an estimate based on the number of connected inhabitants (and based on the closest available data) and is split in 4 types of revenue: **Google.com and Google network which belong to search engine scope** and YouTube and other revenues considered out of scope. This split is based on worldwide distribution of Google's revenues

> Direct revenues in Google case come from **sponsored links that have been clicked and which lead to sites related to cultural content** (access to press, non-press access, e-commerce, social, and other cultural links): this figure is directly available from usage studies

> For **indirect revenues**, the average of 2 estimates based on 2 methodologies has been used:

- One approach evaluates the share of cultural content (access to press, music, video games, TV…) in natural results; the hypothesis is that in the long term overall revenue would decrease by the same amount as available clicks (in addition to revenue lost from direct impact) due to reduced usage. This figure is directly available from usage studies
- Another approach considers that all users would end-up with the same level of usage as current users which do not consume a lot of cultural content. This approach reveals the stickiness to the service due to its exhaustiveness and relevance. The population of users is split into 2 groups, one with strong cultural content consumption (1) and one with weak cultural content consumption (2). (1) and (2) have roughly the same size. It appears consumers in (2) have overall weaker usages than (1). The potential "indirect + direct" impact would be proportional to the loss of clicks if all users were to adopt the same usages as consumers in (2)

> **Google had a 92% to 96% market share in terms of users in 2014 for the considered geographies**; Assumption on other players' monetization capacity: 50% of Google's (industry estimate)

> *For Europe, the impacts in % have been assumed to be the average between Italy and France*

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Methodology (4/5)

2. TuneIn and the content aggregator market

> TuneIn revenues in a given geography are based on percentage of users in considered geography vs. worldwide # users / revenues ; based on publicly available figures, TuneIn market share is estimated at 20% of the market

> Direct impact is based on cultural content on radio stations (music & news), which is publicly available data at Europe level. Without this content, usage or number of channels would decrease proportionally, thus leading to less revenue (less inventory or lower fees)

> Indirect impact is based on contribution of cultural content to ubiquity and adherence, in addition to direct impact, based on estimates of real consumption of content in radio (cultural vs. non-cultural)

> *Impacts in % have been assumed to be similar across all countries (thus also for Europe)*

3. Facebook and the social media market

> **Facebook revenues** are estimated thanks to **revenue per user worldwide** and **number of users in a given geography**; worldwide and European **social media markets** are based on publicly available studies; Facebook market share has been assumed to be constant over Europe at 78%

> Facebook revenues are split between displays advertising, native advertising and payment & other fees, this split is public for Europe, and the same proportion has been applied throughout

> To calculate direct and indirect impacts, **only displays advertising and native advertising** have been taken into account, being directly related to usages (# of page views for display and length of read newsfeed for native advertising)

> **Direct impact** is calculated with the percentage of **cultural content published or shared on Facebook** applied to native advertising revenues: published and shared content are the only contributors to length of read newsfeed, thus proportionally generating inventory for native advertising

> For **indirect impact** the approach considered that all users would end-up with the same level of usage as current users which do not consume a lot of cultural content, for all types of actions. This approach reveals the stickiness to the service due to its richness. The population of users is split into 2 groups, one with strong cultural content consumption (1) and one with weak cultural content consumption (2). (1) and (2) have roughly the same size. It appears consumers in (2) have overall weaker usages than (1). The potential "indirect + direct" impact would be proportional to the loss of actions if all users were to adopt the same usages as consumers in (2) : as no one will click on / publish cultural content, cultural content consumers / influencers will use the site much less, thus reducing the overall inventory available for monetization

> *For Europe, the impacts in % have been assumed to be the average between Italy and France*

Methodology (5/5)

4. Box and the personal cloud market

> Percentage of cultural content share with private storage is 11%, estimation based on private copy remuneration on hardware devices in France. Cultural content share for professional use is estimated at 0%

> This represents the direct impact. No indirect impact has been assessed

> *Impacts in % have been assumed to be similar across all countries (thus also for Europe)*

5. Youtube and video platform market

> Direct impact is estimated with percentage of musical and video cultural content : those figures are available from various studies; we have used figures from France (Hadopi study) for all estimates

> Revenue generation being driven by advertising inventory, i.e. number of views, there is a direct correlation between type of contents consumed and share of revenue

> Indirect impact is estimated based on the same approach as for Content Aggregators

> *Impacts in % have been assumed to be similar across all countries (thus also for Europe)*

Direct Impact calculation method is based on the usage (clicked links) whereas Indirect Impact is based on user behaviors

Estimation of Cultural Contents Impact methodology for Search Engines

	Approach	Impact	Calculation Method
Search Engines Google	**DIRECT**	19 %	> Share of Cultural Contents in **clicked Sponsored Links**
	INDIRECT	46 % 31 % 61 %	**Average between 2 approaches** > Share of Cultural Contents in **clicked Natural Links** > **Traffic loss** based on the **simulation** that all users would converge towards the behavior of users who do not frequently consume Cultural Contents (less than 4 clicked links on a CC during a month)

Average number of clicked links per User (population share in %)

	Large consumers	Small consumers		Clicks	
	47%	53%	→	0%	100%
Non-Cultural	46	8		Non-Cultural	8
Cultural	22	1		Cultural	0
Total	**68**	**9**		**Total**	**8**

Average 37 → **-79%** → 8

79%-19% = 61%

Source: Companies, usage studies, Roland Berger estimates and analyses

Direct Impact calculation method is based on the usage (clicked links) whereas Indirect Impact is based on user behaviors

Estimation of Cultural Contents Impact methodology for Social Media

	Approach	Impact	Calculation Method
Social media facebook	DIRECT	33 %	> Share of Cultural Contents in the Post/Share type of actions (proxy to represent newsfeed display and impact on the available inventory : 39%) x share of Native advertising in the revenue (84%)
	INDIRECT	31 %	> **Activity loss** based on the **simulation** that all users would converge towards the behavior of users who do not frequently consume Cultural Contents (less than 8 actions on a CC during a week)

Average number of actions per User (population share in %)

	Large consumers	Small consumers			
	50%	50%	→	0%	100%
			Actions		
	51	18	Non-Cultural		18
	49	2	Cultural		0
	100	**20**	**Total**		**18**

Average 60 → -70% → 18

70%-39% = 31%

Source: Companies, usage studies, Roland Berger estimates and analyses

Direct Impact calculation method is based on the usage (clicked links) whereas Indirect Impact is based on user behaviors

Estimation of Cultural Contents Impact methodology for Search Engines

Search Engines

Google

Approach	Impact	Calculation Method
DIRECT	18 %	> Share of Cultural Contents in **clicked Sponsored Links**
INDIRECT	48 % 29 % 66 %	**Average between 2 approaches** > Share of Cultural Contents in **clicked Natural Links** > **Traffic loss** based on the **simulation** that all users would converge towards the behavior of users who do not frequently consume Cultural Contents (less than 4 clicked links on a CC during a month)

Average number of clicked links per User (population share in %)

	Large consumers	Small consumers
Population share	59%	41%
	90	11
	40	2
	129	**14**
Average 71		

Clicks (0% / 100%)

Non-Cultural	11
Cultural	0
Total	**11**

-84%

84%-18% = 66%

Source: Companies, usage studies, Roland Berger estimates and analyses

Direct Impact calculation method is based on the usage (clicked links) whereas Indirect Impact is based on user behaviors

Estimation of Cultural Contents Impact methodology for Social Media

	Approach	Impact	Calculation Method
Social media facebook	DIRECT	52 %	> Share of Cultural Contents in the Post/Share type of actions (proxy to represent newsfeed display and impact on the available inventory : 62%) x share of Native advertising in the revenue (84%)
	INDIRECT	24 %	> **Activity loss** based on the **simulation** that all users would converge towards the behavior of users who do not frequently consume Cultural Contents (less than 8 actions on a CC during a week)

Average number of actions per User (population share in %)

	Large consumers	Small consumers		Actions	
	49%	51%	→	0%	100%
Non-Cultural	135	27		Non-Cultural	27
Cultural	225	7		Cultural	0
Total	**360**	**34**		**Total**	**27**

Average 194 → -86% → 27

86%-62% = 24%

Source: Companies, usage studies, Roland Berger estimates and analyses

B. Direct and Indirect Impacts

Cultural Contents could have a total impact up to ~65% in advertising revenue generation for Google

Cultural Contents Total Impact on Value Creation Overview

Google

		Cultural Contents Impact on Revenues[€bn]	Share of Total Revenues	Comments
A	Direct Impact on Revenues	2.8	18%	> ~18% of the sponsored clicked links lead to webpages related to Cultural Contents (18% for Italy and 19% for France)
B	Indirect Impact on Revenues	7.3	47%	> All in all removing Cultural Contents could result in a ~65% loss in the number of clicks (hence paying clicks and then revenue), out of which 47% due to indirect impact (65%-18%) > Indirect Impact is assessed with analyses and estimates made in France and Italy (resp. 46% and 48%)
	Total Impact for Google	**10.1**	**65%**	> All in all a **significant** share of revenues and volume in the market value are related to **Cultural Contents : more than EUR 10 bn**
C	Implicit Value Creation levers		Very High	> Cultural Contents directly contribute to exhaustiveness and relevance of Technical Intermediaries enabling user adhesion and their levels of usage. These elements are reflected in their market share, market capitalization and brand image among other things

Source: Google, Roland Berger analysis

Cultural Contents have a strong impact on revenue generation for Facebook (~70%) because of their prevalence in posts and shares

Cultural Contents Total Impact on Value Creation Overview

facebook

	Cultural Contents Impact on Revenues[€m]	Share of Total Revenues	Comments
A.1 Direct Impact on Revenues	1 040	43%	> All in all 51% of the posted and shared contents on Facebook are related to Cultural Contents – 39% in France and 62% in Italy > These contents generate some inventory for native advertising (84% of total revenues) which is then totally impacted (vs 0% for display)
A.2 Indirect Impact on Revenues	675	28%	> Without any Cultural Content, Facebook would lose in user adhesion, hence impacting with a 70% loss in actions made on the website, i.e. 28% of additional loss > For Europe, this figure is an average : 31% for France and 24% in Italy
Total Impact for Facebook	**1 715**	**70%**	> Sharing Cultural Contents has become a core activity on the website, essential for users, and significantly contributing to value creation mechanisms
A.3 Implicit Value Creation levers		High	> Sharing and consuming Cultural Contents significantly contribute to the user experience on the social medium Facebook > These actions and these contents enable Facebook to better understand and know users and then monetize their profiles

Source: Facebook, Roland Berger analysis

Cultural Contents have an extremely important impact on revenue generation for YouTube (92%)

Cultural Contents Total Impact on Value Creation Overview

		Cultural Contents Impact on Revenues[€m]	Share of Total Revenues	Comments
a	Direct Impact on Revenues	475	66%	> Cultural Contents represent 66% of YouTube total views which directly generate advertising revenue > The share of official and non-official content among total views are respectively ~47% and ~19%
b	Indirect Impact on Revenues	190	26%	> Cultural Contents also contribute to the exhaustiveness and relevance of YouTube, hence encouraging user adhesion and a high level of usage > A benchmark of TuneIn and satellite radios shows a 26% additional impact
	Total Impact for YouTube	**665**	**92%**	> Hence Cultural Contents have a very significant impact on revenue generation for YouTube, directly (66% of revenues) and indirectly
c	Implicit value Creation levers		High	> Cultural Contents directly contribute to exhaustiveness and relevance of Technical Intermediaries enabling user adhesion and their levels of usage. These elements are reflected in their market share, market capitalization and brand image among other things

Source: Roland Berger analyses

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Berger