MEDIA PRODUCTION TECHNOLOGIES STRATEGIC PLAN

TO:	Infrastructure Cttee
MEETING:	June 18, 2013
FROM:	Fred Mattocks, Chair – Technology Strategy Board
PURPOSE:	Update on Media Production Technologies and the Strategy – English and French Services
DATE:	May 27, 2013

WHAT ARE WE TALKING ABOUT?

- Media Production Technologies refer to the "means of production" – the tools and systems by which we create, acquire and distribute content. Examples – cameras, video servers, editing systems, graphics systems.

- In today's digital world the "means of production" are intimately connected with the creative process. Creative choices are driven by desired audience and business outcomes; production technologies must be driven to support those creative choices.

- There is more choice than ever before. We don't speak any longer of a "standard camera" for CBC/Radio-Canada; we speak of an ecosystem of standard cameras each of which fills a niche in a cost/capability eco-system. And increasingly consumer technology informs those choices.

- Media Production technologies across both media account for roughly $800M of the acquisition value of the overall Corporate asset pool (Feb 2013).

MEDIA TECHNOLOGY LIVES IN A CONTEXT

- Media Production Technology lives within the overall technological context of our lives. The key elements of this context are:

  - Ubiquitous computing capability

  - Cheap digital storage

  - Pervasive networks of low cost bandwidth

  - Software defined tools, increasingly operating on mobile devices.

- This means, in an enterprise context, that effective use of Media Production Technologies relies on robust networks (eg.NGCN) and robust I.T. capabilities. A result of this is it is critical that strategies for all three sectors are effectively aligned. To be most effective, Media Production Technology must operate at scale, using network effects to maximize capability and minimize cost. On the other hand, it must permit creative and operational flexibility to ensure agility and cost-effectiveness.

A0056217_3-000356

STRATEGY AND MEDIA PRODUCTION TOOLS

- By definition, specification and characterisation of media production technology must be driven by the overall business strategy.

  - As an example, the Strategy 2015 goal of "more regional" was significantly advanced by the development of lightweight technology packages that cut the technology cost of sub-regional radio stations by

  - Similarly the satellite news gathering trucks we are deploying are being built at   of the cost of the last generation.

- Media Production Technology is the specific responsibility of each media business at CBC/Radio-Canada, reporting to each EVP and controlled by the General manager responsible for operations and technology in both media businesses.

- How then, are we assured that Media Production Technology strategy is aligned across businesses and with IT and MTS strategies?

THE TECHNOLOGY STRATEGY BOARD SETS STRATEGY

- The T.S.B. is the mechanism that ensures that CBC/Radio-Canada has one coherent technology strategy which speaks to Corporate and Business goals. That strategy (see appendix), reviewed with the Audit Cttee of the Board last fall, essentially *is* the Media Production Technology Strategy.

  - It sets out principles for the acquisition and deployment of technology.

  - It collects contextual information from the various marketplaces to ensure CBC/Radio-Canada decisions are well informed.

  - It brings Media Production Technology into alignment across media businesses, and into alignment with the IT and MTS strategies which are also driven by and responsive to TSB principles.

- All projects and acquisitions that arise from the business and strategic drivers go through the rigourous Capital Playbook process which mandates procurement, budgeting and results reporting.

A0056217_5-000358

TSB VIEW OF INFRASTRUCTURE TRANSFORMATION

Technology : A Key Enabler to Achieve Strategic Goals

TSB technology strategy board
CST conseil stratégique des technologies

| THIS | ENABLES | THIS! |

An example involving file based workflow and its market relevance is contained in Appendix "B".

| UNDERLYING TECHNOLOGY | ENABLES | OUTCOME |

13

A0056217_6-000359

WHAT HAVE WE BEEN INVESTING IN?

- **Desktop Editing (TV)***

  - Desktop Editing was first introduced in CBC/Radio-Canada in Montreal as a part of the CDI project. The technology used was provided by Quantel. Based on the Montreal experience both Networks issued a joint RFP to market describing our Corporate goals and requirements. Avid was the successful vendor and, after several years, introduced Avid Interplay based largely on the requirements expressed in the RFP.

  - Today CBC/Radio-Canada has 21 Avid Interplay systems serving all locations that produce Newscasts and local programming and additional systems for Post Production in Montreal and Toronto. Avid has deployed over 1000 Interplay systems worldwide making it the most successful Production System in the market.

- **Desktop Editing Radio***

  - CBC/Radio-Canada experimented with early versions of Desktop Radio in the late 90's and together with TV issued an RFP to market describing the vision and requirements for Radio Networks. Dalet (based in Israel and France) was the successful vendor. Dalet evolved their software to meet our requirements and today the software is the main production tool in Radio and is found in over 3000 desktops in about 60 different CBC/Radio-Canada Locations.

* Denotes Board approved projects, numbers represent total investment over last 10 years, 90% spent.

WHAT HAVE WE BEEN INVESTING IN?

- **New Media**

  - The numbers shown actually understate CBC/Radio-Canada investments in New Media, as much of our infrastructure is provided by outside suppliers on SAAS or PAAS models. This includes many of the applications (Commenting, Blogging, User Management etc) as well as some of the basic infrastructure such as CDN from Akamai and even extends to the core production capabilities with the new CMS for ES from ATEX (Polopoly)

- **HD Newsgathering***

  - CBC/Radio-Canada took advantage of the end of life of our SX field cameras to replace almost 500 field cameras. The technology chosen was Sony XDCAM 422 which records on either BlueRay DVD or memory cards depending on the application. These cameras were first implemented in SD mode but as the project nears completion over the summer we will be able to switch both the cameras and Avid editing systems to HD so that all newsgathering will occur in HD.

- **HD Production**

  - Over the last five years CBC/Radio-Canada has implemented HD production capability in all of our large production studios as well as Network News Studios in Toronto and Montreal. Regional studios are lagging behind with only a very few Regional News studios being capable of HD. Given current funding profiles Regional News Studios will not be completed for another 5 years.

WHAT HAVE WE BEEN INVESTING IN?

- Central Presentation (Radio and TV)*

  - Over the last seven years CBC/Radio-Canada has centralized all Presentation Activities to the Network Centres in Toronto and Montreal for both Radio and TV. This has resulted in simplification of Regional Infrastructure by closing dozens of Regional presentation centres and significant ongoing cost savings and improvement of presentation by eliminating cascading cut-ins.

  - Toronto was able to take advantage of the EOL status of automation systems to purchase a common platform (Miranda ITX) for both Radio and Television. Montreal will be positioned to do the same as a part of the planned move.

- NGCN*

  - The Next Generation Converged network now serves as the digital backbone of CBC/Radio-Canada. It took advantage of the simultaneous expiry of numerous supplier contracts to 'insource' connectivity for all platforms to a CBC/Radio-Canada operated network serving all platforms. Base connectivity is provided by Rogers.

  - NGCN provides greater connectivity than was possible under previous arrangements and is a core enabler for many of the changes in production methods being implemented...it effectively eliminates distance between production centres while simplifying workflow.

WHAT HAVE WE BEEN INVESTING IN?

■ Automated Control Rooms

   ■ Automated Control Rooms (Ignite, Overdrive) allow the production of Newscasts with fewer FTE, provide cleaner presentation and permit the expansion of News programming in a cost effective manner. Beginning in 2003 in Windsor CBC began to implement Automated Control and was the first broadcaster in Canada to do so. Today CBC/Radio-Canada employs over 20 Automated Control Rooms in Yellowknife, Vancouver (2), Edmonton (2), Calgary, Regina (2), Winnipeg (2), Windsor, Toronto (2), Ottawa (2), Montreal (4), Halifax, Fredericton, Charlottetown, Halifax, St John's, Sherbrooke, Trois Rivieres, Saguenay, Rimouski.

■ Graphics

   ■ Except for the most involved graphics virtually all graphics production has been shifted to commodity software such various Adobe products running on commodity PC or MAC platforms.. This has provided significant cost reduction and an ability to democratize daily graphics production. In terms of Graphics display both networks took advantage of the EOL status of our current graphics platforms to adopt a common platform based on a product (VizRT) which we already use for elections and some network news. The end result will be an improvement in graphic quality on all programming. Simple graphics will be created on the journalist Desktop without any involvement of a graphic artist and more complex graphics will be created in a central location reducing FTE headcount in the process.

- ## Archive Systems

  - Tape based Archive systems based on LTO (Linear Tape Open – a versatile high density data storage medium) tape formats have been implemented in both Toronto and Montreal to store all content. LTO systems are very cost effective systems for content storage and are essentially limitless in capacity as tape formats evolve over time to handle greater and greater content capacity on a single cassette. Once the Media Asset Management system is in place to manage these libraries it will be possible for Montreal and Toronto to backup content from the other location ensuring survivability of content in the event of loss of either location. LTO storage is extremely dense and will also permit dramatic reductions in library footprint with hundreds of thousand square feet of storage being reduced to less than 2000 square feet.

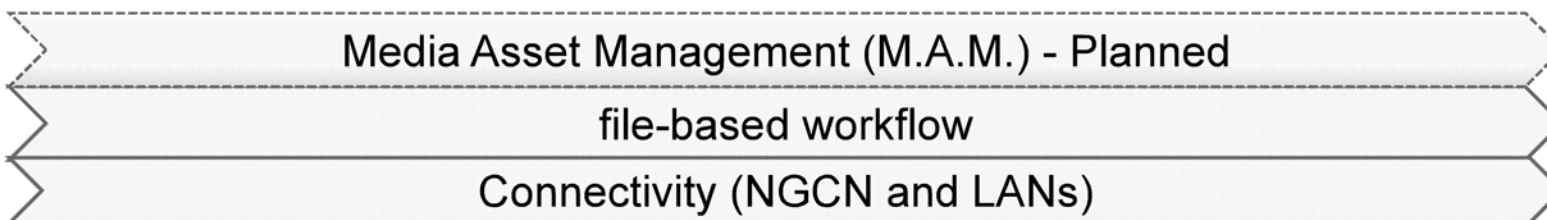- ## MRC Digitisation Project

  - French Services has initiated a three year project to digitise their entire film and tape library to reduce the real estate footprint substantially. The business case is based in Real Estate project savings plus an overall value creation scheme for archived content. The digitised content will be stored on LTO and mirrored between Montreal and Toronto.

HOW DOES IT ALL FIT TOGETHER?

> Content Acquisition > Content production > Content Distribution >

> Media Asset Management (M.A.M.) - Planned >

> file-based workflow >

> Connectivity (NGCN and LANs) >

A0056217_12-000365
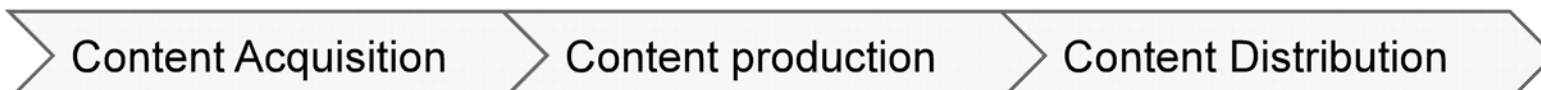
STRATEGY INCLUDES ASSET REDUCTION

- Under T.S.B. leadership in partnership with Finance, Media Production Technology groups have been active in de-commissioning and disposing of redundant and or obsolete technologies.

  - The introduction of the Virtual Music Library (VML – a centralised music storage and retrieval system) permitted the decommissioning of Regional Music Libraries across the country, resulting in head count, operational and real estate savings.

  - Centralisation of Radio and Television presentation facilities resulted in the decommissioning of regional facilities as well as head count, real estate and operating savings across the country.

  - Reduction of redundant music production facilities resulted in head count and operational savings, as well as $200K from the disposal of the surplus assets.

  - As file-based workflow reduces the need for video tape media, substantial operating savings have been realised for both media divisions.

WHAT'S NEXT?

- Media Production Technology will continue to follow the Strategy and Roadmap set by the TSB in response to Corporate Strategic imperatives. Upcoming initiatives include:

  - Media Asset Management - replace ten legacy systems and complete the capability to maximize ROI from file-based workflow.

  - Business continuity planning – present a plan for infrastructure that will mitigate a major failure of one or the other of the two major network centres.

  - Immersive TV – disciplined experimentation with various forms of immersive Television, ranging from multi screen experiences to 4K UHDTV as a production medium.

  - Completion of HD roll out in CBC/Radio-Canada regional plants.

  - Definition of Digital Radio strategy for the next 5 years.

A0056217_14-000367

CAPITAL PROJECTS SAVINGS PROFILES

- The vast majority of Capital Projects are driven by Asset Refresh of Mission Critical facilities rather than Savings or Return on Investment criteria

- A small number of projects are classed as Payback or Efficiency. These often require significant changes to operation but also deliver important annual annual savings

- In some cases savings are achieved but are incidental to the main project driver

- A summary of savings on projects is shown in the chart which follows

CAPITAL PROJECTS SAVINGS PROFILES

Project	ProjectName	Investment_Class	Total	Savings
K000545	Drop Terrestrial Lines (ETN)			
K001454	DÉSAFILIATION - RÉGIONS - PQ			
K000532	Presentation Optimization Plan			
K002017	Next Generation Converged Network (NGCN)			
K001712	Centralized Presentation & Satellite Dis			
K002126	HD MOBILE #3			
K001321	VANCOUVER REDEVELOPMENT PROJECT			
K300367	CENTRE DE PRODUCTION DRAMATIQUES			
K000251	Desktop TV - Toronto			
K003363	CG Replacement - MON (CBMT) & OTT (CBOT)			
K000673	CONSOLIDATION QUEBEC			
K000920	Upgrade TBC - Automation			
K000698	EDM Radio & Television Consolidation			
K002418	Yellowknife			
K002238	CGY Upgrade St Ctrl Rm to Ross Overdrive			
K001003	NW: ParkerVision (Studio 53)			
K000222	HFX News CR & Router Upgrade			
K000949	MAJ CDI Ph.2 - Montreal			

TSB technology strategy board
CST conseil stratégique des technologies

CHANGING THE WAY WE GET THINGS DONE:
TECHNOLOGY AS A KEY ENABLER

- *Technology Strategy Board*
  2010-2015 Strategic Planning – Update

- *September 4, 2012*

THE TIMES THEY ARE A-CHANGIN'

■ The near and medium-term horizon at CBC/Radio-Canada will be characterized by major paradigm shifts dictated by market and industry evolution, and by the specific business and financial context of the Corporation.

■ This new environment will require the organization to continue to evolve rapidly thereby developing new skills, improving workflows, optimizing processes, developing partnerships   and changing its culture. This process has already begun.

■ Technology is the most crucial enabler of these changes within the organization. The TSB Strategic Plan's objectives and priorities have been updated in the following key areas:

■ Meeting the Future
- Long-term technology vision and roadmap
- State-of-the-art, industry leadership
- Identifying future business opportunities
- Enabling the Corporate 2015 strategy

■ Efficiency
- Being more productive
- Achieving greater agility in production and business processes, client services, partners relations, etc.
- Reducing assets and costs

■ Good governance
- Respecting the Corporation's guidelines and priorities

CBC ◉ Radio-Canada

THE TSB SINCE ITS CREATION : A REVIEW
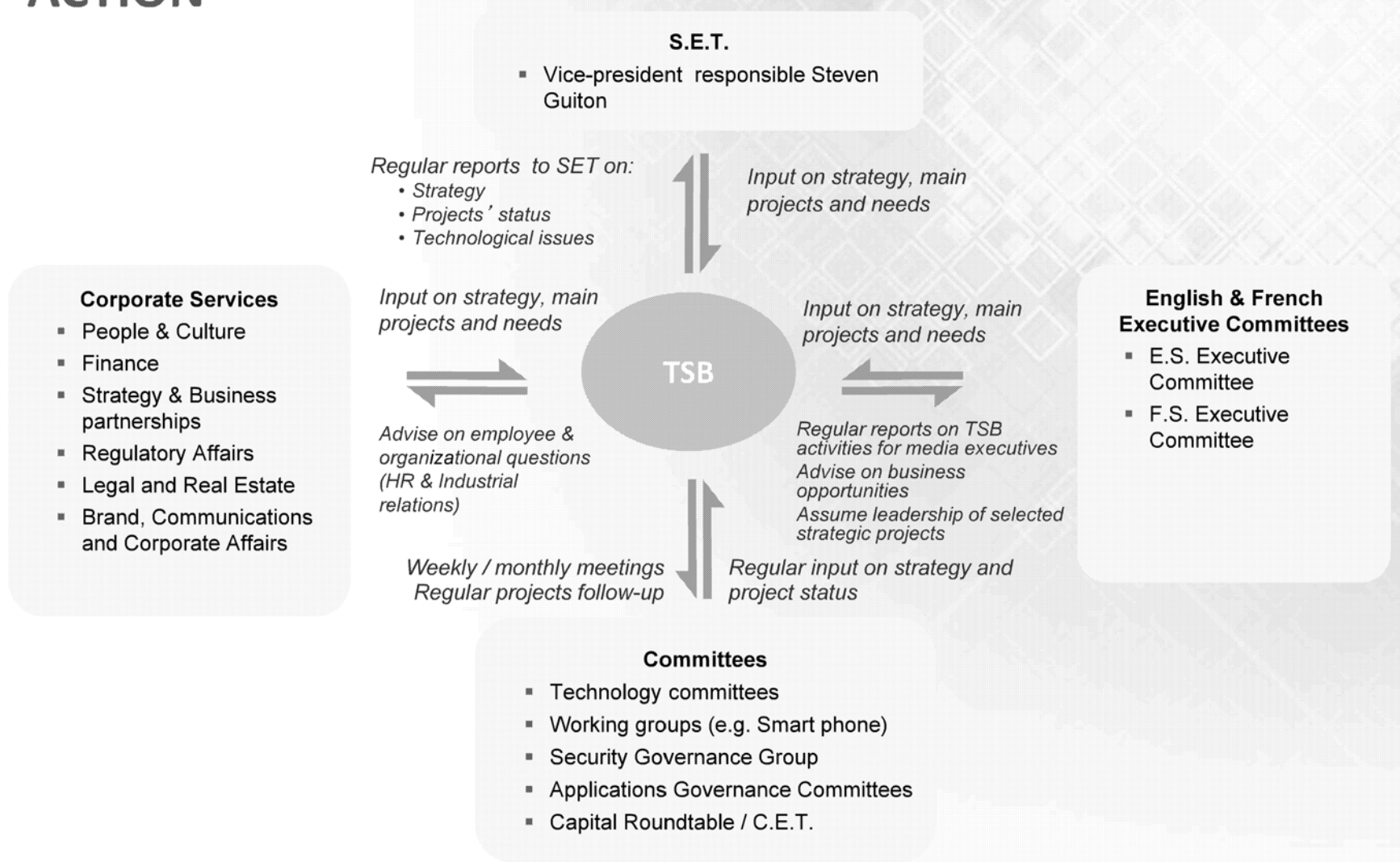
AN INNOVATIVE AND EFFICIENT STRUCTURE

■ Since its creation in 2009, the TSB has developed a technological strategy for the Corporation, aligned with business strategy, executed in a coherent and efficient manner within the company

TSB - leading strategic governing body for technology

Prioritizes and oversees technological projects and investments	Expertise Center

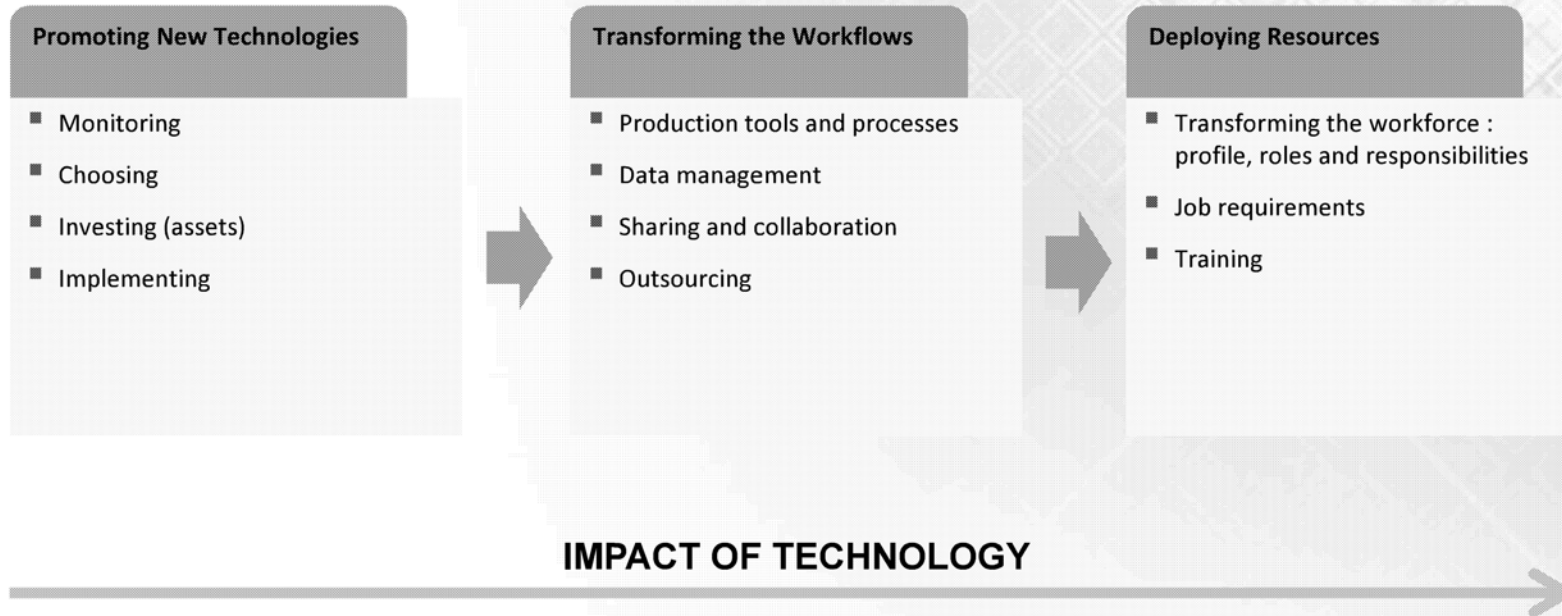| Responsible for all aspects of technology orientation and execution	Influences strategic direction of the Corporation	Identifies & communicates technology trends and opportunities

A structure embedded in the organization

■ Given TSB members are in charge of production and technology teams within the Corporation, the TSB structure provides a greater integration and diffusion of strategic directions regarding technology throughout the organization. It also permits the efficient operationalization of major technology projects.

CBC ◉ Radio-Canada

A STRATEGIC AND OPERATIONAL SPHERE OF ACTION

S.E.T.
- Vice-president responsible Steven Guiton

Regular reports to SET on:
- *Strategy*
- *Projects' status*
- *Technological issues*

Input on strategy, main projects and needs

Corporate Services
- People & Culture
- Finance
- Strategy & Business partnerships
- Regulatory Affairs
- Legal and Real Estate
- Brand, Communications and Corporate Affairs

Input on strategy, main projects and needs

Input on strategy, main projects and needs

TSB

English & French Executive Committees
- E.S. Executive Committee
- F.S. Executive Committee

Advise on employee & organizational questions (HR & Industrial relations)

Regular reports on TSB activities for media executives

Advise on business opportunities

Assume leadership of selected strategic projects

Weekly / monthly meetings Regular projects follow-up

Regular input on strategy and project status

Committees
- Technology committees
- Working groups (e.g. Smart phone)
- Security Governance Group
- Applications Governance Committees
- Capital Roundtable / C.E.T.

CBC Radio-Canada

THE IMPACT OF TECHNOLOGY THROUGHOUT THE ORGANIZATION

- Technology's impact starts upstream in dictating technology choices and extends although the organization, influencing not only processes, methods and workflows but also the deployment of resources

Promoting New Technologies

- Monitoring
- Choosing
- Investing (assets)
- Implementing

Transforming the Workflows

- Production tools and processes
- Data management
- Sharing and collaboration
- Outsourcing

Deploying Resources

- Transforming the workforce : profile, roles and responsibilities
- Job requirements
- Training

IMPACT OF TECHNOLOGY

CBC ⬤ Radio-Canada

CLEAR GUIDING PRINCIPLES

- The guiding principles expressed in the five-year TSB strategic plan have guided decision-making since its creation, based mainly on :
  - Reducing operating and maintenance costs of technology / equipment (based on full cost of ownership), reducing asset base, increasing agility, aiming for standardisation and interoperability, ensuring security

Create a sustainable funding and investment model	Develop greater business agility (increase revenue, improve operational efficiencies, etc.)	Foster greater collaboration and sharing solutions
	■ Partner with best-in-class technology providers and media industry members	
		■ Favour integrated systems to increase sharing of content
■ Favour corporate wide systems whenever possible to generate economies of scale		
■ Make the most cost efficient choices (taking into account full cost of ownership)	■ Adopt standardized and tested technologies	■ Promote engagement and collaboration between media and technology teams

CBC ●●● Radio-Canada

STRATEGIC FOCUS AREAS

■ **Since the TSB creation two years ago, the we have focused on the following priorities:**

■ **Vision and planning**

- Definition of a **clear vision** statement, specific objectives and clear guiding principles, aligned with the overall Corporation's business strategy, and supported by an investment plan

- Production of a major **five-year strategic plan**, and **yearly updates**, that has led to a common understanding on market and technology trends, main issues and opportunities for the CBC / Radio-Canada, project and initiatives revision and elaboration of a technology roadmap

- **Continuous updates** and integration of new information / events ensured through the biweekly TSB and various workgroups meetings

■ **Raising the profile of opportunities powered by technology**

- The TSB make **technological opportunities more accessible and "understandable"** through the Corporation by communicating the vision, priorities and projects to various audiences :

  - Communication of the technology strategy and priorities to higher management through the presentation of the strategic plan and updates

  - Regular presentations to various forums : ES and FS Executive Committees, Corporate Services, Capital Roundtable...

  - Participation of TSB Chair in SET meetings

  - Communications to employees on a regular basis

- The annual Technology Forum (started in 2010) has been a successful venue for communications and exchanges with employees from various departments throughout the Corporation

CBC ◉ Radio-Canada

STRATEGIC FOCUS AREAS (CONTINUED)

■ **Strategic execution coherent with business imperatives**

■ Focus on making technology and integral part of the Corporation's strategy and operations through **greater collaboration and cohesion** between the various stakeholders

- Common, coherent strategic approach to technology and clear guiding principles
- More « intelligent » and rigorous decision making and project review
- Better coordination and more harmonization upstream between EF and FS
- TV / Radio / Web integration : Standardization and optimization of systems, equipment, workflows, training…
- Pooling of resources and expertise, communality of solutions
- Unified approach to purchasing : greater standardization and best cost based on volume and better negotiation with suppliers and vendors

■ Set up of "transversal" committees and working groups : technology committees, smart phone workgroup, security governance group, etc.

■ **Greater leadership and impact in the industry**

■ Continued business intelligence : monitoring of trends and competition

■ More focused and cohesive approach to industry relations

- Great success of Technology Forums 2010 and 2011
- Strategic relations with partners and suppliers : briefings, demonstrations, trials…
- Participation in industry events : ex. NAB, IBC 2011…

■ Strategic participation in selected industry committees :

- AVID Customer Advisory Board
- Institute for Communication Technology Management Board (University of Southern California)
- Associate member of EBU (European Broadcasting Union),
- SMPTE (Society of Motion Picture and Television Engineers),
- ATSC (Advanced Television Systems Committee)

CBC Radio-Canada

THE CONTEXT IN 2012

THE CONTEXT IN 2012

■ Over the next few years, CBC/Radio-Canada will be operating in a context characterized by cost reductions and financial constraints. In this respect, the TSB has set three main priorities:

"Meeting the Future"

- Being competitive, in a North American environment
- Investing in state-of-the art technologies (networks, systems, software, equipment…)
- Identifying new revenues opportunities driven by technology in a new market environment (e.g. content streaming, downloading, VOD…)

Aiming for greater effectiveness / cost reductions

- Rightsizing the organization : being more agile, more efficient, FTE reduction
- Focus on outsourcing, reduction of asset base, cost avoidance
- Simplifying processes
- Reduced equipment, support and maintenance costs
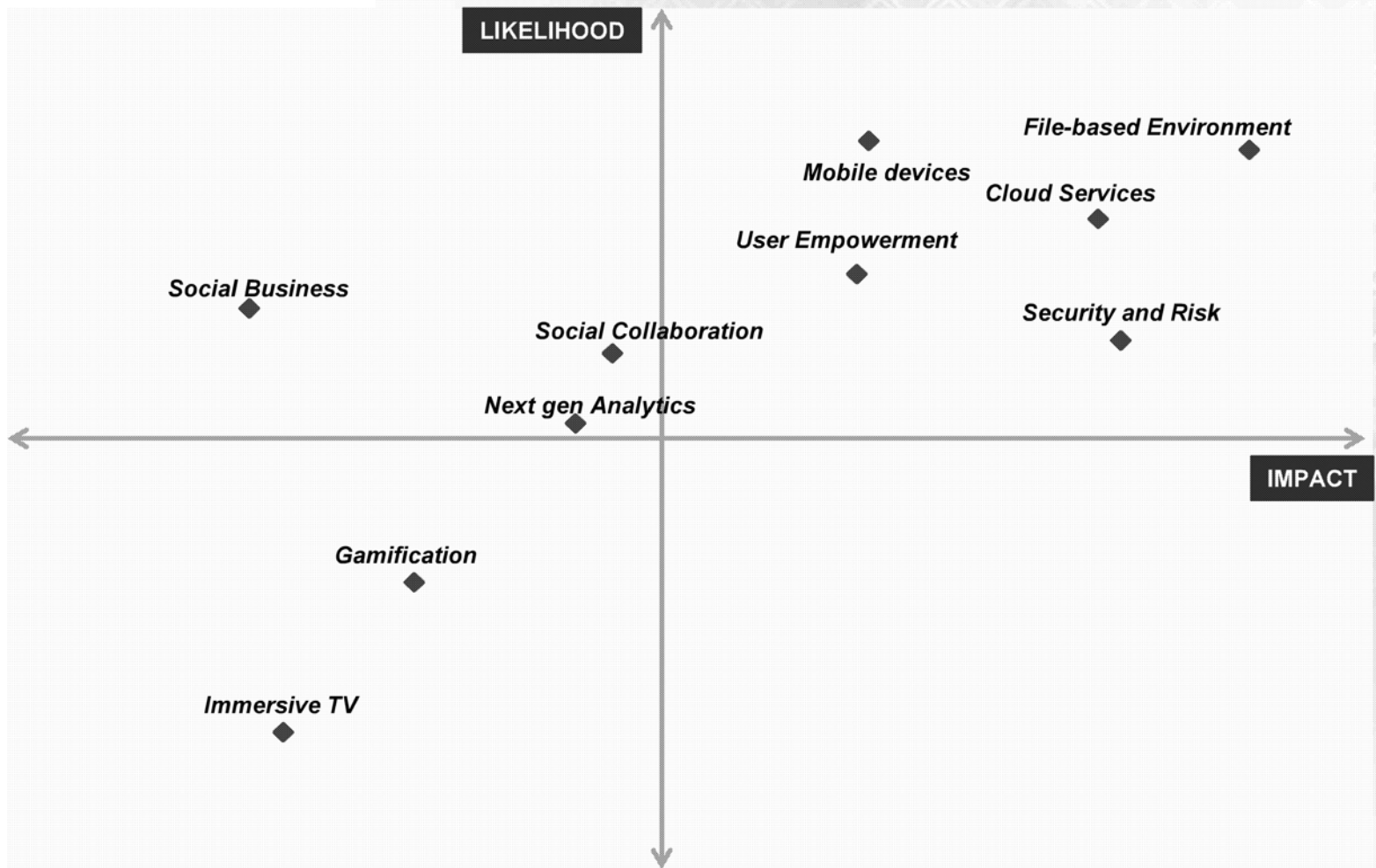
Governance

- Answering Board requests
- Supporting the Corporation's strategic objectives
- Steering corporate-wide projects relating to security and business continuity

CBC ● Radio-Canada

TOP-10 TECHNOLOGY TRENDS FOR 2012

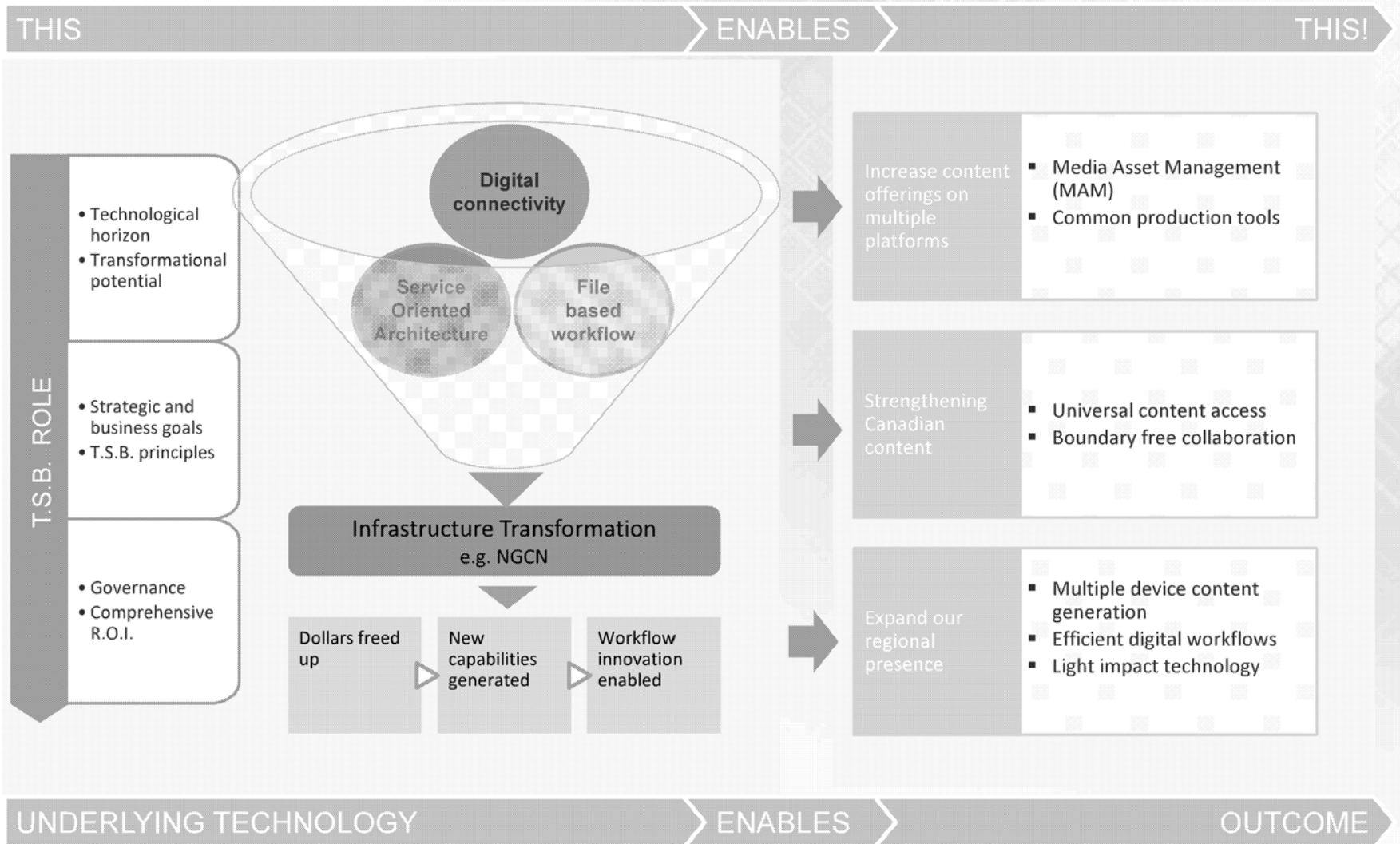|	
Cloud Services	Gartner predicts that by 2015, cloud services will represent up to 15% of all outsourced services. The challenge becomes integration, identity management and data translation between the core and multitenant public cloud offerings, and offering lightweight orchestration for processes traversing enterprise and cloud assets
Mobile Applications and Devices	The influx of mobile devices will not slow down in 2012. Challenged to keep pace with demand, vendors, network operators, app developers and marketers are finding innovative ways to support and capitalize on this continually growing urge to go mobile.
Social Business	The rise of social media in daily life have paved the way for social business in the enterprise. This is leading organizations to apply social technologies on social networks, amplified by social media, to fundamentally reshape how business gets done.
Social Software and Collaboration	According to Gartner, by 2016, at least 50% of enterprise email users will rely primarily on a browser, tablet or mobile client, instead of a desktop client
file-based environment - MAM	Content is moving from physical to file-based support; from content creation to distribution we will need to implement systems to access, browse, search and edit file-based content
Next Generation Analytics / Big data	In 2012, "big data" will experience accelerating growth as there are times that traditional analytics tools can't keep up with the information being collected. Deloitte expects that by the end of 2012, more than 90 percent of Fortune 500 companies will have some big-data initiatives underway in an attempt to manage their overflowing data warehouses.
Gamification	Serious gaming simulations and game mechanics such as leaderboards, achievements and skill-based learning are becoming embedded in day-to-day business processes, driving adoption, performance and engagement. In the broadcast TV environment, gamification also applies to content presentation and access
User Empowerment	Technology is becoming increasingly democratized, with empowered end-users able to directly source solutions from the cloud or app stores – on a mobile device and increasingly on the desktop
Security and Risk	Cloud services and employee-owned devices open new software vulnerabilities. With the explosion of mobile use cases, organizations should make sure solutions are enterprise class – secure, reliable, maintainable and integrated to critical back-office systems and data
Immersive TV (3D TV / 4K)	With its immersive capability and new consumer experience, we see a strong adoption from the studios and the gaming industry. Broadcasters will need to define their strategy around Immersive TV even if that strategy is "wait and see"

Sources: Gartner, Deloitte, SECOR Analysis

CBC ⬤ Radio-Canada

A0056217_28-000381

IMPACT OF TECHNOLOGICAL TRENDS ON THE CORPORATION

LIKELIHOOD

IMPACT

File-based Environment

Mobile devices

Cloud Services

User Empowerment

Social Business

Security and Risk

Social Collaboration

Next gen Analytics

Gamification

Immersive TV

CBC Radio-Canada

A0056217_29-000382

Technology : A Key Enabler to Achieve Strategic Goals

# MAM : THE BACKBONE OF NEW PRODUCTION METHODS AND WORKFLOWS

CBC Radio-Canada

FILE-BASED WORKFLOW : CHANGING THE WAY WE GET THINGS DONE

- Many underlying technology projects / initiatives have a direct enabling impact on the Corporation's strategic goals
- File-based workflow, as an example, is at the core of News renewal, Regional expansion, Radio centralisation and Music strategy
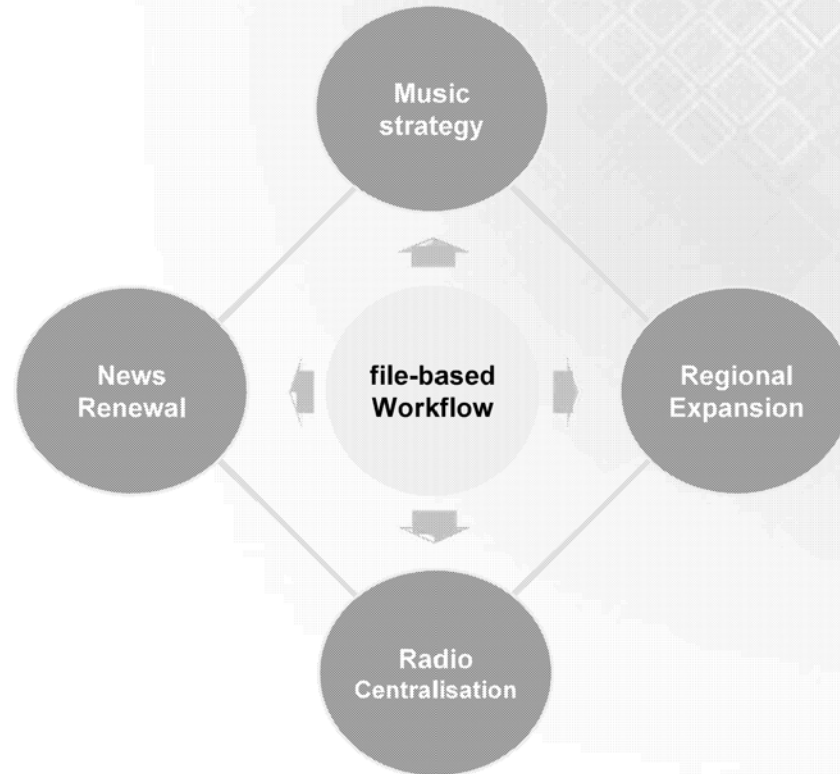
END POINT DEVICES: A TSB INITIATIVE THAT DRIVES AGILITY AND COSTS SAVINGS

The End Point Program is an open and collaborative architecture which provides CBC/Radio-Canada employees an user experience that is innovative, agile, cost contained and in line with TSB goals and corporate business strategy. The expected outcomes are :

- Increased agility (everywhere, multi-platform)

- Increased service level

- Increased employee collaboration

- Cost savings and avoidance : up to 40% cost reduction on laptops

- Better management of software and productivity Apps (software license compliance)

- Risk mitigation (ex. Security of multi-device use within the organization)

CBC ((•)) Radio-Canada

MOBILITY MANAGEMENT: DRIVING EFFICIENCIES

■ In a "bring your own device" environment, CBC/Radio-Canada faces such issues as integration, compatibility, efficiency and security. Mobility management (including telecom expense management and mobile device management) is a good example of how TSB initiatives provide corporate wide solutions. In this specific case, the expected outcomes are :

■ Greater control of wireless expenses

■ Greater savings by identifying and rectifying service provider billing errors

■ Real-time mobile device management, avoiding unnecessary roaming and other charges

■ Compliance with corporate rules and policies

■ Enhanced security

Multiple Mobility Devices
- iPhone
- Android
- BlackBerry
- Windows Mobile

Multiple Wireless Technologies
- CDMA/EVDO 2G
- GSM/HSPA 3G
- LTE 4G
- 802.11x

CBC ◉ Radio-Canada

IMPACT OF TECHNOLOGICAL PROJECTS ON STRATEGIC OBJECTIVES

	MEETING THE FUTURE	GREATER EFFECTIVENESS	GOVERNANCE
Next Generation Convergent Network (NGCN)	✓	✓	
Data management		✓	
MAM / file-based environment	✓	✓	
Digital Transmission	✓	✓	
IT server virtualization		✓	
Unified Communications	✓	✓	
Printer Optimization Program (POP)		✓	
Email strategy (cloud)		✓	
Mobility Strategy	✓		
Collaboration System		✓	
End-point Optimization		✓	
Business Intelligence	✓		✓
IT Security			✓
Broadcast Management System			✓
Disaster Recovery			✓

CBC Radio-Canada

A0056217_35-000388

5-YEAR TECHNOLOGY TSB ROADMAP

By 2015, all the various steps necessary to implement a truly file-based workflow will be in place

Key Projects & Milestones

2012	2013	2014	2015	2016

CBC ◉ Radio-Canada

- File-based workflow became a theoretical possibility in media ten years ago for TV and about fifteen for Radio. Its early adoption was hampered by a lack of file and application standards, ineffective and insufficient networking capability and expensive, limited storage. However, its promise was compelling:

  - Content available everywhere (democratisation of content)

  - Production tools at every content worker's desktop (democratisation of technology)

  - More output for the same resource

  - Much greater agility and lower time to market.

- We have been shifting our infrastructure across CBC/Radio-Canada to file-based workflow as the technology evolved and funds allowed. We are getting close to having a fully file-based infrastructure for media production.

- There are two elements to file-based workflow, the files themselves and the workflow (or what you do with the files). One of the benefits of file-based workflow is that elements of the workflow can be automated. Another is that it materially enhances content access and re-use.

AN INVESTOR'S VIEW OF FILE-BASED OPERATIONS

This is a page from a presentation made by Silverwood Partners, an industry focused investment bank, to a meeting of investors interested in the Media Production space.
It highlights the significance of file-based workflow.

A0056217_38-000391

AN INDUSTRY VIEW OF FILE BASED OPERATIONS

2013 BBS Broadcast Industry Global Trend Index

- Weighted Index, non-vendors

CBC

DEVONCROFT
PARTNERS LLC

Devoncroft is a market research firm specialising in media technologies.