



TECHNOLOGY PLAN

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| TO: | Board of Directors / Infrastructure Committee |
| MEETING: | November 19, 2014 |
| FROM: | Steven Guiton, VP, Technology and Chief Regulatory Officer |
| PURPOSE: | Technology Plan, for Board Approval |
| DATE: | October 16, 2014 |

SIGNIFICANT POINTS:

- The attached Technology Plan sets out the context, principles and objectives that will guide the Corporation's technology-related decision making in the years ahead.
- The plan also identifies CBC/Radio-Canada's new technology structure and governance that will ensure workflows and processes, infrastructure, investments, and key technology projects are aligned with the business priorities and strategic goals elaborated in Strategy 2020.
- The TSET will be providing the Board of Directors' Infrastructure Committee with annual reports on progress against objectives, challenges related to implementation, and potential modifications to the plan.

RESOLUTION:

- That the Infrastructure Committee recommend to the Board that the Technology Plan dated October 2014 be approved.



CBC  **Radio-Canada**
Technology Plan

November 7, 2014



CBC/RADIO-CANADA: TECHNOLOGY PLAN

1. Introduction

Like other broadcasters, CBC/Radio-Canada is in a period of significant technological transformation. Beyond the pressures being brought to its business by new content offers and opportunities made possible via advanced networks and the Internet, challenges and opportunities have arisen from the fundamental changes that have occurred in media technology and consumer electronic devices.

These developments form the backdrop of the company's Technology Plan, which sets out the context, principles and objectives that will guide the Corporation's technology-related decision making in the years ahead.

This plan also identifies CBC/Radio-Canada's new technology structure and governance that will ensure workflows and processes, infrastructure, investments, and key technology projects are aligned with the business priorities and strategic goals elaborated in the Corporation's 5-year strategy, Strategy 2020, approved in June 2014.

This plan was reviewed by the Technology Strategy Executive Team (TSET) in October 2014 to ensure alignment with the objectives of Strategy 2020.

2. Context

Our changing business

Technology is intrinsic to broadcasting. As technology evolves, so must broadcasters.

The past decade has been particularly tumultuous. The advent of digital technology has prompted a radical transformation of the way our industry operates, moving us in just a few short years from a tape-based, siloed production environment with a linear delivery model into a new era defined by digital, multi-platform, on-demand content. The transformation is far from over.

The way audiences are consuming media content is also changing fundamentally. Thanks to mobile technology (smartphones and tablets), over-the-top (OTT) services, video-on-demand (VOD), social networking, and online content distribution, consumers now expect an immersive, interactive, social entertainment experience characterized by access to content when, where and how they want it, in high-quality, in real time, and an ability to share content via social networks.

All of this requires broadcasters to make fundamental changes. From a production and distribution point of view, they are having to:

- Meet enhanced quality expectations from consumers;
- Provide online streaming and feed new non-linear online distribution platforms;
- Deploy services for mobile devices;
- Use social networks to connect and engage with audiences;
- Evolve and expand their offer to advertisers.

From an organizational and business point of view, these changes are having an impact on:

- Processes and workflows;
- Budget allocations;
- Capital asset footprint;
- Employee culture;
- Skill-set and training requirements.

Although challenging to manage, these changes present great opportunity.

Broadcast, information and consumer technologies: the merging of three domains

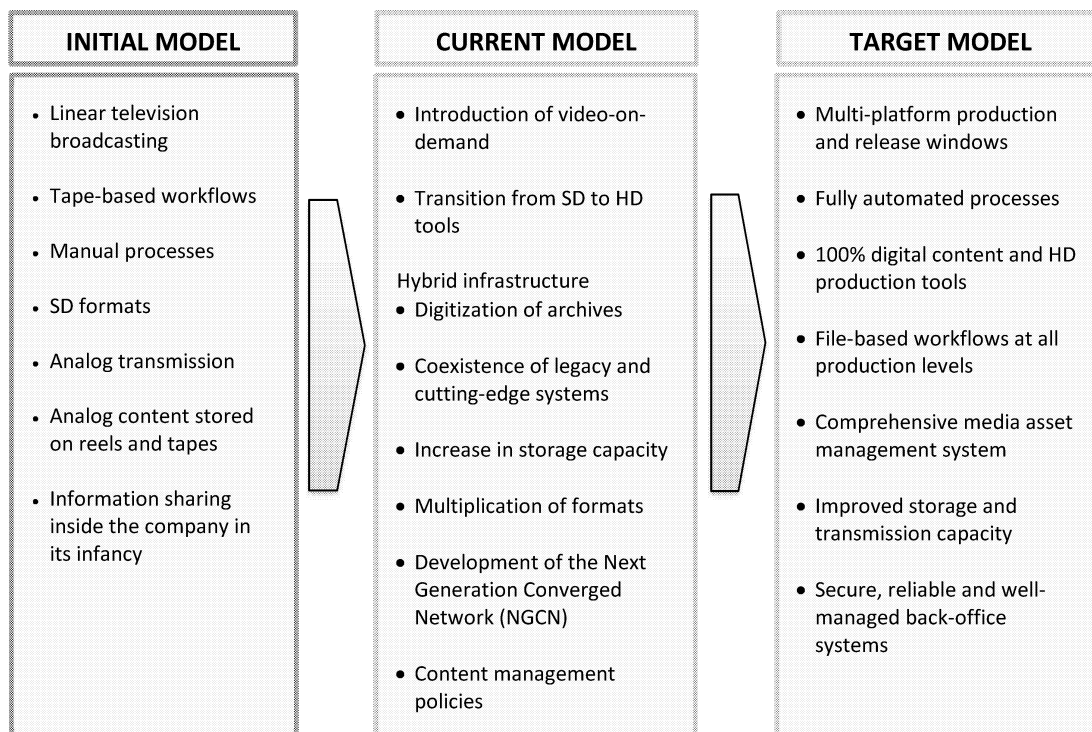
Once involving specialised and proprietary hardware, broadcast technology has increasingly made way for widely-used, generic computing technologies, both hardware and software. Thanks to the quality, low cost, standardisation, and scalability that these new technologies offer for creating, handling, and tracking media content, media companies are able to achieve much greater flexibility in their operations, while continuing to meet the needs of consumers.

The replacement of specialised broadcast technologies with these generic technologies is crucial for the operations of a modern broadcaster if it wishes to evolve its business.

With these changes in technology, media companies are also able to leverage consumer electronics technology throughout their operations, allowing them to adopt more compact and versatile tools and equipment.

Transitioning to a new model

The evolution of technology requires a transition phase where legacy and upgraded technology co-exist. Broadcasters have to deal with the cohabitation of off-the-shelf technologies on the one hand, and highly sophisticated, specialised broadcast systems on the other. The proper migration to a new technological environment is at the core of our strategic challenge.



3. Guiding Principles

The following principles will guide technology-related planning and decision-making at CBC/Radio-Canada.

Support business strategy. Technology must support the business and programming strategies, not dictate them. New technology cannot be adopted for technology's sake or to keep up with the Joneses.

Adopt proven, tested technology. Look outside for solutions and, as a matter of principle, adopt, tested, cost-effective, off-the-shelf technology. CBC/Radio-Canada was, in the past, better resourced to be a leader in the development and adoption of technology. It was able to experiment, build custom in-house systems, and invest in large national infrastructure projects (i.e. our national over-the-air transmission network – the largest in the world). This is no longer possible.

Improve efficiency. Eliminate duplication of resources, technologies, systems, and standards; across departments, networks, and regions. Use technology to improve workflow and productivity. Reduce the size of our asset pool. Reduce dependency on legacy systems. Systematically favour out-sourcing over in-sourcing.

Operate as one company. Share resources between departments and services. Establish and leverage internal best practices. Systematically favour same systems and choose same suppliers for French and English services.

Create an adaptable environment. Adopt technologies that are scalable and responsive to the evolving needs of the company. Implement service-based architecture whenever relevant. Favour open-system standards, hardware independent and SAAS solutions. Partner with best-in-class providers and media industry members.

Foster collaboration, sharing and productivity. Favour integrated systems to increase the sharing of content. Implement file-based workflows with standardized metadata taxonomies. Promote engagement and collaboration between media and technology teams and between networks.

4. Strategic Objectives

From the Guiding Principles flow objectives. These objectives are organized into two key categories:

1. Media and broadcast technologies
2. Back-office systems

Each has its own set of challenges opportunities, priorities and strategies.

I. MEDIA AND BROADCAST TECHNOLOGIES

Media and Broadcast Technologies are the tools and systems with which we:

- Create, acquire and distribute content (i.e. cameras, control rooms, editing systems, media data centres, presentation systems, etc.);
- Manage our media operations (i.e. plan, schedule and monetize content).

One of the key objectives of the Corporation's Strategy 2020 plan is to leverage technology to reduce, rethink, or eliminate aspects of our infrastructure that are not related to our core business, or that are not an efficient use of resources.

This objective will be achieved through the technological transition – from a legacy to a new business model – that CBC/Radio-Canada is currently undergoing. This new business model is enabled by digital file-based workflow, robust asset management, system automation, and commodity off-the-shelf equipment. During this transition, legacy systems and upgraded technology must coexist. As with any process that entails significant organizational change, the successful management of this transition will be the key to future success.

OBJECTIVE 1: MODERN, COST-EFFECTIVE PRODUCTION TOOLS

STRATEGIES AND PRINCIPLES

- Reduce reliance on legacy infrastructure
- Eliminate duplication of infrastructure, resources and assets
- Automate production processes
- File-based workflows at all production levels
- Adopt off-the-shelf solutions whenever possible
- Adopt cloud-based solutions whenever appropriate

INDICATORS

- Increased productivity
- Lower time to market
- Reduced asset pool
- Reduced maintenance costs

**OBJECTIVE 2:
MARKET-QUALITY CONTENT ON ALL PLATFORMS**

STRATEGIES AND PRINCIPLES

- Company-wide availability of platform-appropriate production tools
- Simplified media asset management
- Standardized metadata taxonomies
- Appropriate timing for technological transitions (e.g. UHDTV, HD Radio, etc.)

INDICATORS

- Competitive product quality
- Audience and market recognition
- Availability of user-friendly desktop production tools wherever required

**OBJECTIVE 3:
HIGH-SPEED, SCALABLE CONNECTIVITY**

STRATEGIES AND PRINCIPLES

- High-speed networking capacity on a national basis
- High-speed networking capacity within all of the company's facilities
- Market-quality mobile network access and reliability

INDICATORS

- Improved connectivity between production sites
- Lower network and communications costs
- Scalability and flexibility to support traffic growth

II. BACK-OFFICE SYSTEMS

Back-office systems are the tools and systems with which we manage:

- The corporate environment (HR, finance, legal, real estate, regulatory, etc.);
- The end-user environment (messaging, collaboration, end-point devices, help desks, etc.);
- Information security and general controls.

Most of this technology is required today by all companies, in all sectors. There is, as such, a choice of off-the-shelf and third-party supplied solutions available in the marketplace to serve the Corporation's need in this domain. That translates into an opportunity to lower costs and increase efficiency.

There is increasing demand from employees to access technology services from a variety of devices and platforms (i.e. PC, Mac, iPhone, Android, tablet, etc. – the Corporation currently provides its staff with all of these). Given the diversity of roles and tasks performed at the Corporation, and consequently the diversity of tools used, we will continue to require and support multiplatform solutions.

OBJECTIVE 1: LOW-COST, SCALABLE, INTEROPERABLE SYSTEMS

STRATEGIES AND PRINCIPLES

- Adopt off-the-shelf instead of customized solutions
- Implement open-system standards and hardware independent solutions
- Favour outsourcing over in-sourcing
- Favour cloud-based solutions whenever appropriate

INDICATORS

- Reduced IT costs
- Improved interoperability of key systems and business applications
- Reduction of legacy systems

OBJECTIVE 2: SECURE, RELIABLE, WELL-MANAGED SYSTEMS

STRATEGIES AND PRINCIPLES

- Comprehensive life-cycle management of all hardware and software
- Comprehensive management of security/privacy/internal control protocols

INDICATORS

- Elimination of software licence audit penalties
- Prevention of security/privacy/internal control breaches
- Appropriate and timely updating of software

**OBJECTIVE 3:
IMPROVED END-USER EXPERIENCE**

STRATEGIES AND PRINCIPLES

- Multi-platform and self-service support capacity
- Optimized IT service levels and metrics

INDICATORS

- Higher client satisfaction
- Reduction of calls to support desks
- Lower issue resolution times

5. Governance

Technological change needs to be driven by and aligned with business priorities to achieve the company's overall strategic goals. Since core business decisions are being made at the Vice-Presidential level, technology strategy decisions must be established at that level as well.

The Technology Senior Executive Team (TSET)

In February 2014, the Board approved the creation of the Technology Strategy Executive Team (TSET) as a sub-committee of the Corporation's Senior Executive Team (SET).

The TSET consists of three members:

- Executive Vice-President, French Services
- Executive Vice President, English Service
- Vice-President, Technology and Chief Regulatory Officer

The TSET is responsible for:

- Developing corporate-wide technology strategies and priorities that further the company's business objectives and ensure interoperability of French and English services and across all platforms;
- Approving and being accountable for important technology projects and initiatives;
- Monitoring, measuring and reporting on the success of the implementation of our technology strategy.

The Technology Roundtable (TRT)

Supporting the work of the TSET is the Technology Roundtable (TRT), a committee which brings together the Corporation's three main technology groups, as well as other groups implicated by technology decisions and projects:

- Media Operations and Technology (English Services)
- Radio-Canada Production (French Services)
- Media and Enterprise Technology Services
- Real Estate

The TRT is responsible for:

- Project coordination
- Discussion and support of technology implementation

TECHNOLOGY GOVERNANCE MODEL

