

# CULTURE 3.0

IMPACT OF  
EMERGING DIGITAL TECHNOLOGIES  
ON HUMAN RESOURCES  
IN THE CULTURAL SECTOR

OCTOBER 2011



Cultural  
Human Resources  
Council

Conseil  
des ressources humaines  
du secteur culturel

## ACKNOWLEDGEMENTS

The Cultural Human Resources Council wishes to thank the members of the Steering Committee (see Appendix C) for *The Impact of Emerging Digital Technologies on HR in the Cultural Sector* who guided the development of the study from its inception, under the leadership of Pat Feheley, Committee Chair. CHRC also thanks the experts and the many business, government, not-for-profit, and independent cultural leaders, managers, and workers who shared their expertise and insights via interviews, focus group meetings and an interactive online forum. Finally, CHRC is grateful to the participants in the 2011 national validation roundtable that shaped the report's final recommendations.

This report was prepared by Nordicity Group Ltd., under the direction of Sr. Partner Peter Lyman. The report was written and researched by Stuart Jack (Partner), Kurt Eby and Kristian Roberts (Managers), Julie Whelan (Consultant), and Mila Dechef-Tweddle (Analyst).

Thanks are extended to the subject matter experts: Lynda Brown (Digital Media), Line Côté (Live Performing Arts/ Film and Television Production/HR), Diane Davy (Book and Magazine Publishing/HR), Jane Dysart (Heritage – Libraries and Archives), Jerry Ell (Visual Arts and Crafts), Ron Lamoureux (Music and Sound Recording), Jessica Litwin (Cultural Practitioners), Raymond Montpetit (Heritage – Museums), Joanne Morrow (Live Performing Arts), Gilbert Ouellette (Digital Media/Broadcasting, Film and Television Production/HR) and Christina Sjoberg (Heritage – Museums); and to CHRC staff: Susan Annis (Executive Director), Denise Perrier (Sr. Project Manager) and Marc-André Girouard (Communications and Marketing Manager).

All rights reserved. The Cultural Human Resources Council invites you to copy and to print this material for personal, educational and non-commercial use only. No part of this information may be reproduced, modified or redistributed in any form or by any means, for any purposes other than those noted above, without the prior written permission of CHRC.

The opinions and interpretations in this publication are those of the author and do not necessarily reflect those of the Government of Canada.

This project was funded by the Government of Canada's Sector Council Program.



# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b> .....	<b>i</b>
<b>1. INTRODUCTION</b> .....	<b>1</b>
Background to the Study .....	1
Study’s Goal and Objectives .....	2
Description of Methodology .....	2
<b>2. DIGITAL CONTEXT</b> .....	<b>5</b>
Beyond the Numbers: The Importance of the Cultural Sector .....	5
Digital Trends and Issues: A Recap of the <i>Cultural HR Study</i> .....	6
The Shifting Ground: Structural Impacts of Emerging Digital Technologies .....	8
<b>3. DEFINITIONS AND CONCEPTS</b> .....	<b>10</b>
“Emerging” Digital Technologies .....	10
Digital Skills .....	11
Commercial and Business Terms .....	11
HR Categories .....	13
<b>4. FINDINGS</b> .....	<b>14</b>
Digital Transformation Across the Value Chain .....	14
Digital Adoption Across the Cultural Sector .....	15
Findings – Regional, Language, and Demographic Perspectives .....	17
<b>5. CROSS-SECTORAL RECOMMENDATIONS</b> .....	<b>21</b>
Digital Business and Marketing Skills .....	21
Business Skills Learning Modules .....	22
Continuous Learning Workspaces and Leadership .....	23
Mentorship Programs .....	24
Collaboration Tools .....	26
Summary of Cross-sectoral Recommendations .....	27
<b>6. BROADCASTING SUB-SECTOR RECOMMENDATIONS</b> .....	<b>28</b>
Digital Business and Leadership Skills for New Graduates .....	28
Digital Skills Upgrading .....	29
Digital Internships .....	30
Summary of Recommendations for the Broadcasting Sub-sector .....	31
<b>7. FILM AND TELEVISION PRODUCTION SUB-SECTOR RECOMMENDATIONS</b> .....	<b>32</b>
Industry Input on Skills Needs .....	32
Digital Skills Workshops .....	33
Collaborative Incubators .....	34
Summary of Recommendations for the Film and Television Production Sub-sector .....	35
<b>8. DIGITAL MEDIA SUB-SECTOR RECOMMENDATIONS</b> .....	<b>36</b>
Updating Skills Inventories .....	36
Online National Course Bank .....	37
Disruptive Technology Labs .....	38
Summary of Recommendations for Digital Media Sub-sector .....	38

<b>9. VISUAL ARTS AND CRAFTS SUB-SECTOR RECOMMENDATIONS</b>	<b>39</b>
Audience Development Goals and Training	39
New Media/Digital Art Exhibition	40
Multiplatform Use Contracts	41
Digital Archiving and Conservation	42
‘Push’ Digital Techniques	43
Summary of Recommendations for the Visual Arts and Crafts Sub-sector	44
<b>10. HERITAGE SUB-SECTOR RECOMMENDATIONS</b>	<b>45</b>
Adaptable Heritage Digital Skills Strategy	45
Flexible Learning	46
New Business Models	46
Summary of Recommendations for Heritage Sub-sector	48
<b>11. LIVE PERFORMING ARTS SUB-SECTOR RECOMMENDATIONS</b>	<b>50</b>
Reverse Mentorships for Digital Skills	50
Access to Specialized Skills	51
Digital Training Inventory	52
Knowledge Sharing	52
Summary of Recommendations for Live Performing Arts Sub-sector	54
<b>12. MUSIC AND SOUND RECORDING SUB-SECTOR RECOMMENDATIONS</b>	<b>55</b>
Blending Digital, Management and Entrepreneurial Skills	55
Expanded Core Music Education	56
Summary of Recommendations for Music and Sound Recording Sub-sector	57
<b>13. WRITING AND PUBLISHING SUB-SECTOR RECOMMENDATIONS</b>	<b>58</b>
Trends and Impact Research	58
Technical and Business Skills Upgrading	59
Digital Skills Mentorships	60
Contract Worker Needs	60
Retention Resources	61
Summary of Recommendations for the Writing and Publishing Sub-sector	62
<b>14. APPENDICES</b>	<b>63</b>



## EXECUTIVE SUMMARY

### Background - Study Rationale

Throughout the past decade, the Cultural Human Resources Council (CHRC) has increasingly recognized the growing impact of emerging digital technologies on the cultural sector in general, and the sector's human resources in particular. In fact, the *2010 Cultural HR Study*<sup>1</sup> identified the “digital tsunami” that is permeating all stages of the cultural sector's creative chain – creation, production, distribution, marketing and preservation. The 2010 study characterized it as the most prevailing issue across all cultural sub-sectors covered by CHRC, namely: broadcasting, film and television, digital media, visuals arts and crafts, heritage, live performing arts, music and sound recording, and writing and publishing.

These digital impacts trigger major HR implications in the cultural sector. In fact, cultural workers across all sub-sectors need training through formal education, in-career skills upgrading and mentorships and internships to adapt to the new digital realities. Practitioners also need access to knowledge resources such as best practices and instructional material to leverage the advantages of digital technologies.

CHRC's mandate is to “*strengthen the Canadian cultural workforce by providing leadership and innovative solutions to human resource issues.*” In light of this mandate, then, CHRC's responsibility to help the cultural sector navigate through these digital impacts is clear. To that end, CHRC engaged Nordicity to undertake this study on the *Impact of Emerging Digital Technologies on Human Resources in the Cultural Sector*, whose short form is “*Culture 3.0*” to underscore the impact of the web and other digital technologies.

The study's goal is to:

*Assess the impact of emerging digital technologies on the eight cultural sub-sectors; and recommend priority solutions to address the challenges and take advantage of the opportunities arising from these digital technologies.*

### Context - The Economic, Employment, And Trade Impact Of The Cultural Sector

The work of Canada's artists and cultural content creators enriches the nation and presents images of Canada and Canadians to the world. As well, the cultural sector is a key contributor to Canada's economy. According to the Conference Board of Canada, in 2007 the cultural sector contributed more than \$46 billion in real value-added GDP to the Canadian economy, which amounted to 3.8% of the entire economy.<sup>2</sup> Beyond the vast wealth created by cultural endeavors, the cultural sector directly employs more than 650,000 Canadians across the country.<sup>3</sup>

In terms of exports the “official” figure for the cultural sector of about \$2.1 billion (in 2006) is often cited to indicate the value of Canada's cultural exports.<sup>4</sup> However, that figure underestimates the true export value of Canadian cultural product. For example, between 1999 and 2008 there was an average of \$1.7

---

<sup>1</sup> Published in December, 2010.

<sup>2</sup> Valuing Culture, pg iv.

<sup>3</sup> Department of Canadian Heritage, <http://www.canadianheritage.gc.ca/pc-ch/infoCntr/cdm-mc/index-eng.cfm?action=doc&DocIDCd=SJM092442>

<sup>4</sup> Valuing Culture, pg 48.





billion in location production shot in Canada,<sup>5</sup> which is not counted as “exports” even though, like the attraction of foreign tourists, it should be so counted.

The cultural sector can clearly demonstrate an ability to use digital technologies to add to the volume of exports in Canada’s knowledge-based economy. For example, publishing sub-sector leaders like Harlequin Enterprises have been early adopters of ebook distribution and have found several ways to distribute content to consumers. Similarly, film and television production companies like Epitome Picture have expanded their brands (in this case *Degrassi: The Next Generation*) to numerous digital platforms among other product lines. The innovation continues in Canada’s live performing arts, with world-leading companies like Cirque du Soleil routinely incorporating advanced digital effects into its renowned productions. As well, many recording companies offer consumers access to content through their websites, for example Maplecove has long offered consumers easy access to over 800 Canadian artists and their works through the company’s website. In the visual arts and craft sub-sector, many visual arts not only *use* but *create* the digital tools of their medium; while at the same time many heritage institutions are increasingly using digital technologies to interact with their audiences – both inside and outside of the building.

Beyond its direct contribution, the cultural sector has a wider, more profound impact on Canada’s economy. The inherent creativity of the cultural sector is more frequently being integrated with other industrial sectors such as medicine or engineering – thus leading to new approaches to production, distribution and/or marketing. As such, a strong cultural sector is likely to bleed into other sectors of the economy, strengthening them in the process. Increasing synergy between the Information and Communications Technology (ICT) sector and the cultural sector is generating new businesses that ultimately view the world as their markets. As the Canadian economy continues to move toward a knowledge-based economy, the creativity exhibited by the cultural sector will only increase in importance.

However, change poses challenges as well. While many of these digital impacts create opportunities to further expand the cultural sector’s role as a key driver of Canada’s economy, they also pose a number of disruptive challenges to cultural practitioners. Digital impacts pose threats to individual artists, and to the business models underpinning entire sub-sectors. As well, the spread of digital technologies creates a challenge for important elements of the public support system for the cultural sector, for example the threat posed by broadband internet to the traditional structure of the broadcasting system. Left unaddressed, these issues will undermine the cultural sector’s viability and will put the sector at risk of losing jobs and its share of the increasingly global cultural content market. Clearly, leadership, entrepreneurship, good HR practices, and skills development are all important assets in the continued development of the cultural sector at home and abroad.

## Findings – Digital Adoption by the Cultural Sector

While digital adoption rates differ somewhat for each of the eight cultural sub-sectors, there are no valid objective criteria to measure relative adoption rates among the sub-sectors. Due to the variety of cultural products, the permutations for digital adoption can vary quite widely across the creative chain. Indeed, some sub-sectors (e.g. digital media) have adopted digital technology across the board, i.e. a majority of practitioners are using digital technologies for a majority of creative chain activities. While it is true that some sub-sectors have more fully integrated digital technologies across the creative chain than other sub-sectors, most sub-sectors have more advanced digital technology adoption than one might expect.

It is clear that the **digital media** sub-sector has adopted digital technologies to a greater degree than all other sub-sectors – after all, digital media began as a digital sub-sector. The digital media sub-sector has existed for as long as digital technology, but also the sub-sector has created a great deal of digital

---

<sup>5</sup> CFTPA, “09 Profile: An Economic Report on the Canadian Film and Television Production Industry,” Prepared by Nordicity, 2009, pg 80.





technology. However, new digital technologies have been developed in other sectors as well, namely **broadcasting, film and television production, visual arts and music and sound recording**.

Consumption trends have pushed digital adoption to a high level in the **music and sound recording** industry, where the majority of development, production and distribution activities are now digital. Similarly for **broadcasting and film and television production**, consumption trends, as well as advances in production equipment, have spurred a high-level of digital technology adoption. The **magazine and book publishing** sub-sector has also substantially adopted digital technology, largely driven by consumption trends again.

The **heritage** and **live performing arts** sub-sectors still 'distribute' a primarily physical product in a physical location. However, each sub-sector is experimenting with digital distribution (e.g. 'live' performances simulcast in movie theatres and virtual museum and gallery tours), but the essence of each sub-sector is attracting visitors. The live performing arts and heritage sub-sectors will never be 'fully digital,' but digital technologies are being leveraged to attract more visitors and enhance the audience participation in these sub-sectors.

The broad observation is that the levels of digital adoption by each sub-sector are highly nuanced, although some sub-sectors seem more advanced in new technologies adoption relative to others. In addition, as the digital adoption increases the lines between the sub-sectors begin to blur. Indeed, it is inevitable that all sub-sectors will evolve greatly as a result of emerging digital technologies.





## Conclusions and Recommendations

In general, improvements in existing mechanisms and the creation of new ones are needed to improve digital skills across all employment levels of all sub-sectors. While ensuring new graduates have the technical skills to take advantage of the new digital realities is one piece of the puzzle, senior level staff also need to understand the new capabilities digital technologies bring to their sub-sector in order to guide their workforces. And as digital technologies are affecting all stages of the creative chain, a consistent refrain of the cultural community is that what is needed most is training in digital *business* skills – marketing, finance, strategy, business affairs, project management, intellectual property and IP rights management. Such areas are perceived as being even more critical than the technical training required to make use of the emerging technologies.

Ensuring that crucial skills are acquired throughout the sector will require a multi-faceted approach of training mechanisms, including:

- Closer collaboration between industry and academic institutions to ensure new entrants to the workforce have the most relevant skills;
- Accessible in-career skills training options such as workshops and modules that allow cultural workers to upgrade digital business and leadership skills; and
- Mentorships that increase peer-to-peer knowledge sharing, including cross-sub-sector mentorships and reverse mentorships where digitally-savvy junior staff mentor their senior-level peers.

Canada's cultural workers have also proven extremely resourceful in adapting to the new digital realities. In many cases, new digital skills are self-taught and honed through experimentation. Similarly, many disruptive digital impacts could be overcome merely with the assistance of targeted knowledge resources. Therefore, in addition to improving training mechanisms, digital impacts should also be addressed by developing, providing and promoting new and existing resources to address digital issues, including best practices guides, instructional guides and databases of websites dedicated to the application of digital technology to the cultural sector. To this end, this study worked toward the development of recommendations that were subjected to careful scrutiny by the CHRC steering committee and reviewed by members of the respective sub-sectors in 'validation workshops' held across the country.

The first set of recommendations that emerged from this study (see figure 1 below) cover the whole cultural sector, labeled "cross-sector recommendations". The second set (see figure 2 below) is divided into recommendations for each of the eight sub-sectors. Both sets of recommendations are accompanied by a broad implementation plan indicating the roles for CHRC as well as industry associations and other stakeholders.





**Figure 1: Cross-sector Recommendations**

Title	Recommendation
<b>Digital Business and Marketing Skills</b>	Academic training curricula for new entrants to the workforce in the cultural sector should increasingly emphasize entrepreneurship, management, business, and marketing skills in the digital economy.
<b>Business Skills Learning Modules</b>	Develop accessible and relevant learning modules to upgrade skills in business and marketing for entrepreneurs and managers in a convergent world.
<b>Continuous Learning Workspaces and Leadership</b>	Build continuous learning opportunities into the workplace, including the means to develop leadership skills needed in addressing new challenges relating to the advent of emerging digital technologies.
<b>Mentorship Programs</b>	Introduce and/or expand mentorship initiatives on a regional and national basis through building on current and new initiatives, such as communities of practice, <sup>6</sup> in order to integrate the use of emerging digital technologies throughout the workforce.
<b>Collaboration Tools</b>	Develop the new “learn ware” that recognizes growing convergence and strengthen the mechanisms for sharing and pooling new tools, common resources and business processes.

In addition to these cross-sector recommendations, the study team, through extensive consultation, arrived at the following recommendations grouped according to the eight sub-sectors:

**Figure 2: Sub-sector Recommendations**

Title	Recommendation
<b>BROADCASTING SUB-SECTOR RECOMMENDATIONS</b>	
<b>Digital Business and Leadership Skills for New Graduates</b>	Improve training in academic institutions to incorporate business and leadership skills with respect to the new multiplatform broadcast distribution realities.
<b>Digital Skills Upgrading</b>	Broadcasters should adopt best practices for skills upgrading to meet the strategic, operational and content production challenges of continuous technological change for all mid- and senior-level staff.
<b>Digital Internships</b>	Use digital skills development as a platform to develop best practices for internship programs tailored to broadcasters of all sizes.
<b>FILM AND TELEVISION PRODUCTION SUB-SECTOR RECOMMENDATIONS</b>	
<b>Industry Input on Skills Needs</b>	Upgrade industry input mechanisms in film and television production training programs with the aim of integrating more digital management, marketing and financial skills into curricula.
<b>Digital Skills Workshops</b>	Increase the number, quality and depth of workshops to address digital skills upgrading in key areas including: financing, marketing/distribution, workflow management and technical training.
<b>Collaborative Incubators</b>	Facilitate and promote the establishment of incubators for the creation of market-ready, cross-media products.

<sup>6</sup> A community of practice is a group of individuals—often sharing a craft, hobby or profession—who work together in order to share knowledge, information, experiences and best-practices. The goal of these communities is for members to learn from one another’s experiences and as a result develop their own personal and professional skills and knowledge.



Title	Recommendation
<b>DIGITAL MEDIA SUB-SECTOR RECOMMENDATIONS</b>	
<b>Updating Skills Inventories</b>	Update existing Training Gaps Analyses, using international references, to outline the skills, knowledge and abilities required of key digital media positions at the entry level, 3 years out, and the senior level; and share reports with formal education partners and other training providers.
<b>Online National Course Bank</b>	Develop leadership skills, knowledge and abilities as related to digital media workers and the distributed team work environment.
<b>Disruptive Technology Labs</b>	Facilitate short-term (2-3 day) labs with lead researchers in the content development, new platforms and disruptive technologies fields, who would present and work with industry participants on emerging opportunities and innovation.
<b>VISUAL ARTS AND CRAFTS SUB-SECTOR RECOMMENDATIONS</b>	
<b>Audience Development Goals and Training</b>	Identify the digital audience development goals of artists, craft workers associations, artist-run organizations, commercial galleries and museums, and develop/promote training programs that address these separate, yet related, needs.
<b>New Media/Digital Art Exhibition</b>	Create and maintain a best practices or how-to guide for museums and galleries regarding exhibition guidelines and technical requirements for exhibiting and maintaining art with a digital technology or digital media component.
<b>Multiplatform Use Contracts</b>	Identify best practices and standard terms for contracts between artists and museums or private and public galleries, which cover the use of multiplatform and digital content.
<b>Digital Archiving and Conservation</b>	Develop a sub-sector-wide best practices guide on digital archiving and conservation options, including effort and budget estimates for each.
<b>‘Push’ Digital Techniques</b>	Identify and promote digital techniques for creating, producing, marketing and archiving visual arts and crafts to artists that are unlikely, or unable, to seek out such skills and solutions on independently.
<b>HERITAGE SUB-SECTOR RECOMMENDATIONS</b>	
<b>Adaptable Heritage Digital Skills Strategy</b>	Facilitate strategic interaction between heritage organizations, training institutions and professional associations to identify the digital competencies of heritage organizations and to ensure flexible and accessible approaches to learning.
<b>Flexible Learning</b>	Promote flexible approaches to workplace learning that provide opportunities for employees to experiment, learn, and develop in a variety of ways.
<b>New Business Models</b>	Coordinate government and industry research on partnerships, business models, and new funding streams to support heritage organizations and their programs.
<b>LIVE PERFORMING ARTS SUB-SECTOR RECOMMENDATIONS</b>	
<b>Reverse Mentorships for Digital Skills</b>	Offer “reverse mentorships” where experienced workers are mentored by younger innovative workers with more digitally-based skills, or are presented with residencies in digitally-equipped theatres and creative performing arts environments.
<b>Access to Specialized Skills</b>	Develop strategies to ensure access to specialized skills in digital technologies adapted to the needs of the live performing arts.
<b>Digital Training Inventory</b>	Build an inventory of training programmes for live performing arts.
<b>Knowledge Sharing</b>	Promote opportunities for professionals to network and share knowledge, best practices, innovations and case studies (i.e. build and promote communities of practice).
<b>MUSIC AND SOUND RECORDING SUB-SECTOR RECOMMENDATIONS</b>	
<b>Blending of Digital and Management Skills</b>	Identify and promote best practices in skills upgrading mechanisms (e.g. workshops, online professional development, mentoring, and formal education) for all workers (e.g. entry-level, mid-career, and senior-level) with a focus on digital, entrepreneurial and management skills.
<b>Expanded Core Music Education</b>	Encourage formal educational institutions to integrate some aspects of arts administration, entrepreneurial, management, technical and business skills into core courses and programs within the base degree or certificate music programs.





Title	Recommendation
<b>WRITING AND PUBLISHING SUB-SECTOR RECOMMENDATIONS</b>	
<b>Trends and Impact Research</b>	Develop a long-term strategy for on-going research that addresses issues impacting the writing and publishing sub-sector workforce.
<b>Technical and Business Skills Upgrading</b>	Promote the concrete benefits of skills upgrading, of both technical and business skills, to the entire workforce in publishing, from freelancers to publishers.
<b>Digital Skills Mentorships</b>	Build on existing best practices (domestic and international) to make mentorships an on-going option for in-career professionals who want/need to upgrade their digital and traditional skills.
<b>Contract Worker Needs</b>	Expand training programs for freelancers (writers, photographers, illustrators, editors, designers, etc.) to ensure they have the skills to meet the needs of content commissioners and to run their own businesses in a changing landscape.
<b>Retention Resources</b>	Provide access, particularly for micro-enterprises and SMEs, to HR experts and training that demonstrates best practices in methods of attracting, motivating and retaining employees on small budgets.

While this study has been thoroughly substantiated through consultation with all sub-sectors, the impacts of digital technologies on the cultural sector is a very complex matter. Consequently, the recommendations are intended to be priorities, and not touch on all the potential initiatives that could address all the needs of all the components of each sub-sector.

### Implementation

For each of the recommendations, an implementation approach is suggested for consideration. Most of the implementation call to action involves CHRC as well as the formal linkages this national organization has crafted with appropriate stakeholders around the country. Thus, the implementation actions frequently involve the **Provincial and Territorial Advisory Committee (PATAC)**, whose members represent all 13 Canadian provinces and territories.

For implementing the recommendations, the report also proposes more active participation of the **National Training Advisory Councils (NTACs)** formed by CHRC for some sub-sectors. These NTACs act as a vehicle to bring together representatives from industry, professional associations, unions and guilds, and academic institutions to address training needs. This study calls for a range of stakeholders representing all facets of each sub-sector to be brought together, and therefore revitalizing existing NTACs or forming new NTACs is considered an appropriate forum for such collaboration.

