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# Means for Overall Assessment of Cultural Life and Measuring the Involvement of the Cultural Sector in the Information Society

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# Means for Overall Assessment of Cultural Life and Measuring the Involvement of the Cultural Sector in the Information Society

A report prepared for The Finnish Ministry of Education and Culture

by

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# Introduction

This report develops a method to create an overall indicator of the state of a nation cultural life, that is, the extent to which cultural activities and materials contribute to the enrichment and improvement of inhabitants' lives.

The authors present a general outline for a Cultural Life Index that would allow rapid and easy comparison of national performance by creating a cross-sectoral index that incorporates the variety of cultural activity indicators generally available. This proposed index would invigorate the meaning and discussion of general sectoral numerical indicators by drawing them together to show their overall impact and contribution to cultural life.

This report then considers indicators that could be used to locate the position of the culture sector in the information society. To make such an assessment requires making a general overview of information society development and then considering the situation regarding cultural sectors.

The first objective can be met through a variety of indicators of development of infrastructures and technology penetration necessary to take part in the information society and to play a more advanced role. These data currently exist in datasets at the national and international levels.

The second objective can be pursued through indicators that measure the use of information and communication technologies in cultural institutions and organisations and media activities. Some of the data necessary for such an assessment are currently available but additional types of information would need to be gathered for nations to fully assess the impact of ICT on cultural sectors and the impact of the cultural sectors on information society.

This report identifies different types of indicators that can be used to determine the level of information society development and the extent to which it affects cultural industries. The indicators are useful in gaining a portrayal of the situation at a given time, which can then be assessed in light of changes to determine developmental trends. It can also be used to create comparisons and benchmarks among nations that have a variety of policy and economic uses.

# Cultural Life Index

No cross-sector index of cultural life exists today but it would be possible to create a cultural life index that allows comparison of national situations (and possibly domestic provinces) based on a wide variety of statistical data that already exists in databanks of national statistics offices, Eurostat, and UNESCO.

Such an index would combine indicators of the availability, participation, and production of cultural resources into an index that provides an easily understandable, relative measure and comparison among nations. A variety of such aggregate indices are already in use nationally and internationally, such as indices for national competitiveness<sup>1</sup> and innovation<sup>2</sup>. These are generally considered reliable and valid means of aggregating multiple indicators to produce an overall ranking.

The Cultural Life Index would weight the performance of nations or provinces in terms of availability of cultural resources (for example, number of symphonies, number of museums, TV sets, computers, etc. per 1000 population), cultural participation (for example, number of admissions to cinema houses per 1000 population, tickets sold to theatrical performances, materials borrowed from libraries, etc. per 1000 population) and production (number of feature films produced, number of web hosts, number of domestic audio recordings, etc. per 1000 population).

Indices produced using each of the indicators selected for inclusion would be averaged to produce three sub-indices (cultural availability, cultural participation, and cultural production) and then an overall Cultural Life Index produced by averaging the three sub-indices.

The three sub-indices are important because they show differences in whether certain cultural resources are even available, on the use of available resources by the public, and of the extent to which cultural resources are domestic. The final combined index would thus provide a broad comparative overview of

the state of cultural life among nations. By utilising these different indicators, policy makers and cultural workers could identify and focus upon specific activities toward which improvement can be targeted to improve the overall cultural well-being of a nation or province.

This process would draw from the wide variety of types of indicators available on cultural activities to produce an overall and more comprehensible comparison on a scale of 1 to 10. A nation score of 8.7 would thus be seen as having a higher development of cultural life than a nation with a score of 6.2.

A variety of indicators could potentially be used drawn from relevant indicators of the information society, general indicators of cultural activities and materials, and indicators of media. In the following sub-indices sections the authors suggest a variety of indicators of cultural activity and material availability, participation, and production are provided, along with indicators that are useful to determine participation of sectors in information society activities that could be used in the sub-indices. It should be noted, however, that this cultural life index would reflect on organised and formalised aspects of cultural life that can be measured and not the individualised and less formalised aspects of culture.

<sup>1</sup> The World Economic Forum produces an annual Global Competitiveness Report that uses an index to assess and compare the competitiveness of national economies. Information about the index is available from the World Economic Forum: <http://www.weforum.org/site/homepublic.nsf/Content/Global+Competitiveness+Programme>

<sup>2</sup> Innovation, for example, has been the subject of a study and index produced for the European Commission. Information on the index and its findings can be found at:

## Cultural Resources Availability Sub-Index

A variety of available indicators could be combined to provide a good comparative index of availability of cultural resources. The sub-index would be created by gathering the data for the indicators, averaging the scores on the indicators, and collapsing the score to the 10-point scale that would be used for the cultural availability sub-index.

Indicators that could be included to create the sub-index include:

- number of concert hall, festivals, and music organisations per 1000 population
- number of performances at concert hall, festivals and music organisations per 1000 population
- number of dance companies and organisations per 1000 population
- number of performance by dance companies and organisations per 1000 population
- number of theatres per 1000 population
- number of theatre companies per 1000 population
- number of performances by theatre companies per 1000 population
- number of fine arts institutions and galleries per 1000 population
- number of permanent fine arts exhibitions per 1000 population
- number of temporary fine arts exhibitions per 1000 population
- number of museums per 1000 population
- number of other cultural heritage sites per 1000 population
- number of libraries per 1000 population
- number of items in libraries' collections per 1000 population
- number of institutions of higher education per 1000 population
- number of institutions of secondary education per 1000 population
- number of institutions of primary education per 1000 population
- number of newspaper titles per 1000 population
- number of magazine titles per 1000 population
- number of titles published per 1000 population

- number of radio channels per 1000 population
- number of radio receivers per 1000 population
- number of television channels per 1000 population
- number of television receivers per 1000 population
- number of cinema screens per 1000 population
- number of cinema titles shown per 1000 population
- number of audio recordings produced per 1000 population
- number of audio recording copies produced per 1000 population
- number of personal computers per 1000 population
- number of Internet service providers per 1000 population
- number of Internet hosts per 1000 population
- number of web pages per 1000 population

## Cultural Participation Sub-Index

This sub-index focuses on the use of the cultural resources available and thus the degree to which the population participates in cultural life reflected in the indicators.

The sub-index would be created similarly to the cultural availability sub-index by gathering the data for the indicators, averaging the scores on the indicators, and collapsing the score to the 10-point scale that would be used for the cultural availability sub-index.

Indicators that could be included to create the sub-index include:

- number of admissions to performances in concert halls, festivals, and by music organisation per 1000 population
- number of admissions to performances by dance companies and organisations per 1000 population
  - number of admissions to theatrical performances per 1000 population
  - number of admissions or visitors to fine arts institutions or galleries per 1000 population
  - number of admissions or visitors to museums per 1000 population

- number of admissions or visitors to other cultural heritage sites per 1000 population
- number of registered library users per 1000 population
  - number of library items lent to users per 1000 population
  - number of students in institutions of higher education per 1000 population
  - number of students in secondary education institutions per 1000 population
  - number of students in primary education institutions per 1000 population
  - newspaper circulation per 1000 population
  - magazine circulation per 1000 population
  - number of book copies published per 1000 population
  - number of radio receivers per 1000 population
  - number of TV receivers per 1000 population
  - number of television licenses per 1000 population
  - number of cinema admissions per 1000 population
  - number of copies of audio recordings produced per 1000 population
  - number of Internet users per 1000 population

### Cultural Production Sub-Index

The cultural production sub-index measures domestic production of cultural materials.

The sub-index would be created similarly to the cultural availability sub-index by gathering the data for the indicators, averaging the scores on the indicators, and collapsing the score to the 10-point scale that would be used for the cultural availability sub-index.

Indicators that could be included to create the sub-index include:

- number of copies of newspapers published per 1000 population
- number of copies of magazines published per 1000 population
- number of copies of domestic books published per 1000 population
- number of hours of radio broadcasts per 1000 population

- number of domestically produced hours of television programme broadcasts per 1000 population
- number of number of feature films produced per 1000 population
- number of domestic audio recording produced per 1000 population
- number of copies of domestic audio recordings produced per 1000 population
- number of web hosts per 1000 population
- number of web pages per 1000 population

Some types of measures should be possible to measure domestic content of music, dance, theatre, fine arts; museums/cultural heritage sites, libraries, and education, but we have not yet located existing data. Suggested data would be things like percentage of domestic music performed by symphonies, etc. Percentage of domestic language books in libraries, etc. The researchers are open to suggestions on how to get at the same figures for all cultural institutions.

### Sub-Indices and Cultural Life Index Calculations

The scores for the sub-indices would be calculated by determining an average score across the items included (the individual scores would be summed and divided by the number of items) and then that average would be divided by 100 to yield a number of the 1 to 10 point scale.

To calculate the overall Cultural Life Index score, the scores on all items in the three sub-indices would be averaged, thus yielding a final result on the 1 to 10 point scale.

The results thus permit a rank ordering of performance and direct comparison of performance. For example, the calculations might provide results showing that country x has a cultural availability index of 3.58 and country y has 7.16. Because it is an interval scale it is possible to say that inhabitants in country y have twice as much cultural resources in per capita terms than available to inhabitants in country x.

The index is constructed in such a way so that all types of cultural resource availability carry similar weight and that it does give greater weight to any one type of cultural resource.



# General Indicators of the Information Society

General indicators of the information society focus on the potential to be part of the information as well as the actual use of basic information and communications technologies.

These indicators focus on whether the potential for broad use of information technologies and their actual use exists. These indicators relate to critical infrastructure and basic services necessary for participation in the information society and some can be used as indicators in the Cultural Life Index. Important indicators are:

## **Electrification**

- percent of country in which electricity is available
- number of hookups per 1000 population
- average consumption (kilowatt hours)
- average electricity consumption cost
- average electric expenditures per household

## **Telephony**

- percent of country in which telephony is available
- broadband as percentage of total telephone line
- number of fixed lines per 1000 population
- number of mobile lines per 1000
- average telephone call cost
- average telephony expenditures per household
- international Internet bandwidth

## **Computers and Internet**

- Personal computers per 1000 population
- Personal computers in educational institutions
- Percent of networked personal computers
- number of internet service (ISPs) providers
- number of ISPs per 1000 population
- number of hosts
- number of hosts per 1000 population
- number of web pages
- number of web pages per 1000 population

## **Internet Access and Use**

- number of internet users
- internet users per 1000 population
- number of broadband subscribers
- number of broadband subscribers per 1000 population
- internet access costs
- average internet use expenditures

## **Overall Expenditures**

- ICT expenditures as percent of gross domestic product
- ICT expenditures per capita

These data are compiled and available from national statistics offices, Eurostat, UNESCO, International Telecommunications Union, OECD, World Bank, and private statistical sources.

# Indicators for Cultural Activities and Materials

These measurements are designed to identify the impact of information and communication technologies (ICT) on cultural sector activities and institutions and the use of ICT within the sector and to provide indicators for use in the Cultural Life Index. The indicators suggest means for measuring and benchmarking the involvement of the cultural sector in the information society.

In considering the industry, the authors recognise two forms of involvement. First, activities related to cultural production. Secondly, it considers indicators related to consumption aspects of the cultural sector.

In the production case, the focus is upon the use and benefit of ICT technologies in the creation, production, distribution, and management of cultural activities and matter. In the consumption case, the indicators focus upon the use of ICT products and services in gaining access to, taking part in, and consuming cultural materials and activities.

Assessing the position of the cultural sector in the information society is complicated because a single universally accepted definition of the culture sector does not exist. For the purposes of this report, a definition has been adopted that includes music, dance, theatre, fine arts, cultural heritage, libraries, games, and culture sector education. The authors specifically excluded media (print, broadcast, recorded, online, and cinema [except those by cultural organisations and institutions]) from this portion of the list because they are covered later in the media section and inclusion here would result in some double counting of production of information society products and services.

The focus of indicators suggested here is on institutions, organisations, and central activities in to the cultural sector. Although one could gather statistics from individuals employed or otherwise active in the cultural sector, that method was deemed unrealistic.

The major uses of information and communication technologies that create the information society in the cultural sector involve internal uses to improve managerial and production functions, marketing activities designed to inform and interest the public, admission control and sales, remote accessibility to collections, exhibitions, cultural sites, and production of ICT based products and merchandise that can be acquired via ICT transactions (Figure 1). On the user side, the uses and benefits include better social service, improved information acquisition, admission transactions, access to materials away from their physical location, and the availability of ICT products derived from the material of the cultural sector.

In considering the involvement of cultural organisation, the suggested indicators focus on such uses and provide measurements of the amount of materials and activities produced, managed, and offered in forms relying upon information and communication technologies, the use of ICT by cultural organisations and institutions in marketing their activities and material, in providing accessibility to cultural material and performances, expenditures on ICT and ICT-based activities and materials, employment in ICT based activities, etc. In considering involvement from the consumption side, the indicators focus on consumption and money spent on cultural materials and activities based in ICT.

Some of the statistics suggested here are available from national statistics organisations and relevant ministries, however much of the data relating to ICT and its use is not currently collected and would need to be developed in order to make such a study.

## Cultural Organisations

## Public Users of Cultural Activities and Materials

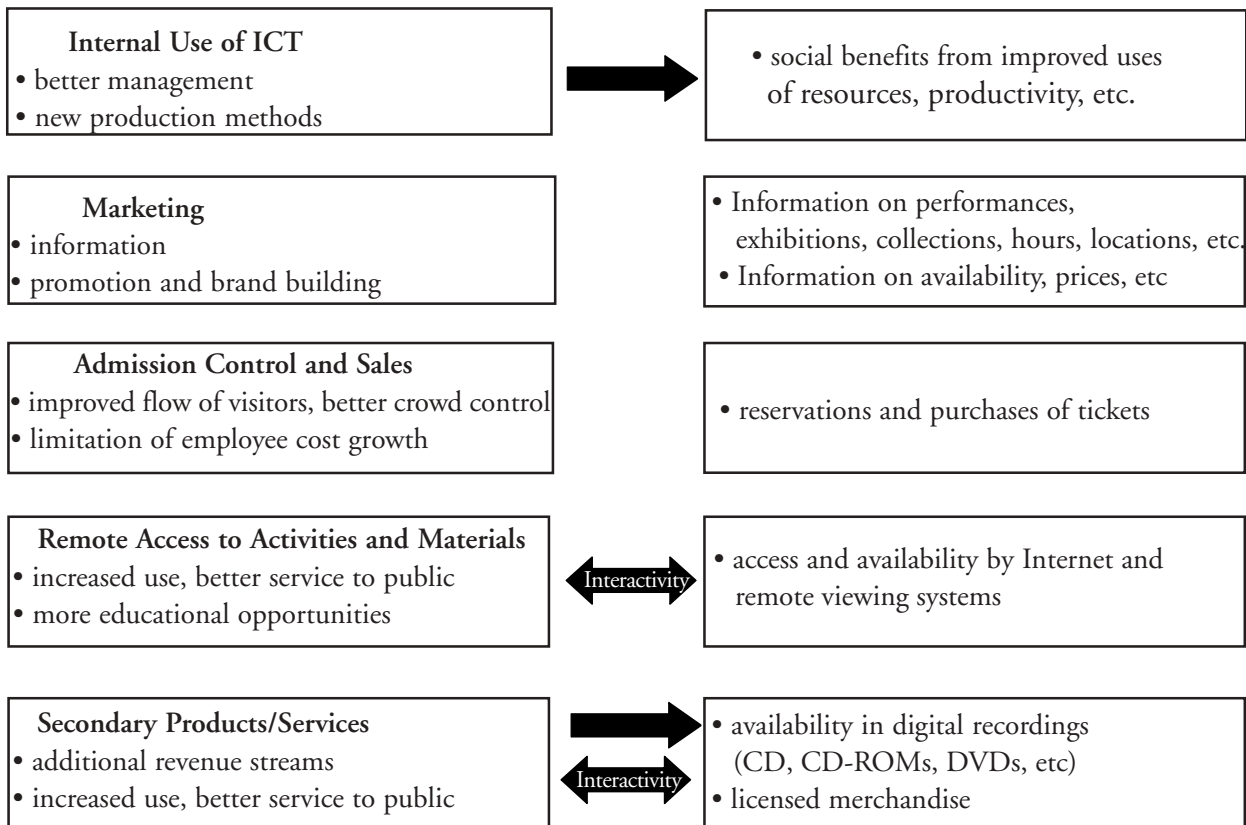


Figure 1:  
Utilisation and Benefits of ICT by Cultural Organisations and Public Users

## Music

This category covers activities of music institutions and organisations such as symphonies, operas, music festivals, concert halls, and other organised, regular providers of live performances.

Activities in the audio recording industry and sales of music through retail establishments, recording clubs, etc. are considered media and outside the scope of these indicators.

The indicators suggested for music are:

- Number of concert halls, festivals, and music organisations
  - Number of performances at concert halls, festivals, and music organisations
  - number of tickets sold
  - Total number of admissions
  - Number of concert halls, festivals, and music organisations that operate Internet sites for marketing purposes and percent of total
    - Number of CD or CD-ROM titles internally produced or commissioned by concert halls, festivals, and music organisations themselves
    - Number of concert halls, festivals, and music organisations that internally produced or commissioned CDs or CD-ROMs and percent of total halls, festivals, and music organisations
    - Number of internally produced or commissioned DVD titles by concert halls, festivals, and music organisations
    - Number of concert halls, festivals, and music organisations that internally produced or commissioned DVDs and percent of total halls, festivals, and music organisations
    - Number of other ICT titles internally produced or commissioned by concert halls, festivals, and music organisations
    - Number of concert halls, festivals, and music organisations that internally produced or commissioned other ICT materials and percent of total halls, festivals, and music organisations
    - Number of concert halls, festivals, and music organisations providing online ticket reservations or sales and percent of total concert halls, festivals, and music organisations
- Number of concert halls', festivals', and music organisations' tickets reserved online and percent of total reservations
  - Number of concert halls, festivals, and music organisations tickets purchased online and percent of total sales
  - Number of concert halls, festivals, and music organisations providing ticket reservations or sales through mobile phone systems and percent of total
    - Number of concert halls, festivals, and music organisations tickets reserved by mobile phone systems and percent of total reservations
    - Number of concert halls, festivals, and music organisations tickets purchased by mobile phone systems and percent of total sales
    - Expenditures for ICT systems and material for internal use and percent of total expenditures of expenditures music companies
    - Expenditures for producing ICT systems and materials for public use and percent of total expenditures of music companies
    - Number of persons employed who regularly work with ICT systems and materials and percent of total employees.
    - Subsidies or grants provided for producing ICT systems and materials for public use and percent of total grants provided to music companies
    - Revenues from sales of digital rights and digital rights royalties and percentage of total revenue
    - Revenue from internally produced or commissioned CD titles sold by music companies and percentage of total revenue
    - Revenue from internally produced or commissioned CD-ROMs sold by music companies and percentage of total revenue
    - Revenues from internally produced or commissioned DVD titles sold by music companies and percentage of total revenue
    - Revenue from online ticket sales and percentage of total revenue
    - Revenue from mobile phone based ticket sales and percentage of total revenue

## Dance

This category of cultural activity covers dance companies and organisations engaged in the performance of dance. Suggested indicators are:

- Number of dance companies and organisations
- Number of performances by dance companies and organisations
- Number of tickets sold
- Total number of admissions
- Number of dance companies and organisations that operate Internet sites for information, marketing purposes and percent of total
  - Number of CD or CD-ROM titles internally produced or commissioned by dance companies and organisations
  - Number of dance companies and organisations that internally produced or commissioned CDs or CD-ROMs and percent of total theatres or theatre companies
  - Number of DVD titles internally produced or commissioned by dance companies and organisations
  - Number of dance companies and organisations that internally produced or commissioned DVDs and percent of total theatres or theatre companies
  - Number of other ICT material titles internally produced or commissioned by dance companies and organisations
  - Number of dance companies and organisations that internally produced or commissioned or other ICT materials and percent of total theatres or theatre companies
  - Number of dance companies and organisations providing online ticket reservations or sales and percent of total reservations or sales
    - Number of dance companies' and organisations' tickets reserved online and percent of total reservations
    - Number of dance companies and organisations tickets purchased online and percent of total sales
    - Number of dance companies and organisations providing ticket reservations or sales through mobile phone systems and percent of total
    - Number of dance companies and organisations tickets reserved by mobile phone systems and percent

of total reservations

- Number of dance companies and organisations tickets purchased by mobile phone systems and percent of total sales
- Expenditures for ICT systems and material for internal use and percent of total expenditures of expenditures of dance companies
  - Expenditures for producing ICT systems and materials for public use and percent of total expenditures of dance companies
  - Number of persons employed who regularly work with ICT systems and materials and percent of total employees.
  - Subsidies or grants provided for producing ICT systems and materials for public use and percent of total grants provided to dance companies
  - Revenues from sales of digital rights and royalties and percentage of total revenue
  - Revenue from internally produced or commissioned CD titles sold and percentage of total revenue
  - Revenue from internally CD-ROMs sold and percentage of total revenue
  - Revenues from internally produced or commissioned DVD titles sold and percentage of total revenue
  - Revenue from online ticket sales and percentage of total revenue
  - Revenue from mobile phone based ticket sales and percentage of total revenue

## Theatre

This category covers performance theatrical halls and productions. Suggested indicators are:

- Number of theatres or theatre companies
- Number of theatrical performances
- Number of tickets sold
- Total number of admissions
- Number of theatres or theatre companies that operate Internet sites for information, marketing purposes and percent of total theatres or theatre companies
  - Number of theatres or theatre companies that internally produced or commissioned CDs or CD-

ROMs and percent of total theatres or theatre companies

- Number of theatres or theatre companies that internally produced or commissioned DVDs and percent of total theatres or theatre companies

- Number of theatres or theatre companies that internally produced or commissioned other ICT materials and percent of total theatres or theatre companies

- Expenditures for ICT systems and material for internal use and percent of total theatres or theatre companies' expenditures

- Expenditures for producing ICT systems and materials for public use and percent of total theatres or theatre companies expenditures

- Number of persons employed who regularly work with ICT systems and materials and percent of total employees.

- Subsidies or grants provided for producing ICT systems and materials for public use and percent of total grants provided to theatres or theatre companies

- Number of theatres or theatre companies providing online ticket reservations or sales and percent of total reservations or sales

- Number of theatres or theatre companies' tickets reserved online and percent of total reservations

- Number of theatres or theatre companies tickets purchased online and percent of total sales

- Number of theatres or theatre companies providing ticket reservations or sales through mobile phone systems and percent of total

- Number of theatres or theatre companies tickets reserved by mobile phone systems and percent of total reservations

- Number of theatres or theatre companies tickets purchased by mobile phone systems and percent of total sales

- Revenues from sales of digital rights and royalties and percentage of total revenue

- Revenue from internally produced or commissioned CD titles sold and percentage of total revenue

- Revenue from internally produced or commissioned CD-ROMs sold and percentage of total revenue

- Revenues from internally produced or commissioned DVD titles sold and percentage of total revenue

- Revenue from online ticket sales and percentage of total revenue

- Revenue from mobile phone based ticket sales and percentage of total revenue

## Fine Arts

This category covers a variety of institutions, galleries, and exhibitions of fine arts. The suggested indicators are:

- Number of fine arts institutions and galleries

- Number of permanent exhibitions

- Number of temporary exhibitions hosted

- Number of tickets sold

- Total number of admissions

- Number of fine arts institutions and galleries that operate Internet sites for information, marketing purposes and percent of total fine arts institutions and galleries

- Number of fine arts institutions and galleries with electronic cataloguing systems and percent of total fine arts institutions and galleries

- Number of fine arts institutions and galleries providing remote catalogue access and percent of total fine arts institutions and galleries

- Number of fine arts institutions and galleries providing multimedia and electronic guides and percent of total fine arts institutions and galleries

- Number of fine arts institutions and galleries providing access to collections through Internet sites and percent of total fine arts institutions and galleries

- Number of arts institutions and galleries that internally produced or commissioned CDs or CD-ROMs and percent of total theatres or theatre companies

- Number of arts institutions and galleries that internally produced or commissioned DVDs and percent of total theatres or theatre companies

- Number of arts institutions and galleries that internally produced or commissioned other ICT materials and percent of total theatres or theatre companies

- Number of institutions and galleries providing online ticket reservations or sales and percent of total

reservations or sales

- Number of institutions and galleries tickets reserved online and percent of total reservations
- Number of institutions and galleries tickets purchased online and percent of total sales
- Number of institutions and galleries providing ticket reservations or sales through mobile phone systems and percent of total
- Number of institutions and galleries tickets reserved by mobile phone systems and percent of total reservations
- Number of institutions and galleries tickets purchased by mobile phone systems and percent of total sales
- Expenditures for ICT systems and material for internal use and percent of total expenditures of fine arts companies
- Expenditures for producing ICT systems and materials for public use and percent of total expenditures of fine arts companies
- Number of persons employed who regularly work with ICT systems and materials and percent of total employees.
- Subsidies or grants provided for producing ICT systems and materials for public use and percent of total grants provided to fine arts companies
- Revenues from sales of digital rights and royalties and percentage of total revenue
- Revenue from internally produced or commissioned CD titles sold and percentage of total revenue
- Revenue from internally produced or commissioned CD-ROMs sold and percentage of total revenue
- Revenues from internally produced or commissioned DVD titles sold and percentage of total revenue
- Revenue from online ticket sales and percentage of total revenue
- Revenue from mobile phone based ticket sales and percentage of total revenue

## Cultural Heritage

This category covers museums and various cultural heritage sites. Suggested indicators are:

- Number of museums
- Number of other cultural heritage sites
- Number of tickets sold for admissions
- Total number of admissions
- Number of museums that operate Internet sites for information, marketing purposes and percent of total museums
- Number of museums providing access to collections through Internet sites and percent of total museums
- Number of museums providing multimedia and electronic guides
- Number of museums that produced CDs or CD-ROMs and percent of total museums
- Number of museums that produced DVDs and percent of total museums
- Number of museums that produced or other ICT materials and percent of total museums
- Expenditures for ICT systems and material for internal use and percent of total museum expenditures
- Expenditures for producing ICT systems and materials for public use and percent of total museum expenditures
- Subsidies or grants provided for producing ICT systems and materials for public use and percent of total grants provided to museums
- Number of museums providing online ticket reservations or sales and percent of total museums
- Number of museum tickets reserved online and percent of total reservations
- Number of museum tickets purchased online and percent of total sales
- Number of museums providing ticket reservations or sales through mobile phone systems and percent of total museums
- Number of museum tickets reserved by mobile phone systems and percent of total reservations
- Number of museum tickets purchased by mobile phone systems and percent of total sales
- Number of other cultural heritage sites or

institutions that operate Internet sites for information, marketing and percent of total sites or institutions

- Number of other cultural heritage sites or institutions providing multimedia and electronic guides

- Number of other cultural heritage sites or institutions that internally produced or commissioned CDs or CD-ROMs and percent of total sites or institutions

- Number of other cultural heritage sites or institutions that internally produced or commissioned DVD and percent of total sites and institutions

- Number of other cultural heritage sites or institutions that internally produced or commissioned other ICT materials and percent of total sites and institutions

- Expenditures for ICT systems and material for internal use and percent of total museum expenditures

- Expenditures for producing ICT systems and materials for public use and percent of total expenditures for cultural heritage sites and institutions

- Number of persons employed who regularly work with ICT systems and materials and percent of total employees.

- Subsidies or grants provided for producing ICT systems and materials for public use and percent of total grants provided to cultural heritage sites and institutions

- Number of other cultural heritage sites or institutions providing online ticket reservations or sales and percent of total sites or institutions

- Number of tickets reserved online and percent of total reservations

- Number of tickets purchased online and percent of total reservations

- Number of museums providing ticket reservations or sales through mobile phone systems and percent of total museums

- Number of museum tickets reserved by mobile phone systems and percent of total reservations

- Number of museum tickets purchased by mobile phone systems and percent of total sales

- Revenues from sales of digital rights and percentage of total revenue

- Revenue from internally produced or commissioned CD titles sold and percentage of total revenue

- Revenue from internally produced or commissioned CD-ROMs sold and percentage of total revenue

- Revenues from internally produced or commissioned DVD titles sold and percentage of total revenue

- Revenue from online ticket sales and percentage of total revenue

- Revenue from mobile phone based ticket sales and percentage of total revenue

## Libraries

This section covers libraries of all types. Suggested indicators are:

- Number of libraries
- Number of items in collections
- Number of users
- Number of items lent
- Number of libraries with electronic cataloguing systems

- Number of libraries providing remote catalogue access

- Number of libraries providing material reservations through ICT systems

- Number of libraries providing remote lending services based on ICT

- Number of libraries providing remote access to collection materials and services (databases, video, audio)

- Number of computers available for public use to use materials in collections

- Number of computers available for public use for Internet

- Number of CDs in collections and percent of total items

- Number of CD-ROMs in collections and percent of total items

- Number of DVDs in collections and percent of total items

- Number of software items in collections and percent of total items



- Number of other ICT materials in collections and percent of total items
- Total lending of CDs and percent of total items lent
- Total lending of CD-ROMs and percent of total items lent
- Total lending of DVDs and percent of total items lent
- Total lending of software products and percent of total items lent
- Total lending of other ICT materials and percent of total items lent
- Expenditures for ICT systems and material for internal use and percent of total expenditures of libraries
- Expenditures for producing ICT systems and materials for public use and percent of total expenditures of libraries
- Number of persons employed who regularly work with ICT systems and materials and percent of total employees.
- Subsidies or grants provided for producing ICT systems and materials for public use and percent of total grants provided to libraries

## Education

The category focuses on education activities related to the cultural sectors offered through university, polytechnic, vocational, adult, and other training institutions and firms. Suggested indicators are:

- Number of institutions of higher education
- Number of institutions of secondary education
- Number of institutions of primary education
- Number of students enrolled in higher education institutions
- Number of students enrolled in secondary education institutions
- Number of students enrolled in primary education institutions
- Number of institutions providing Internet courses and percent of the total institutions and course
- Number of students participating in Internet courses and percent of the total
- Number of institutions providing courses through remote video systems and percent of the total institutions and courses
- Number of students participating in remote video system courses and percent of the total
- Number of institutions providing courses via television or radio and percent of total institutions and courses
- Number of students participating in TV/Radio courses and percent of the total
- Number of CD or CD-ROM titles produced by educational institutions
- Number of institutions that produced CDs or CD-ROMs and percent of total
- Number of DVD titles produced by educational institutions
- Number of educational institutions that produced DVDs and percent of total
- Number of institutions that produced or other ICT materials and percent of total
- Expenditures for ICT systems and material for internal use and percent of total expenditures of educational institutions
- Expenditures for producing ICT systems and materials for public use and percent of total expenditures of educational institutions
- Subsidies or grants provided for producing ICT systems and materials for public use and percent of total grants provided to educational institutions
- Revenues from sales of digital rights and royalties and percentage of total revenue
- Revenue from internally produced or commissioned CD titles sold and percentage of total revenue
- Revenue from internally produced or commissioned CD-ROMs sold and percentage of total revenue
- Revenues from internally produced or commissioned DVD titles sold and percentage of total revenue

# Indicators of Media Products

These indicators provide measurements of the availability of media products and the extent to which media are participating in ICT activities. They are also indicators that can be used in the Cultural Life Index. Suggested indicators are:

## Newspapers

- number of titles
- number of newspaper titles per 1000 population
- newspapers circulation per 1000 population
- number of online editions or other Internet sites
- revenue from sales

## Magazines

- number of titles
- number of magazine titles per 1000 population
- magazine circulation per 1000 population
- number of online editions
- revenue from sales
- number of magazines with Internet sites

## Books

- number of titles published
- number of titles published per 1000 population
- number of copies published per 1000 population
- number of e-book titles produced
- number of recorded book titles produced
- revenue from sales
- number of internet retailers
- number of internet second-hand retailers
- number of internet book clubs
- number of book publishers with Internet sites

## Radio

- number of radio channels
- number of radio channels per 1000 population
- number of radio receivers per 1000 population
- number of Internet radio stations
- number of radio stations with Internet sites

## Television

- number of television channels
- number of digital television channels
- number of return channels (interactive television)
- number of television channels per 1000 population
- number of television channels per 1000 population
- number of Internet television providers
- number of television channels with Internet sites
- revenues from interactive television

## Cinema and Video

- number of cinema halls
- number of cinema halls per 1000 population
- number of screens
- number of screens per 1000 population
- number of seats
- number of seats per 1000 population
- number of feature films produced
- number of number of feature films produced per 1000 population
- number of admissions
- number of admissions per 1000 population
- average admission cost
- revenue from admission
- revenue from sales and rental of video

## Audio Recordings

- number of audio recordings produced
- number of audio recordings produced per 1000 population
- number of copies produced
- number of copies produced per 1000 population
- number of retailers
- number of Internet retailers and commercial download services
- revenue from sales
- revenue from online sales/rental

## Discussion

The indicators suggested here can be used to provide a good overview of the changing status of cultural life and the involvement of cultural sectors in information society over time or among nations.

In measuring the involvement of the cultural sector in the information economy it will be necessary to specify a temporal point for the data so questions relating to production of CD-ROMs or DVDs, for example, will indicate production during a specific year or set of years rather than reporting whether they have ever been produced by a cultural institution.

Although not included in the basic indicators suggested, it might be possible to collect indicators of the extent to which national geography affects information society participation by the cultural sector. One might collect data that allows comparisons between institutions or activities in the capital and those outside the capital, or in those in the largest cities and those in the smallest cities.

Further refinements might focus on separating the largest museums, sites, symphonies, dance companies, universities, etc. from smaller ones to determine differences.

If cross-national benchmarking is established, it will be necessary to adjust data to per capita, per gross domestic product (for financial figures), per number of institutions in a category, and-perhaps--per square kilometre figures to obtain more reasonable comparability.

Because many of the indicators are similar, it also permits cross-sectoral benchmarking on the use of ICT in the cultural sector.



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