

# ARTS AND CULTURE DIGITAL ROADMAP



## 1

# WHY GOING DIGITAL IS IMPORTANT

**Digitalisation is a key enabler for the arts and culture sector today and for the future.**

**Digital transformation** is not about replacing the existing experience, but enhancing the arts ecosystem. Digital technology can help enhance the experiences of audiences and visitors by making a wide range of innovative works available, and increase the productivity and sustainability of arts and culture organisations.

**Digital solutions** can help you and your organisation better serve and connect with your audiences and visitors. One of the most useful applications of digital technology is for automating and streamlining administrative and back-room processes, such as accounting, booking of tickets and email marketing. The right digital solutions can seamlessly complement your work in any part of the sector.

**Global trends across technology, the economy and society will impact the arts and culture sector.** Digital transformation will position it to respond and take advantage of these trends.



**Digital disruption** has affected almost all industries. In the arts and culture sector, it can bring value to different stages of the creative process, ranging from creation and presentation of artworks (e.g. Augmented Reality), to marketing and corporate functions (e.g. enterprise resource planning systems).



**The COVID-19 Pandemic** has brought challenges for the arts and culture sector, with safe distancing measures affecting how different art forms are appreciated. The adoption of technology (e.g. virtual performances and classes) has, however, kept the sector sustainable during this challenging period.



**Consumption patterns have shifted.** People are increasingly spending their leisure time on screen-based devices. Digital technology can enhance the experience of consumers and make appreciation of the arts and culture more accessible for audiences.



**Populations in industrialised countries, including Singapore, are ageing.** Digital technology can make the arts and culture more accessible to the elderly, who may not find it convenient to travel to a physical venue to appreciate the arts and culture.



**Internationalisation of the arts and culture** is enhanced by digital technology, allowing artists to reach overseas markets without travelling.

## A ONE-STOP ARTS AND CULTURE DIGITAL ROADMAP

**The Arts and Culture Digital Roadmap is designed to support you and your organisation in the adoption of digital solutions** to improve operational productivity and deliver greater impact through your work. It was developed through a survey on the digital capabilities of the sector, and over 20 deep-dive interviews with arts and culture organisations and practitioners.

The Roadmap consolidates validated digital solutions that work across the sector, and provides information on funding resources to support your digital transformation journey.

# ARTS AND CULTURE DIGITAL CHECKLIST

Are you keen to find out how **digital-ready** you or your organisation is and the steps to take to further your digital efforts? Take the self-test below to find out.

## GOVERNANCE AND LEADERSHIP



- ☐ I / We have a **digital strategy and plan**.
- ☐ I / We **understand the digital strategy and plan**.
- ☐ I / We have a **digital governance framework**.

## DIGITAL CULTURE



- ☐ **Policies and processes** are aligned with digitalisation.
- ☐ **Digital roles and skillsets** are present in job descriptions.
- ☐ I / We use **digital tools** at work.

## CAPACITY AND CAPABILITY



- ☐ I / We have a **digitalisation budget** and are **aware of the Government grants** that we are eligible for.
- ☐ I / We have **sufficient manpower and technical capabilities** to implement our digital strategy.
- ☐ I / We have access to **training and development opportunities** to boost our digital capabilities.

## DIGITAL TECHNOLOGY



- ☐ I / We are able to **identify digital solutions and vendors** to help achieve our digitalisation goals.
- ☐ I / We have in place **procurement processes** for **digital solutions** and **vendor management**.
- ☐ I / We actively **leverage digital technology** (including experimentation and innovation) to enhance the experiences of audiences/museum visitors/consumers.

## DIGITAL ECOSYSTEM



- ☐ I / We are able to **tap into a community of practice** on technology adoption.
- ☐ I / We **build and manage relationships digitally** with audiences, consumers, customers, suppliers and employees.



10 TO 14



You are **digitally ready**. Consider sharing your experiences with other arts and culture practitioners and organisations.



05 TO 09



You have **some digital capabilities** and are working towards enhancements.




0 TO 04



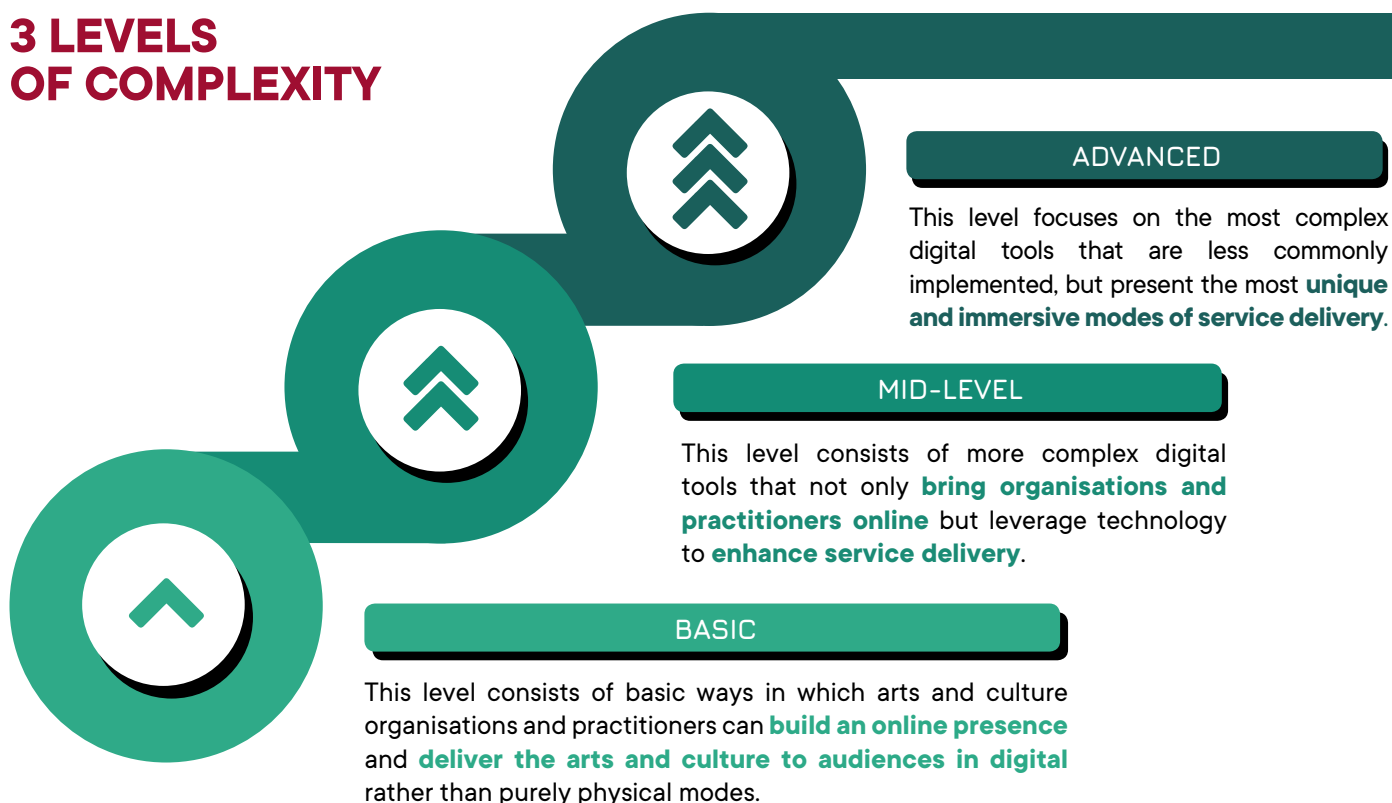
You are **less digitally ready**. Consider reviewing your operating model to benefit from digitalisation.

## 2

## HOW TO GO DIGITAL — DIGITAL SOLUTIONS

We have curated a list of **digital solutions** relevant to you and your organisation through your digitalisation journey. The digital solutions correspond to **3 levels of complexity**, as well as **6 different dimensions of both the creative process and other supporting functions**. More details are at [www.mccy.gov.sg/sector/arts-and-heritage](http://www.mccy.gov.sg/sector/arts-and-heritage). 

### 3 LEVELS OF COMPLEXITY



# DIGITAL SOLUTIONS FOR THE 6 DIFFERENT DIMENSIONS

## CREATION



These solutions comprise digital technology that helps arts and culture organisations and practitioners **create and develop art, music, museum exhibitions and other works.**

- ⌄ Virtual Reality (VR) Exhibition
- ⌄ Augmented Reality (AR) Exhibition
- ⌄ Artificial Intelligence (AI)-Aided Art
- ⌄ Digital Art
- ⌄ Accessibility Tools
- ⌄ Wireframe Tools
- ⌄ User Interface (UI) Design Tools
- ⌄ User Experience (UX) Design Tools
- ⌄ Scheduling Tools
- ⌄ Web Publishing Platforms for Museums

## PRESENTATION



These digital tools aid in the **presentation of arts and heritage creations** to audiences, museum visitors, and other consumers.

- ⌄ Archival Systems
- ⌄ Online Festivals
- ⌄ Virtual Museum Tours
- ⌄ Virtual Jamming Tools
- ⌄ Mobile Applications
- ⌄ Online Streaming
- ⌄ Webinars and Virtual Workshops

## MARKETING



This category comprises digital technology for **marketing and promoting arts and heritage offers** to audiences, museum visitors, and other consumers.

- ⌄ Enhanced Ticketing Solutions
- ⌄ Marketing Analytics Software
- ⌄ Digital Marketing
- ⌄ Online Art Marketplaces
- ⌄ Virtual Viewing Rooms
- ⌄ Unlocking New Revenue Streams
- ⌄ Dynamic Pricing Solutions
- ⌄ Website
- ⌄ Email Marketing
- ⌄ Social Media Marketing

## CORPORATE FUNCTIONS



This stage comprises **back-room functions.** Arts and culture organisations and practitioners can streamline operations with digital solutions to raise productivity.

- ⌄ Enterprise Resource Planning (ERP) System
- ⌄ Human Resource Management System (HRMS)/ Workforce Management System (WMS)
- ⌄ Contract Management Software
- ⌄ Project Management Software
- ⌄ Accounting Management System
- ⌄ Subscription Services

## STAKEHOLDER MANAGEMENT



This stage covers the **inbound resources** received by arts and culture organisations and practitioners. Arts and culture organisations and practitioners can **enhance their engagements and improve relationships with stakeholders** through digitalisation.

- ⌄ Advanced Stakeholder Management Software
- ⌄ Donor Management System
- ⌄ Volunteer Management System (VMS)
- ⌄ Basic Stakeholder Management Software

## DATA ANALYTICS



These solutions enable arts and culture organisations and practitioners to **analyse data on audiences, website traffic, museum visitors, and consumer preferences.** Data analytics helps generate insights to better engage consumers and reach out to new audiences.

- ⌄ Advanced Analytics Software
- ⌄ Mid-Level Data Analytics Software
- ⌄ Website Visitor Analytics





# HOW CAN I BENEFIT FROM DIGITALISATION?



## ARTS EDUCATOR

With **webinars** and **virtual workshops** and **online streaming**, there are numerous ways to deliver content to students without travelling.



## TECHNICAL PRODUCER

To streamline your rehearsal scheduling process, consider using a **rehearsal scheduling tool**.



## ARTIST

### VISUAL ARTIST

As a visual artist, there is a range of digital tools that can support your creative process and open new possibilities for artmaking, such as:

- **Digital art**
- **AR exhibition**



### PERFORMING ARTIST

Deliver performing arts content (e.g. music, dance) to and interact with international audiences with

- **Online streaming**
- **Social media marketing**



## GALLERIST

Several tools are available to make your gallery's artworks accessible to a pool of international visitors and customers, including:

- **Online art marketplaces**
- **Virtual viewing room**
- **Webinars and virtual workshops**



## MUSEUM CURATOR/ADMINISTRATOR

You may wish to digitally catalogue artefacts, create virtual exhibitions or transform the visitor experience through innovative technology. You can consider:

- **Web publishing platforms for museums**
- **Webinars and virtual workshops**
- **Virtual museum tours**



## ARTS AND CULTURE ORGANISATION

One place to start is building an online presence, through tools like

- **Mobile applications**
- **Website visitor analytics**

To help designers along the creative process, try using the UI and UX software:

- **Wireframe tools**
- **UI design tools**
- **UX design tools**

Manage volunteers and donors using

- **Basic Stakeholder Management Software**
- **Donor Management System**
- **VMS**

Leverage social media and digital marketing, and interact with a base of international visitors and customers by streaming a series of videos about your activities to create **Twitter engagement campaigns** to drive conversations about your work.

Optimise marketing efforts through:

- **Solutions to unlock new revenue streams** with the ability to track subscriber growth using analytics, and new avenues for monetisation include subscriptions and advertising.
- **Dynamic pricing solutions** which automate and optimise pricing with category/brand performance analytics.
- **Enhanced ticketing solutions** to enable easy set-up of events using templates and inventory management, and to allow tracking of sales with analytics.
- **Marketing analytics solutions** to enable revenue attribution reporting to track return on investment (ROI), integration with other tools e.g. customer relationship management (CRM) software to provide lead intelligence to sales team, management of ads for social media platforms, and track conversion of ads to customers.

## 3

# HIGHWAYS FOR DIGITAL SERVICE DELIVERY AND DIGITAL INNOVATION

You and your organisation can tap on “highways” the Government has developed for digital service delivery and digital innovation in our cultural landscape. These shared platforms enable the sector to employ digital solutions without having to build the infrastructure yourself.

The **Digital Service Delivery** “highway” refers to the **transmission of digital content and data across different devices and platforms**. It enables arts and heritage offerings to be integrated with a range of entertainment and lifestyle options for a holistic and diverse audience experience.



## THE A LIST

A **one-stop arts and culture digital portal** that features event listings, feature stories, in-depth interviews and bite-sized content.

You can contact the A List at this [link](#) to request that your content be featured.

# ROOTS

## ROOTS.GOV.SG

[Roots.gov.sg](#) is a **one-stop platform** for members of the public to **discover Singapore's culture and history** through the national collection of objects, images, stories and more.

You can contact Roots.gov.sg about collaborative ideas at this [link](#).



## ESPLANADE OFFSTAGE

[Esplanade Offstage](#) offers **behind-the-scenes, educational and streamed content** on the performing arts.

You can contact Esplanade Offstage at this [link](#) with your story idea or partnership proposal.



## SISTIC

A platform for audiences to **stream productions** on internet enabled devices.

You can contact SISTIC at this [link](#) for corporate enquiries.

# Cultural Concierge

## CULTURAL CONCIERGE (*Work-in-progress*)

A **one-stop platform** that will enable efficient **discovery of events by members of the public**, through the aggregation of local arts and culture events, as well as collaborative features and recommendation capabilities.

- It will provide **arts and culture sector stakeholders** with **data analytics** and **data mining** capabilities that allow a deeper understanding of Singaporeans' consumption of the arts.
- The platform will have an application programming interface (API) framework that arts and culture organisations and practitioners can **integrate with to publish content** to and from Cultural Concierge.

The **Culture Sector Innovation Labs** provides opportunities for you and your organisation to **collaborate with technology companies** in innovation labs to **experiment and develop potentially game-changing ideas and solutions** for the arts and culture sector.



### DIGIMUSE

Digimuse, an initiative by the National Heritage Board, aims to engage the wider **technology sector** to crowdsource ideas to **enhance museum experiences** and **build a vibrant culture sector**.

- Invites **artists, technologists and culture professionals** to co-create projects, and provide consolidated interventions that showcase the integration of culture and technology in our museums.

Past projects from Digimuse can be viewed at this [link](#).

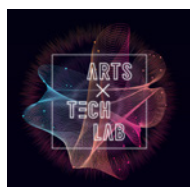


### Y-LAB

Y-Lab is a product innovation lab in National Gallery Singapore. It provides **organisations and entrepreneurs** a platform to launch or testbed their **Art x Tech product innovations**.

- Seeks to be an innovation hub for **start-ups, patrons, museum professionals, investors, culture sector talents and visitors** to co-create the future of cultural production and consumption.

Arts and culture organisations and practitioners can submit their projects to Y-Lab at this [link](#).



### ARTS X TECH LAB

Arts x Tech Lab is National Art Council's inaugural innovation lab that will **foster collaboration between the arts and technology sectors**.

- Aims to empower **creatives, artists and technologists** to engage in innovative experiments and collaborations.

For more information, contact National Art Council at this [link](#).



### SAM EXPERIMENTAL GALLERIES

The upcoming SAM Experimental Galleries will be a series of **pop-up exhibition spaces** that incorporate a variety of technologies for:

- Concept reviews, presentations and feedback.
- Feasibility and proof-of-concept studies of digital artwork, installations and creative innovations.

For more information, contact Singapore Art Museum at [enquiries@singaporeartmuseum.sg](mailto:enquiries@singaporeartmuseum.sg)





## 4

## GET FUNDING SUPPORT

- Using the table below, first **identify your profile** as an individual, charity/Institution of a Public Character (IPC), other non-profit organisation or business.\*
- In the column corresponding to your profile, you can **consider digitalisation funding schemes** that support adoption of digital solutions, training and digital presentation, as well as other resources that support digitalisation.

	INDIVIDUALS	CHARITIES/IPC	OTHER NON-PROFIT ORGANISATIONS	BUSINESSES
FUNDING SUPPORT FOR ADOPTION OF DIGITAL SOLUTIONS				
• Charities Capability Fund (CCF)		✓		
• Productivity Solutions Grant (PSG)				✓
• Enterprise Development Grant (EDG)				✓
• Tech-and-GO!		✓		
• Cultural Matching Fund (CMF)		✓		
FUNDING SUPPORT FOR DIGITAL CAPABILITY DEVELOPMENT				
• Charities Capability Fund (CCF)		✓		
• Capability Development Grant	✓	✓	✓	✓
• Cultural Matching Fund (CMF)		✓		
FUNDING SUPPORT FOR DIGITAL PRESENTATION				
• Presentation and Participation Grant	✓	✓	✓	✓
• Production Grant	✓	✓	✓	✓
• Cultural Matching Fund (CMF)		✓		
OTHER RESOURCES				
• Our Singapore Fund for Digital Readiness	✓			✓
• SMEs Go Digital				✓
• SkillsFuture Credit-Eligible Courses	✓			
• Growing with Resilience through InTangibles (GRIT)	✓	✓	✓	✓
• MuseumNext	✓	✓	✓	✓
• Yours Virtually	✓	✓	✓	✓

An **overview** of the schemes and links to their respective webpages for further information are compiled in the **Funding Support pull-out**.

\*"Individuals" refers to Singapore Citizens or Permanent Residents; "Charities/IPC" refers to charities that are registered under the Charities Act; "Other Non-Profit Organisations" includes organisations registered with the Registry of Societies, and public Companies Limited by Guarantee; while "Businesses" includes companies, partnerships, and sole proprietorships. The eligibility criteria for each scheme may vary.

## 5

## OTHER ISSUES TO CONSIDER WHEN GOING DIGITAL



**Building a digital culture** requires stakeholders at all levels of the organisation to support the goals of digital transformation. This may involve setting out a vision for how technology and innovation can add value to you and your organisation's artistic production and implementing a digital governance framework.



**Cybersecurity** refers to the safeguarding of internet technology, including data, software and hardware, from damage and theft. This is important especially if you and your organisation have the personal details of patrons, volunteers or other stakeholders.



**Personal Data Protection Act (PDPA)** governs the collection, use, disclosure and care of personal data. Since digital transformation for the arts and culture sector may involve the collection of customer data (e.g. for email marketing), it is important for you and your organisation to be familiar with the proper procedures for managing personal data. For detailed information on the PDPA and guidelines for handling personal data, visit the Personal Data Protection Commission's [website](#).



**Intellectual Property Management** becomes especially important when content is made digital, placed online and becomes accessible to a global audience. It is vital for you and your organisation to be aware of how to protect your intellectual property (IP) against piracy. IP management also includes the monetisation of IP: when releasing content online, you and your organisation should be knowledgeable about the avenues for earning income from those works. For resources on IP management, visit the websites of [IPOS International](#) and [Growing with Resilience through InTangibles \(GRIT\)](#).



**Knowledge of contracts.** Digital transformation involves engaging IT vendors and contractors for various reasons, including technology implementation, recording music, and the loan of hardware. Hence, you and your organisation need to be able to evaluate and understand contracts, or risk facing unfavourable contractual terms.



We thank everyone who has contributed to the development of the Arts and Culture Digital Roadmap, including those who participated in our earlier survey and interviews. We look forward to your continued support and partnership as we continue to refine the Roadmap, and promote digital adoption across our arts and culture ecosystem.

Visit [www.mccy.gov.sg/sector/arts-and-heritage](http://www.mccy.gov.sg/sector/arts-and-heritage) for more details on the Digital Roadmap and digital adoption. Other useful websites include [www.nac.gov.sg](http://www.nac.gov.sg) and [www.nhb.gov.sg](http://www.nhb.gov.sg).