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The Tate's Digital Transformation

John Stack was the visionary Head of Digital Transformation at the Tate, a collection of four major art galleries in the UK, including Tate Modern, the most visited gallery devoted to modern and contemporary art in the world. Tate Modern had just completed a decade of expansion, which included the 2000 opening of a new building at the Bankside Power Station to house its burgeoning collection, and a 2012 expansion into The Tanks, the abandoned oil tanks of the power station whose vast concrete cylinders were transformed into spaces dedicated to performance art and large installations.

Now, the Tate was shifting its emphasis to its digital, rather than physical, footprint. Stack was the architect of the Tate's "fifth gallery," its online presence. Stack had guided the Tate through two digital-strategy planning processes, which culminated in the development of Ten Principles for Tate Online (see **Exhibit 1**). His team had experienced much success in developing the Tate's fifth gallery into a virtual place filled with immersive and engaging content, activities, experiences, and communities.

Stack was working to execute a new digital strategy, one that included digital as a dimension of everything the Tate did, both physically and virtually. This effort was raising important questions about organizational structure, marketing strategy, product and service design, and return on investment. What would it take to be a truly digital organization where digital was the norm?

The History of the Tate

Henry Tate was a British industrialist and sugar merchant whose fortune was made when he purchased the patent for sugar cubes. He was a generous philanthropist and humanitarian. After accruing a collection of British artworks, he attempted to donate them to Britain's National Gallery, but, due to a lack of space, it declined to take them. So, Tate funded a new establishment called the National Gallery of British Art, with a donation of £80,000 and 65 paintings. By 1897, a location in central London was renovated for their display, at the site of the old Millbank Penitentiary.

The new museum had a different feel than the National Gallery, and attracted people who did not typically frequent museums. "Ever since the morning in August 1897 when Tate first opened, it has been an art gallery that the public has claimed as its own. The majority of curious visitors who streamed into the new Gallery were working men and women from the immediate neighborhood, and groups of schoolchildren from local schools, rather than the usual well-heeled museum visitor," proclaimed its website.¹ Colloquially known as the Tate Gallery, the organization adopted this more casual nickname in 1932, and divested from the National Gallery in 1955 to become an independent entity.

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When the collection outgrew the physical space available, modern and contemporary artworks were moved to the Bankside Power Station to form Tate Modern in 2000. The turbine hall and boiler house were transformed into a dramatic entrance hall and gallery spaces. The building's utilitarian design was oddly beautiful, and many viewed it as an industrial cathedral, its prominent central chimney forming a spire pointing toward the heavens. The Tate Gallery changed its name once again to Tate Britain to better reflect its renewed emphasis on historical and contemporary British art from 1500 to the present.

Under the directorship of Sir Nicholas Serota, the Tate had grown into a network of four galleries—Tate Britain, Tate Modern, Tate St. Ives, and Tate Liverpool—that collectively housed 70,000 artworks. Tate Liverpool served the public of Northwest England, while Tate St. Ives was located in a vibrant artist colony on the Cornish coast of England, where artists, including abstract expressionist Mark Rothko, flocked to the sea to take advantage of the beautiful light. Despite all of the organizational and physical changes throughout the years, the Tate stayed true to its founding mission: “to promote the public's enjoyment and understanding of British art, and of twentieth-century and contemporary art.”² Its 850 employees were proud to be the stewards of an esteemed collection.

By 2013, nearly 8 million people visited the Tate galleries each year. Tate Modern was the biggest draw, with 5.5 million visitors in 2012, and 40 million visitors since its opening in 2000. The Tate's 105,000 members represented the largest arts membership group in Europe and were retained at an 86% annual renewal rate. The excitement surrounding the opening of Tate Modern had helped to grow the membership fourfold. Going forward, increasing the age and ethnic diversity of visitors was a key objective. The Tate, like many art museums, catered to a primarily white, middle- and upper-class, highly educated, older audience. Only one quarter of visitors was under 25, but the fastest-growing membership group was the Young Patrons, currently numbering 500. In addition, 650,000 of the visitors to the museums were black, Asian, or from other minority ethnic backgrounds.

The Tate received a significant portion of its annual funding from the British Department of Culture, Media & Sport. For 2012–2013, government aid accounted for £34.9 million of the Tate's £157.8 million income. However, government funding for the arts had “failed to keep pace with inflation,” according to Tate board chair Lord Browne. This was putting pressure on the Tate's business model, he claimed. “Our ability to rely on public funds is only going to decrease which means that the link between our grant and the public services we provide will need to be redefined.”³ Despite these funding concerns, the Tate had its most successful year in history in 2012–2013, with an increase of 700,000 visitors versus the year before. A popular Damien Hirst exhibition attracted 463,000 visitors and set a record for the most popular solo artist exhibition in the Tate's history.

Tate Online: The Fifth Gallery

The Tate's online presence was launched in 1998 with its first website. Like most arts websites, the early site largely served as an online brochure for the galleries, featuring photographs and text about the works in the Tate collection, highlights of upcoming exhibitions and calendar details, and information for visitors about directions, parking, and amenities. Over the years, the Tate continued to add more extensive and detailed content to its website, offering visitors multimedia experiences. Live events were digitally captured and webcasted. Curators participated in behind-the-scenes interviews with artists and collectors to introduce new exhibitions. The Tate constructed a searchable and comprehensive online database of all of the objects in its collection. An effort to digitize images of each of the objects was initiated; as of 2014, 70,000 objects, including paintings, sculptures, and works on paper, were displayed on the website. This opened the collection to a broad and diverse audience.

By the mid-2000s, the digital landscape was changing rapidly. A dizzying array of new technologies was emerging and forming the basis for a new age, dubbed Web 2.0. The age of Web 1.0 was dominated by organizations that utilized the Internet as an alternative distribution outlet for content, a place to publish static content for consumers to read passively. In contrast, Web 2.0 was dominated by interactive, participatory, and collaborative behaviors that included ordinary people as co-creators and disseminators of content. Rather than the top-down, one-way communications model that characterized Web 1.0, Web 2.0 utilized a two-way communications model in which ordinary people contributed content and shared it with others. People were empowered to create personalized experiences on the web and share them with others; hence, content was democratized and experiences online became social. The rise of social media applications Facebook, Twitter, YouTube, and Pinterest made it easy for consumers to post and share content with their social networks and the world.

Stack tackled the task of upgrading the Tate's website to incorporate the spirit and technologies of the changing times. He outlined his vision to move the Tate's fifth gallery from Web 1.0 to Web 2.0:

Tate Online is widely recognized as among the best museum websites in the world. This reputation is largely built upon the extensive and deep content that has been produced and published online over the past eight to ten years. However, we should no longer view the website solely as a channel for publishing Tate content; we should see it as an interactive platform for engaging with audiences...

Much of Tate Online is a relatively flat, even monolithic and impervious website. It is thus clear that a complete overhaul of the website is required for Tate to realize its ambitions for a website that can deliver the Tate 2015 vision, refreshed brand values, the new audience strategy and the emerging learning strategy. At the heart of this overhaul are Tate's online audiences and a rethinking of how we engage with them...

Tate's website will be user-centered. Much of the website echoes the organization's structure to the point that the website sections are named after the departments that initiated them. This structure must be unraveled and reconstructed using art, artists and user needs as the guiding architectural framework, whilst keeping Tate's authority, research and scholarship at the centre.⁴

One of Stack's challenges was to find a way to allow multiple voices to contribute to the conversation, diverse voices that emerged from and addressed different segments of the Tate's many stakeholders. Social media technologies were making these kinds of conversations easier, and the Tate allowed outside voices to contribute through user comments, discussion threads, online communities, and crowdsourced activities. Proclaimed Stack:

Tate Online will be ideas-led and diverse through a proliferation of opinions, including multiple voices on the same subject, exchanging views; inclusive through content developed for audiences ranging from children to academics... stimulating two-way conversation and dialogue through blogs, online communities and forums to which users can contribute.⁵

One of the digital opportunities Stack capitalized on was the ability to customize how constituents experienced the collection. In the physical galleries, all visitors experienced the artwork in the same way: each gallery was carefully designed by a curator to tell a story, with the physical flow and labels guiding the journey. Stack built functionality to allow visitors to personalize their experiences to address their diverse perspectives and desires. He explained:

Users have different levels of knowledge and different needs. "Perspective" functionality enable[s] the same art work to be viewed in different ways. For example, one perspective

highlight[s] scholarly materials, while another [is] image-led . . . Users [are] able to select and customize their perspective, which persist[s] while they explore the online collection.⁶

The new website was launched in 2012, with a clean design and simplified structure. It transformed Tate's online perspective from that of a publisher to that of a facilitator, educator, and engager. Stack's team redesigned the text-heavy website to be user-friendly and user-centric. The new online experience placed the needs and interests of users in the foreground, while internal organizational structures and processes were kept hidden. It was less focused on happenings in the physical galleries, and organized around the online collection and the vast array of digital resources the Tate had created.

In its first year, the new website attracted 13.7 million unique visits, and averaged 6 million page views per month. A mobile-optimized version launched shortly thereafter, allowing people to access the Tate from wherever they found themselves. Digital consultant Ben Davis was enthusiastic:

Tate.org.uk is showing everybody else what a website means in the context of museums, art, communities of students and enthusiasts; simply in the context of "bringing everything and everyone together", allowing users to generate content, as well as comment on collections, and even repurpose content...

The fairly shocking point stands that once I engaged with the website, I quickly found I spend far more time on the site than I do in the galleries themselves. Perhaps some of the bourgeois will argue that's not a great thing, but I'd say it's unique (for now), timely, accessible, and a joy.⁷

Developing Digital Assets

The amount of digital content produced by the Tate was staggering. Over 600 hours of archived webcast events were featured on the website as a complement to the online collection database, giving digital visitors the opportunity to browse or search the collection and experience some of the exciting things happening in the galleries. But the Tate's fifth gallery offered so much more.

Blogs, Podcasts, Digital Events, and Exhibitions

Stack actively encouraged curators, conservation staff, archivists, and others to blog about their scholarly activities, and many had begun to do so. He remarked:

Curators now routinely blog about their exhibitions, and staff involved in research and learning projects are also beginning to blog more frequently. Looking ahead, blogging will be considered part of the working practice of most departments. Staff across the organisation will become communicators and the museum will have many voices—a shift that will need to be managed and will require a relaxing of controls surrounding who speaks from Tate.⁸

By 2013, the Tate's website included over 750 blog posts, an average of 200 per year. Blog posts were timely and connected to events happening in the galleries and in the greater culture. Posts highlighted current exhibitions and artists such as *An A to Z of Paul Klee* and artworks of the week, engaged visitors with interactive quizzes such as "How Bauhaus Are You?", offered suggestions on ways to use art to beat the January blues, provided self-guided tour routes for Valentine's Day, and leveraged excitement about the television series *Girls* to highlight the role of women in modern art.

While blog posts often emerged organically from curators and staff, a more orchestrated process of digital content production was managed by Stack's team. *TateShots*, a series of three-minute documen-

taries featuring interviews with artists and curators, were immensely popular, with over 2 million views. These short videos were produced weekly, providing fresh content on a recurring basis.

BMW Tate Live: Performance Room was an experiment in live streamed performances that leveraged the heritage of performance art, particularly the “happenings” of the Dada movement. It featured performance art events that were streamed live. Audience members could use social media to comment as the performances unfolded, and to participate in a follow-up discussion. The events were immediately archived, without editing, and posted to YouTube. One reviewer noted, “The works thus inhabit a strange new zone: they are neither fleeting experiences for a live audience nor refined works of art.”⁹ Artist Nicoline van Harskamp proclaimed, “It’s the best and worst of both worlds . . . a live thing that will stay online forever!”¹⁰ Twenty events were planned; eight were already complete.

The website also featured online exhibitions, such as *The Gallery of Lost Art*. This immersive digital experience led visitors on a journey, telling the stories of artworks by Marcel Duchamp, Joan Miró, and Willem de Kooning that had disappeared from the Tate’s collection. Visitors entered a virtual warehouse, where they interacted with photographs, newspaper articles, letters, and videos about the lost works. The exhibition attracted over 100,000 visitors, outpacing many physical exhibitions.

The Tate’s website was also used as a platform for the exhibition of online artworks. *Net Art at Tate* commissioned artists to use digital technologies to create online art and then displayed them in virtual galleries. Commissioned works were on view for five years and were accompanied by critical texts that analyzed and interpreted them.

Going Mobile

The Tate was one of the first museums to replace traditional audio tours with handheld interactive multimedia guides. Using Toshiba’s e800 handheld computer, the Tate allowed each visitor a behind-the-scenes look at an exhibition, and a way to tour it at their own pace, in their preferred order. The guides featured virtual gallery tours; studio tours to show how artists created their works; interviews with artists, collectors, and art historians about the inspirations for the works; and videos of curators staging the exhibition. Information was presented in short snippets so that viewers could interact with the technology and then turn their attention to the art on display. The guides included many voices, from both inside and outside the museum, and allowed users to contribute their own thoughts and feelings, adding their voices to the conversation. Visitors using the guides spent longer in the galleries, and 86% of users proclaimed that the multimedia guides improved their visit.

The Tate began experimenting with the development of multimedia applications (apps) for the iPhone, iPad, and other mobile devices (see **Exhibit 2** for a list of apps) to accompany the launch of new exhibitions. The exhibition-themed apps were available for sale on iTunes for £1.49 and up. The apps could be accessed on a personal smart phone or mobile device when visiting the exhibition galleries, or they could serve as virtual tours for those who could not physically make it to the gallery. Over 280,000 multimedia guides had been downloaded to date. The Tate also produced a multimedia guide to Tate Britain and the *Tate Guide to Modern Art*, a modern art dictionary app.

The Tate also began creating photography apps and game apps. *Muybridgizer* allowed photographers to turn their photos into “Muybridgized” freeze-frame images resembling the early photographs of artist Eadweard Muybridge. *Race Against Time* was an adventure game featuring characters, backgrounds, challenges, and music inspired by 151 years of modern art. *Pocket Art Gallery* enabled users to virtually curate their worlds, pulling together images from galleries across Britain and placing them, using augmented reality, anywhere—in the user’s living room or out on the street.

Another app, the *Magic Tate Ball*, delivered a personalized image from the Tate's collection when users shook their iPhones, using a sophisticated search algorithm that collected real-time data, such as the user's GPS location, the date and time of day, the local weather, and any ambient noise present. A relevant image was delivered in seconds, along with a short explanation of how the artwork connected to the user's life at that moment. It achieved 100,000 downloads in its first six months. Ben Templeton of Thought Den, a digital design agency, lauded *Magic Tate Ball*: "As an interaction it is a great way to 'onboard' a casual audience. Once they have been given a playful introduction to an artwork they will be much more likely to seek further details, via Tate's site or even in person."¹¹ Jane Burton, Creative Director and Head of Content, Tate Media, explained its appeal: "I love the serendipity of discovering art through *Magic Tate Ball*. We hope it will please both existing Tate fans and new audiences who are interested in a more playful experience than cultural institutions typically offer."¹²

While some of the Tate's mobile apps were offered for sale on iTunes for a small fee, others were available for free with premium upgrade opportunities with additional features that could be purchased. Some apps featured hidden bonus features that could be unlocked only on a physical visit to the Tate. Stack explained the strategy: "Successful mobile apps are either useful or fun. Tate's applications will play to the strengths of this new platform, which include providing entertainment to fill spare time, location awareness, and a tool for building online communities."¹³

As part of its sustainability objectives, the Tate began moving some of its scholarly research publications online. Digital publications, which replaced the physical books and monographs produced by the Tate, offered advantages beyond lower costs and less waste, such as multimedia content and interlinking facilities. As more people began reading newspapers, magazines, and other content on mobile devices, demand for digital content swelled. The Tate responded by producing an app for iPad users that enabled them to digitally access *Tate Etc.*, the Tate's monthly art magazine. It was offered free to Tate members and was sold to others via Apple's iTunes marketplace for £7.99 annually. The app transformed the physical magazine into an interactive, multimedia experience.

Gamification

To help launch an *Alice in Wonderland* exhibition, the Tate digital team experimented with gamification—using the tools and platforms of games to help people learn by engaging their natural inclinations for competition, mastery, and achievement. The team created *Wondermind*, a website with games, interactive educational videos, and blog posts with discussion forums, which used the magic of Lewis Carroll's story to teach children about neuroscience and brain development. The site targeted children ages 8–12 and their parents and educators, and connected them to child development neuroscientists. Four games provided a variety of challenges: in *Remember Me*, children matched pairs of cards in the Queen of Heart's garden; in *On Reflection*, children placed mirrors in a maze to shine a flashlight on the Cheshire Cat; in *Pathways*, children worked to find the White Rabbit hidden in the forest; and in *Talking Tea*, children determined which tea to serve at the Mad Hatter's tea party.

Tate Kids, an online community designed for children, featured a large suite of games and creative projects that engaged children in art through gamification (see **Exhibit 3**). The games were available for play on a computer, and there were early plans for an app that could be accessed via mobile devices. Many of the games awarded points, allowing users to level up as they progressed and gained expertise. Many allowed users to share their results on leaderboards or to post their creations to an online gallery.

Online Community Development

Specialized online communities were a key component of the strategy and were created as digital spaces to bring people together to experience and discuss art and culture. Interaction and participation

were essential components. Most were hosted on the Tate's website, some were created as microsites, and others were hosted outside of the Tate and involved collaboration with arts and cultural organizations throughout the UK and the world.

- *Tate Kids* gave children their own space to experiment, explore, create, and share their own artworks and those of the Tate. Games, interactive experiences, blogs, stories, and animated short films provided entertainment, while online galleries and story archives allowed children to upload their own creations and comment on others' work.
- *Tate Collectives* was for teenagers and young people who were interested in exploring careers in creative industries. It gave them the virtual studio space and community to create online sketchbooks and interact with one another as they created their art. Completed works could be uploaded to virtual galleries. Competitions and challenges were instigated to encourage members to use their artistic talents to engage with new exhibitions. *Tate Collectives* was integrated with Facebook, Flickr, and YouTube so that its users could share their artwork broadly. By the end of 2012, 1,703 young creatives had signed up. The virtual group also hosted physical events for young people at each of the Tate galleries.
- *The Unilever Series: turbinegeneration* linked schools, galleries, artists, and other cultural institutions worldwide to discuss contemporary art and ideas. Learning modules were organized into downloadable project packs that included topics and exercises to initiate a dialogue among participating international schools and colleges. Each project pack was based on a current installation of contemporary work on display. Schools were invited to explore their own culture, create and exchange culturally informed artwork in an online gallery, and compare and discuss art across cultures.
- *Turbinegeneration* was one of many resources available to an online teaching and learning community populated by teachers. Downloadable teaching packs, digital whiteboards, and online projects were available. Stack and his colleagues saw great future potential in the learning resources area – for both children and adult learners. Online learning was gaining steam, and the Tate, along with eight other national museums, had been experimenting for the past few years with eLearning communities through an initiative called *Creative Spaces*, which was decommissioned in 2013. Stack wondered if online learning could provide a path to monetize some of the digital assets his team had been creating.
- *Circuit* was a national visual arts network for 15–25-year-olds in the UK, launched in 2013 by the Tate and five other national arts organizations. *Circuit* targeted young people who did not have access to arts programs in their communities. *Circuit* included learning modules using Britain's art collections to encourage budding artists to display their work and to collaborate to produce group artworks. *Circuit* had ambitious goals to reach 80,000 young people in its first four years and included both physical and digital components, including arts festivals and projects in local areas.
- The Tate also teamed up with four of Britain's art galleries to sponsor *the Great British Art Debate*, which invited young people to explore questions about their British identity by engaging with the historic art of Britain through an interactive website and social media. Running from 2008–2012, the discussions focused on four physical exhibitions that addressed different aspects of British heritage.
- The Tate was collaborating with Google on a project called *This Exquisite Forest*. Drawing inspiration from the Surrealist idea of the exquisite corpse, a creative exercise in which one person begins a drawing then passes it on to others to continue it, *This Exquisite Forest* was an online collaborative art project. It began with a prompt of a series of short animation sequences created by artists affiliated with the Tate. The public was invited to contribute

new sequences and thus continue the story. The public could access the project through a website or by visiting a physical installation at Tate Modern.

Social Media

Stack and his team harnessed social media technologies to spread the Tate's digital content beyond its own website. Social media was a fundamental component to increasing the reach and impact of the Tate's online efforts, and Stack viewed it as much more than a marketing vehicle:

Key to our approach must be a recognition that social media websites are not just a new platform to advertise our activities or promote our brand. We must transparently interact with audiences and, though this is labor intensive, the result will be an engaged audience with whom we have a deep relationship.¹⁴ . . .

Social media has already transformed Tate's approach to communication and marketing. Social media is destined to change many more activities at Tate, offering new ways to engage with audiences and to distribute content where it will reach new audiences. We believe there are significant opportunities for social media and new digital platforms to revolutionize the visitor experience as well as transform the practices of learning, research, curating and fundraising within the museum.¹⁵

The Tate authored 16 Twitter feeds, 8 Facebook pages, 2 YouTube channels, 1 Google+ Circle, and 1 Pinterest board, and maintained a presence on photo-sharing sites Flickr and Instagram. Wherever people were on social media, the Tate was there with content to engage them. All of this enabled the Tate to be one of the top three digital presences in the cultural sphere, with over 700,000 Facebook likes, 1.2 million Twitter followers, 807,000 people in a Google+ Circle, and 25,000 subscribers to its YouTube channels by early 2014 (see **Exhibit 4**).

Blending the Physical and the Virtual

Stack knew there were powerful ways to blend the physical and the virtual by bringing technology into the galleries. The digital multimedia guides were a first step, but Stack wanted to make in-gallery digital experiences more social. *Apollo* magazine proclaimed, "Rather than focus (as most digital strategies do) on digital media's capacity to reach far-flung audiences, the latest features [of the Tate's digital strategy] look back to the building itself . . . [they are] an attempt to create a digital community within the building that rewards those who actively visit its displays."¹⁶

An early experiment was *Art in Action*, a festival devoted to art in action—a series of 40 live performances that emphasized audience participation. During artist Tracey Mobley's piece *Tweet Me Up!*, visitors were encouraged to comment in real time via Twitter, Facebook, and Google+. More than 122,000 participated, and their thoughts were projected onto the walls of The Tanks to contribute to the evolving performance. According to Film Curator Stuart Comer, the audience thus became part of the living archive: "Because we're now in a moment dominated by social media, the experiences [the audience] will be having will immediately be recorded and disseminated in a manner that is unprecedented historically."¹⁷

Spurred on by this early success, the digital team began thinking of ways to transform the visitor experience through technology. Wi-Fi was enabled in all galleries, giving all visitors the opportunity to access the wealth of digital assets the team had created and use them to interpret the work they saw in front of them on the walls. Information staffers were equipped with tablets to access online content.

Touchscreens and digital learning studios were sprinkled throughout the galleries. But the pièce de résistance came via a Bloomberg grant, which funded the Tate's most ambitious physical/digital combination, *Bloomberg Connects*. Seventy-five interactive screens were installed in the staircases of Tate Modern. The screens were used to project comments, tweets, photographs, and digital drawings created by visitors. A drawing bar encouraged visitors to doodle, and their drawings were uploaded to the continuously displayed content stream. Drawings were also immediately uploaded to Flickr.

Serota explained the motivation: "In the coming years, we need to devote as much attention to the digital as we have given recently to the physical expansion and improvement of our buildings. Bloomberg Connect encourages the creativity which exists within each one of us and recognizes the importance of dialogue."¹⁸ Philanthropist Michael Bloomberg was excited about its potential. "Engaging with the arts can happen in any number of ways, and technology has the capacity to make the museum experience more personal and powerful than ever . . . I'm honored to support Tate in their efforts to expand digital engagement and creatively reinterpret the experience of visiting a museum."¹⁹

The user-generated content was randomly shuffled and displayed in a constantly updating stream without moderation or editing, which sometimes led to the display of criticism or inappropriate content. The lack of moderation was a controversial decision, but one that the Tate moved forward with despite the risk, "There will be a system to take down inappropriate things should they emerge, and no doubt that will occasionally happen," explained Burton.²⁰

Measuring the Tate's Digital Return on Investment

Stack's team had achieved success, with scarce human and financial resources. However, he was now asking for a much larger commitment, one that he would need to defend by showing solid proof of digital's payback to the organization's mission and operations. How could he finance his digital vision? Was there a way to monetize the digital assets his team was developing? Would the Tate's constituents pay to play in digital? Measuring digital's return on investment (DROI) was tricky. Stack's team developed a digital dashboard (see **Exhibit 5**) to provide a snapshot of the progress of the Tate's activities. It was published monthly and distributed to a wide audience across the organization. But everyone knew more could be done, so the Tate participated in an action research project devoted to measuring the success of online projects. The Tate's Digital Analyst Elena Villaespesa explained:

All participants recognised that reporting solely on the number of visits and time spent on a website fulfills funding bodies' requirements, but such statistics are unlikely to help the museums and other public institutions evaluate and improve their online presence against their organisational objectives . . . We realized that we had to start using the large amount of available metrics in a more intelligent way...

In 2010, there was no analytics strategy and no one was responsible for managing the analytics at Tate. Webtrends was used to report page views and unique visitor figures on a monthly basis in a spreadsheet buried somewhere on Tate's intranet. Meanwhile the availability of the free Google Analytics service opened a whole new world of metrics, with immediate and user-friendly access to reports. However, Tate's use of Google Analytics was based on settings configured by a number of different people on a project-by-project basis over a number of years. When we started analyzing the metrics more closely, we realized the tool was not set up or used correctly and the reports were, to say the least, inaccurate.²¹

The Tate developed a series of digital key performance indicators (see **Exhibit 6**). But, despite the wealth of data provided by these metrics, Stack struggled to calculate DROI. He explained,

"Understanding our audiences and evaluating the impact and value of their digital experiences is a vital element of Tate's digital transformation . . . The development of an analytics strategy is a continuous and iterative process that should organically evolve as the online ecosystem changes to support the organization's overall aim."²²

Measuring DROI was challenging because most of the digital assets the Tate produced were offered for free, reducing the opportunity to offset their development costs with revenue. Stack was searching for ways to monetize the vast digital asset base the Tate had created. Options included:

E-Commerce. One path to monetization was to more closely link the Tate's online shop to its digital content. The online shop supplemented the physical gift shops located in the Tate's galleries and sold books, prints, and products related to the collection. Online sales were healthy, up 57% in the past year. Stack saw an opportunity:

The online shop will be promoted across all digital channels to increase revenue. As digital visitors use free content, relevant products from the online shop will be promoted to them . . . [We] have already produced a number of digital products such as online courses, apps, ebooks, and *Tate Etc.* for purchase through the iTunes newsstand. It is clear that this is an area of great opportunity for the organization, and digital publications are expected to become a significant revenue stream in the future.²³

Marketing Efficiencies. A second path was to use the massive amounts of data generated by online visitors' browsing and click patterns to better market the physical offerings of the Tate to them. Understanding online visitors could help generate more targeted marketing that could generate higher ticket sales for visits to the galleries and special events. Stack explained, "Through improved capture of users' contact details and behavior we will know our customers better, be able to personalize and improve their online experience. Key to maximizing this opportunity is more targeted emarketing, cross promotion of products and up selling, and developing long term relationships with audiences."²⁴

Digital Philanthropy. A third path to monetization was to leverage the online user base for philanthropic outreach. The Tate relied heavily on philanthropy to support its business model (see **Exhibits 7 and 8** for Tate financial information). Most of its donors were heavily involved in the physical galleries; the online community had yet to be significantly tapped by the development group. Digital fundraising was becoming commonplace for nonprofit institutions; many were using text message technology (SMS), social media fundraising (Facebook Causes, Twitter's Twitpay RT2Give), or crowdfunding marketplaces (Razoo, Kickstarter). However, the payback was unclear. According to Target Analytics, donors who arrived via a social network were likely to donate at lower than average amounts and had poor retention, with only 15% returning to give to the organization again within a year. Organic donors, those who arrived through the nonprofit's website, were more profitable and longer lasting; they gave at higher levels and 50% returned to donate again. Stack thought there might be potential for significant development opportunities among the Tate's digital audience:²⁵

We shall initiate a managed journey from first-time virtual or actual visitor, through membership and patrons schemes, to donor. . . .

The case for giving to Tate will be reiterated throughout the site . . . through the news and blogs sections and through social media. Microsites will be built to support individual fundraising campaigns and micro donations will be asked for as part of ticket and product purchases. The Tate Fund online donation page will be promoted in context throughout the website.²⁶

Pay to Play. A fourth path was to charge visitors for the use of digital assets. “The majority of the content on the website is distributed free and it is envisaged that this will continue to be the case,” Stack explained. “However, significant opportunities exist around online revenue generation. We shall also investigate new digital products and ‘freemium’ models where basic content and services are offered for free with a paid for premium service.”²⁷ However, Stack worried that charging for content might diminish the spread of its content around the web. Charging for content limited access to it, which went against the culture of open access that prevailed in web culture and that was critical to the museum’s mission. According to Stack:

The social value of Tate’s knowledge and assets is limited by the institution’s approach to its reuse by audiences. The use of more permissive content licenses – such as Creative Commons – will unlock this value and enable learners to repurpose Tate-generated content and use it in their own projects so long as their purpose is non-commercial. In this way Tate’s content will enter the wider digital ecosystem and be encountered across the web, amplifying engagement with art in accord with Tate’s mission.²⁸

Currently, the Tate provided free access to its collections database under a permissive Creative Commons Zero CC0 license. However, it charged users a licensing fee when images from the e-collection were used for commercial purposes. Much of the Tate’s online content was published under restrictive end-user licenses, which detracted people from using it for non-commercial purposes. Stack wondered if this policy needed to change as the social web continued to expand:

Consumption of online content has shifted towards users as authors and editors, especially through social media and online publishing platforms. We shall embrace audience creativity and personal ambitions, through new end user licenses, empowering them to reuse and remix Tate content...

Most of the content on Tate Online is published under restrictive end-user licenses. We shall audit these and review what content could be released under a more permissive license that would enable users to reuse and remix this content as part of their own creative projects or research. These new public licenses are likely to be based on a commons model, focusing on wide distribution which will democratize knowledge and give audiences the freedom to share their and Tate work. For example, users could take art work images from the collection and share them on their non-commercial blogs, social media profiles or online project so long as this includes the correct caption information and a link to Tate Online.²⁹

Grants. While the Tate had been successful in generating grant income to support some of its digital initiatives, the Arts Council England, a major funding source for cultural organizations, focused its grants on physical infrastructure improvements rather than digital programming. Government funding had historically been allocated based on the number of physical visitors an organization garnered; however, the Tate had successfully lobbied to include unique visitors to the Tate website in its visitation statistics. Stack wondered if there was more he could do to attract government funding.

Moving Forward: Digital as a Dimension of Everything

As he moved forward, Stack wanted to reconceptualize digital as a dimension of everything the Tate did. He saw big opportunities and wished to expand digital activities beyond those that supported what was happening in the physical galleries. Digital opened up new possibilities for achieving the mission of the Tate, possibilities that moved beyond what could happen within its physical walls. Stack noted, “Digital activity is forcing us to rethink our creative practice. For over a hundred years, our

activity has been grounded in collections displayed in buildings. The affordances of digital means we are rethinking this."³⁰ Serota, Stack, and the board wanted digital to transform the organization,

Our ambition is to make Tate Online the most engaging and most social arts website, to match this with the richest, deepest arts content found anywhere on the web, and to pair this with an increased presence for Tate beyond our own website, so that we engage with Tate audiences wherever they are active online. To achieve this ambition we should move on from considering Tate Online as "Tate's fifth gallery" to making online, quite simply, a dimension of practically everything Tate does, from research and conservation to fundraising and public programmes.³¹

Artistic spaces are no longer just physical; they have become the integrated product of museums, galleries and the digital realm . . . Tate is evolving into an organization in which digital is the norm.³²

But how could this vision be realized? Stack was facing some important decisions regarding organizational structure and processes, marketing strategy, product and service design, and pricing strategy. All of these areas would need to be addressed in order to pull off a digital transformation. Organizationally, Stack worried that the Tate's siloed structure was not effective, nor efficient. He recognized the need to infuse the organization with the right people and skill sets to capitalize on the rapidly changing digital environment: "To continue to adapt in a rapidly changing digital landscape, Tate will need to operationalize digital disruption. This will enable the organization to respond effectively to the emerging opportunities of new technologies and new media."³³

However, an inclusive digital strategy required employees to become facile with using social media, a skill set that many of the curators and staff did not currently have in their tool kits. This change also required new systems and processes to make adding new content to the website quick and easy, and to eliminate the lengthy content review process so that information could be posted in real time. Stack understood that empowering everyone in the organization to use digital technologies to communicate with the Tate's audiences would require a shift in how the Tate operated:

Digital is no longer the remit of a single department of museum technologists. All departments now have digital activity as part of their strategies and are looking to undertake significantly more digital activity in the years to come. . .

Digital used to be the concern of one department at Tate but will soon permeate all areas of work in the museum. This transition will require the right level of resourcing, leadership and engagement from across the organization.³⁴

Stack also wanted to expand authorship of digital content within the Tate organization. Historically, digital content had emerged from a team of staffers in the digital group. Content was written, reviewed, and posted according to a fairly rigid process. Stack had visions of expanding the web of authors who contributed content to the site, so that anyone in the Tate organization could comfortably participate, making the Tate "more porous through a move to the emergence of individuals within Tate expressing their views and engaging directly with audiences."³⁵ Serota explained:

Digital technologies enable us to involve audiences more deeply in the art that we show. That's why it is important that each and every person working at Tate should weave them into the fabric of their daily work. A curator blogging about an exhibition; a researcher using new technologies to gather and disseminate new findings; staff in the galleries showing the public how they can join in through digital conversation: all contribute to reaching new audiences.³⁶

Many in the organization worried that a more open process could jeopardize the Tate's ability to speak with one voice to its various constituents, and that less experienced members of the Tate team might share things on social media that were off-brand. Some began questioning whether detailed social media guidelines and policies needed to be developed to police social media activity:

A diversity of viewpoints is integral to the concept of the public realm. Today more than ever the museum is a place where ideas, experiences and opinions are exchanged. There will always be a role for the expert, but the evolution of communications technologies offers unrivalled opportunities for people to contribute from their own personal perspective.³⁷

In many cases we shall nurture new online communities through facilitating discussion amongst audiences themselves. In other cases, the discussion will be in response to content authored by a Tate employee or some piece of Tate content. In such cases, it will be appropriate for Tate to respond and join the discussion directly and it is envisioned that numerous members of staff will therefore be involved in this work. Unmediated interaction with online audiences will be new to almost everyone involved and therefore, training, new policies, and new skills will need to be developed to help Tate staff shape communities.³⁸

Featuring user-generated content on the Tate's website raised some eyebrows from those who worried that the Tate's scholarly authority might be undermined by the intermixing of Tate and outsider voices. "One of the challenges this raises is how to communicate the authority of Tate's research and scholarship amongst a myriad of voices and opinions," explained Stack.³⁹ The processes for oversight, cultivation, and moderation of active user-generated content were under discussion. Historically, the digital team was responsible for moderating users' comments; however, this was getting more challenging as the Tate's digital presence grew. Stack wanted to push this task out to the greater Tate organization to encourage collective ownership:

Online audiences are now active contributors to online communities through comment threads, forums, blogs and social media. Tate should embrace this and welcome online audiences as contributors and collaborators. Dialogue and debate will be embedded throughout the new website, through forums, blogs, and community websites and through Tate activity on third-party social media websites. Significant effort needs to be put into the moderation and guiding of these new communities. Ultimately, it should be the aim that colleagues throughout the organisation undertake this work.⁴⁰

Stack also wanted visitors to be able to design their own relationships with the art, disintermediating the role of the curator: "Website visitors will be able to curate their own online collections, write their own labels, annotate these and then share them online and with others via social media if they choose."⁴¹ This was a controversial notion within the art world, which relied on the scholarly expertise of highly educated and trained curators to translate and interpret art for the public. Lord Browne, chairman of the board of trustees, addressed the issue:

As the relationship between the museum and visitor evolves, we will still rely on our colleagues' expertise, knowledge, and experience to promote understanding and enjoyment of art. But that relationship will increasingly be characterized by a creative conversation with and between members of the audience, enabled by connections through digital media.⁴²

What was the best way to structure the Tate organization to ensure that it was nimble enough to foresee and capitalize on the rapidly evolving technologies in the dynamic digital space? What new processes could he put in place to facilitate the dispersion of digital thinking and execution across the organization? How could Stack best educate and arm all of the Tate's employees so that they could

become digital citizens? How could he balance curatorial voice with the emerging voices of the crowd? What internal and external governance structures needed to be put into place to oversee digital content production, moderation, and dissemination?

Digital transformation also required Stack to make some important trade-offs regarding which audiences to target with his efforts, given limited resources. Should the digital efforts focus on attracting new visitors to the Tate's physical galleries or deepen relationships with existing visitors? Should the Tate design and deliver its online content to reach people who weren't physically able to visit, or should digital content supplement physical visitation by providing information to visitors in the pre- and post-visit time periods? Was digital an opportunity to expand the global reach of the Tate brand, or was it better utilized to enhance the physical experiences happening in the galleries' physical spaces? What was the balance of physical and virtual content and experiences that best achieved the Tate's mission and operating needs?

Serota wanted to address the world, but Stack felt there was also power in staying close to home. Serota proclaimed:

The future of the museum may be rooted in the buildings they occupy but it will address audiences across the world—a place where people across the world will have a conversation. Those institutions which take up this notion fastest and furthest will be the ones which have the authority in the future.⁴³

New technologies offer opportunities to reach audiences on multiple digital platforms. The result for Tate is an extended audience of many millions, some of whom may never be able to visit the galleries, but are nonetheless being offered an engaging art experience, curated by Tate.⁴⁴

Stack certainly had his work cut out for him. As he thought about the decisions facing him, he held Serota's directive to be a digital pioneer, one who moves ahead of the curve, anticipating rather than responding to the future, at the center of his thoughts:

How can we engage new and more diverse audiences in the conversations around art? Being at the forefront of digital development in the arts is crucial to our success. It's not just about keeping up; it's about being several steps ahead, connecting with audiences globally and encouraging them to join in.⁴⁵

Exhibit 1 Ten Principles for Tate Online (2010)

1. **Tate's website is for Tate's online audience:** The website's structure and navigation must aid the visitor's experience and conform to their expectations rather than echoing organisational structures. Each online initiative must serve a defined online audience and fulfil a defined need for that audience.
2. **The website is both a platform for publication and for interaction:** Alongside the ongoing publication of deep content, we shall use the website as an interactive platform for engaging audiences and giving them a platform for discussion, debate and participation.
3. **The website must be alive with thoughts, conversation and opinion:** Through blogs, articles, multimedia other means, we shall find new ways to share the expertise and ideas of artists, curators, individuals working for Tate and others alongside those of our audience.
4. **Online content, commerce and community are intermixed:** Community features – blogs, user comments and discussion threads—should be featured alongside the relevant content rather than zoned off. Tate's commercial offer – Membership, Patrons, books, artists' prints, custom prints, online courses and so on—should be promoted alongside relevant content throughout the website.
5. **All webpages are the start of a range of possible user journeys:** The majority of online visitors enter the site at a deep page, from a search engine or other incoming link. Each page must therefore simultaneously stand alone, make its context clear through navigation, and offer links to closely related content.
6. **Content owners manage their content:** The management of web content will be distributed around the organisation, supported by updated back office systems, training and changes to staff responsibilities. The skills to author web content and to engage directly with online audiences must be distributed throughout the organisation.
7. **Online content needs to be open and shared:** Users must be free to take, repurpose and redistribute Tate content to fulfil their individual needs. Data should be made available to third parties for easy reuse.
8. **Content and interaction should be taken to the online audience:** Through social media, third-party websites and new mobile platforms we can reach new audiences and interact with them in the online spaces where they active. In some cases we should expect to find that these spaces be the best place to realise entire projects.
9. **Personalisation will improve visitors' experience:** By allowing users to customise their online experience of Tate, we shall improve their experience, be able to communicate with them more effectively and fulfil their diverse needs.
10. **The website must be sustainable:** It is expected that the growth of the website will accelerate. To facilitate this growth, the site's technical and information architectures and our approach to content maintenance and copyright costs must be scalable.

Source: John Stack, "Tate Online Strategy 2010-12," <http://www.tate.org.uk/research/publications/tate-papers/tate-online-strategy-2010-12>, accessed March 13, 2014.

Exhibit 2 The Tate's Mobile Applications

Mobile App	Description	Price
Tate Guide to Modern Art	This comprehensive but concise art dictionary helps demystify the themes, movements, media, and art practices of modern art.	\$2.99
Tate Britain Mobile Guide	Audio guide to the collection featuring detailed information on key works, curators' commentaries, and background information on British history and art.	FREE
Damien Hirst	Accompanies the 2012 exhibition at the Tate Modern	\$1.99
Miro: The Ladder of Escape	Accompanies the 2011 retrospective exhibition at the Tate Modern.	\$2.99
Gerhard Richter	Accompanies the 2011 retrospective exhibition at the Tate Modern.	\$1.99
Gauguin: Maker of Myth	Accompanies the 2010 retrospective exhibition at the Tate Modern.	\$2.99
How It Is	An interactive interpretation of Miroslaw Balka's epic new work in the Tate Modern's Turbine Hall.	FREE
Muybridgizer	Take freeze frame pictures inspired by the iconic works Eadweard Muybridge. The release celebrated the opening of an exhibition of Muybridge's work at Tate Britain.	FREE
Magritte Your World	Take pictures of your favorite views or landmarks and 'Magritte' them with an animation inspired by one of Magritte's most famous paintings.	FREE
Magic Tate Ball	Shake your phone and we will serve up the most relevant artwork from the Tate's archive, using your location, date/ time, weather, and background noise to find a match for your moment in time.	FREE
Tate Trumps	A digital card game where you can pit the artworks of the Tate's Collection against each other in a fast-paced game of Trumps!	FREE
Race Against Time	Can you race through time to defeat the diabolical Dr. Greyscale? Emerging from Monet's Water Lilies, you'll notice everything evolving to reflect the art of the last 121 years, as you pick up speed. That is, if a fire breathing Picasso dragon or rogue balloon dog doesn't get you first.	FREE

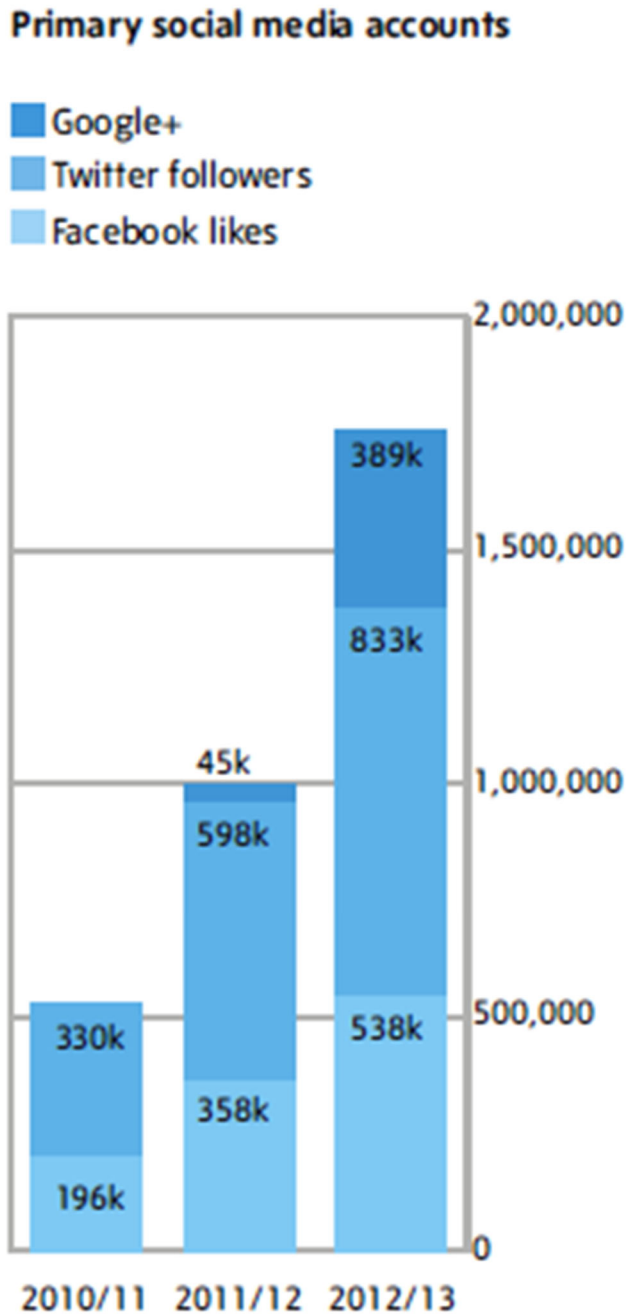
Source: <http://www.tate.org.uk/context-comment/apps>, accessed March 13, 2014.

Exhibit 3 Tate's Digital Games

Game	Description	Artist Inspiration
DotShop	Dotify an artwork	Roy Lichtenstein
Spin	Create digital spin art	
Cuboom	Cubify the world	The Cubists
Airbrush	Make abstract art using your whole body	
Art Lab	Will you restore or ruin the Tate's works?	
Art Detective	Solve the case of the mysterious Tate object	
Barbara's Garden	Enjoy a treasure hunt through the Tate's sculpture garden	
The Secret Dancer	Catch the secret dancer as she dances through the Tate	Edgar Degas
Cold Corners	Race against the clock to put the Cold Corners sculpture back together	Eva Rothschild
Colour	Repaint an object using the palettes of three modern masters	Andy Warhol, Frank Stella, Ed Ruscha
Tate Paint	Create your own digital masterpiece	
Street Art	Create digital street art using the tools of graffiti artists	Banksy
Tate Tales	Write and share a story inspired by an artwork	
Memento Mori	Match symbols with artworks and solve riddles	Memento Mori room
My Imaginary City	Invent your own imaginary city	

Source: www.kids.tate.org.uk/games, accessed March 12, 2014.

Exhibit 4 Growth in Social Media Audiences



Source: Serota, Nicholas (2013), Tate Report 2012/2013, <http://www.tate.org.uk/download/file/fid/31113>, accessed March 13, 2014.

Exhibit 5 The Tate's Digital Dashboard



Source: <http://www.tate.org.uk/about/our-work/digital/digital-metrics>, accessed March 13, 2014.

Exhibit 6 Digital Key Performance Indicators

Category KPI	KPIs
Reach and Brand	Number of visits, new visits, searches including the keyword Tate
Audience	Audience KPIs in line with the overall audience strategy (families, young, local, international)
Conversion	Total revenue from the ecommerce activities, revenue per visit, conversion rate
Social engagement	Pages per visit, time on site, percentage of repeating visitors, community size, number and quality of user generated content, number of clicks on social media buttons
Accessibility	Percentage accessible content
Usability	Percentage positive comments, percentage satisfied users (online survey), ease of navigation (user testing)
Technical	Load time, number of broken links, browser compatibility

Source: Villaespesa, Elena, and Tijana Tasich (2012), "Making Sense of Numbers: A Journey of Spreading the Analytics Culture at Tate," Museums and the Web, http://www.museumsandtheweb.com/mw2012/papers/making_sense_of_numbers_a_journey_of_spreading.html, accessed March 13, 2014.

Exhibit 7 Key Performance Indicators (in 000s)

	Actual 2013	Actual 2012
Access		
Number of actual visits	7,747	7,066
Number of unique users visiting the website	13,669	14,327
Audience Profile		
Number of visits by children under 16	1,063	1,033
Number of visits by adult visitors from NS-SEC 5-8	219	241
Number of visits by UK adult visitors from an ethnic minority background	519	261
Number of visits by UK adult visitors with a long-term illness, disability or infirmity	113	109
Number of overseas visits	3,620	3,601
Learning/outreach		
<i>Children</i>		
Number of facilitated and self-directed visits to the museum by visitors under 18 in formal education ^a	144	209
Number of instances of visitors under 18 participating in on site organised activities ¹	84	91
Number of instances of children participating in outreach activity	579	243
<i>Adults</i>		
Number of instances of adults participating in on-site organised activities	474	303
Number of instances of adults participating in outreach activity	227	80
Visitor satisfaction		
Percentage of visitors who would recommend a visit	90%	96%
Income generation		
	(in £000's)	(in £000's)
<i>Self-generated income</i>		
Admissions	10,826	6,379
Trading income	28,353	26,663
Fundraising (including capital)	53,887	20,540
Fees and other income	11,085	10,526
Donated works of art	18,493	3,300
	122,644	67,408
Regional engagement		
Number of UK loan venues	128	147

Source: The Board of Trustees of the Tate Gallery, Annual Accounts 2012–2013, <http://www.tate.org.uk/download/file/fid/30359>, accessed March 13, 2014.

^a Figures for 2012 relate to under 16s.

Exhibit 8 Consolidated Statement of Financial Activities

	2012-13 Unrestricted funds (in £000's)	2012-13 Restricted funds (in £000's)	2012-13 Endowment Funds (in £000's)	2012-13 Total funds (in £000's)	2011-12 Total funds (in £000's)
Incoming Resources					
<i>Incoming resources from generated funds</i>					
Voluntary income					
Grant in Aid	34,012	900	-	34,912	45,105
Donated works of art	-	18,493	-	18,493	3,300
Other voluntary income	2,974	50,913	-	53,887	20,540
Activities for generating funds					
Trading income	28,330	23	-	28,353	26,663
Other activities for generating funds	7,492	-	-	7,492	7,585
Investment income	145	120	-	265	535
<i>Incoming resources from charitable activities</i>	13,533	-	-	13,533	8,534
<i>Other incoming resources</i>	886	-	-	886	786
Total incoming resources	87,372	70,449	-	157,821	113,048
Resources Expended					
<i>Costs of generating funds</i>					
Costs of generating voluntary income	2,614	57	-	2,671	2,246
Fundraising trading: costs of goods sold and other costs					
Trading costs	24,952	-	-	24,952	22,375
Other costs of generating funds	3,646	-	-	3,646	3,124
Investment management costs	17	59	-	76	69
<i>Charitable activities</i>	54,430	16,503	-	70,933	69,208
<i>Governance costs</i>	611	2	-	613	643
<i>Other resources expended</i>	891	-	-	891	787
Total resources expended	87,161	16,621	-	103,782	98,452
Net incoming/(outgoing) resources before transfers	211	53,828	-	54,039	14,596
Transfers between funds	(4,440)	4,440	-	-	-
Net incoming/(outgoing) resources after transfers	(4,229)	58,268	-	54,039	14,596
Gain/(loss) on investment assets	-	37	1,018	1,055	227
Gain on revaluation of tangible fixed assets	505	24,661	-	25,166	14,364
Net movement of funds	(3,724)	82,966	1,018	80,260	29,187
Funds brought forward at 1 April 2012	59,862	841,005	8,932	909,799	880,612
Funds carried forward at 31 March 2013	56,138	923,971	9,950	990,059	909,799

Source: The Board of Trustees of the Tate Gallery, Annual Accounts 2012-2013, <http://www.tate.org.uk/download/file/fid/30359>, accessed March 13, 2014.

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