



Communities for Immunity

Museums and Libraries as Trusted Community Partners

Primed for Action: Cultural Institutions Support Public Health and Community Wellbeing

During the COVID-19 pandemic, science centers and museums, libraries, and other cultural organizations across the globe responded to the needs of their communities in myriad ways, including providing educational support to students and teachers, offering childcare and family services, conducting food drives, hosting blood drives and clinics, and providing safe in-person and online experiences. These community supports were critical during a period of intense social disruption and demonstrated how these organizations play a vital role in the wellbeing of their communities. In the United States, science centers and museums—along with, and often in partnership with, a wide range of other museums, libraries, and cultural institutions—made a unique contribution to their communities by engaging their audiences on the science behind COVID-19 and COVID-19 vaccines. These efforts resulted in increased vaccine confidence and vaccination rates in their communities.

Communities for Immunity is a signature project led by the Association of Science and Technology Centers (ASTC) and a coalition of national museum and library associations in 2021–2022. Museums, libraries, and other cultural organizations were awarded competitive federal funding to engage their audiences to increase vaccine confidence. *Communities for Immunity* awardees identified and targeted the segments of their communities that were most likely to be vaccine hesitant and reached them in two important ways.

1. First, they were able to educate and raise awareness about COVID-19 vaccines at scale. A total of 91 institutions provided accurate, culturally and locally relevant, and compassionately-communicated information about COVID-19 vaccines to more than 1 million people, with a particular focus on populations most likely to be vaccine hesitant.
2. Second, they engaged more than 50,000 people with interactive exhibits, events, and programming and ultimately motivated up to 32% of those participating individuals not already vaccinated to get a vaccine.¹ This impact reinforces other research that shows that museums and libraries have a significant role to play in addressing community health and can motivate their audience to adopt healthy behaviors, like vaccination.

¹ 32% represents an estimate based on best available data. Due to the nature of the interactions, awardees did not track the vaccination status of all 50,000 participants. We estimate that 67.7% of the 50,000 engaged were already vaccinated, which reflects the national average vaccination rate as of January 2022, the mid-point of the two rounds of awards, and therefore at least 16,200 participants were unvaccinated. Awardee data shows that 5,200 individuals were vaccinated at a *Communities for Immunity* event, which equals 32% of that 16,200. Because awardees targeted audiences with low rates of vaccine confidence, we assume this calculation represents the maximum number of vaccinated individuals and therefore recognize that a more precise calculation may show that fewer than 32% of unvaccinated individuals chose to be vaccinated at a *Community for Immunity* event.

More broadly, this initiative demonstrates that U.S. science centers and museums are well-positioned to help their communities understand often complicated and sometimes contentious socioscientific issues and with the right resources, can motivate visitors to take action.

The Project

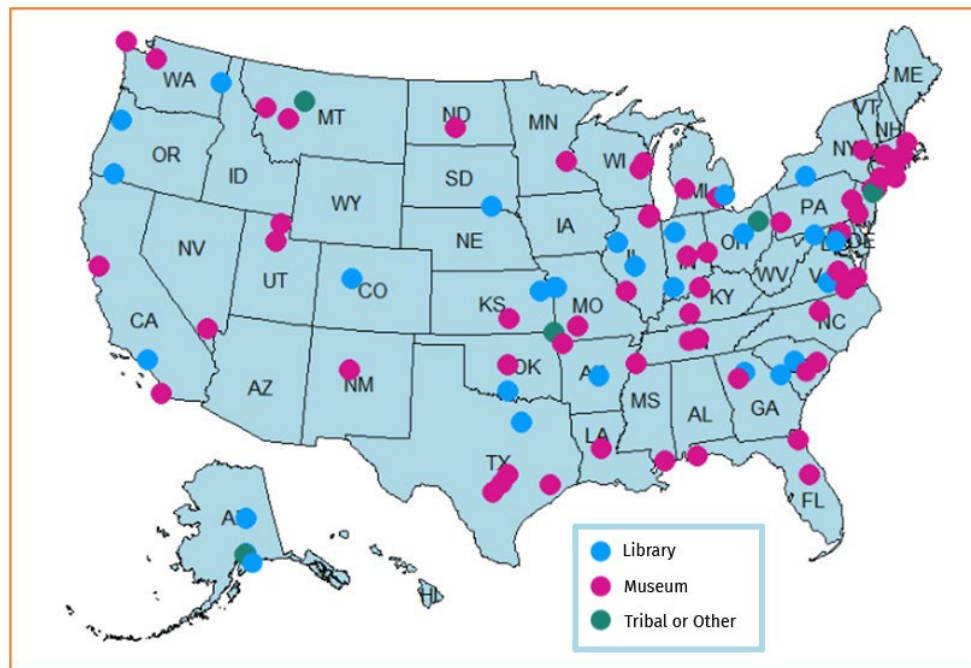
In fall of 2021, with generous funding from the U.S. Centers for Disease Control and Prevention (CDC) and the Institute of Museum and Library Services (IMLS), ASTC launched *Communities for Immunity*, a year-long project that helped museums, libraries, and other cultural organizations leverage their roles as trusted community organizations to improve local COVID-19 vaccine confidence. ASTC led the project in partnership with the American Alliance of Museums—and in collaboration with the American Library Association, the Association of African American Museums, the Association of Children’s Museums, the Association for Rural and Small Libraries, the Association of Tribal Archives, Libraries, and Museums, and the Urban Libraries Council. The project’s goal was to empower museums, libraries, and other cultural organizations to design and offer materials and activities that would resonate within their specific community context to increase confidence in the efficacy and safety of COVID-19 vaccines.

To facilitate this goal, ASTC and the partner associations engaged in five primary activities:

- collecting and broadly sharing resources with museums and libraries to help them communicate about and engage their audiences on the COVID-19 virus and the COVID-19 vaccines;
- making 100 awards ranging from \$1,500 to \$100,000 mainly to museums, libraries, and tribal organizations in 38 states;
- providing awardees with evidence-based messages and data about vaccine hesitancy, as well as training, coaching, and administrative support to implement their projects;
- engaging awardees to share their experience, ask questions, and connect with other awardees in an online community of practice; and
- collaborating with an expert evaluator, SRI Education, to evaluate the results of the awardees’ efforts.

ASTC and its partner associations promoted the award opportunity and resources through the *Communities for Immunity* website, social media, association newsletters, and member forums to institutions of all sizes across the United States. Museums, libraries, and other cultural organizations were invited to identify key target audiences with elevated vaccine hesitancy to propose the messages and activities they determined would best help move those populations from hesitancy to vaccine confidence. ASTC and the partner associations recognized that, as institutions deeply embedded in their local communities, their individual member organizations were best situated to determine what would resonate most with their target audiences. Accordingly, the partner associations encouraged applicants to design activities based on specific community assets and needs including diverse languages, values, geographies, and historical interactions with the medical system. Applicants were also encouraged to collaborate with other local partners—including health care providers, schools, businesses, and social leaders—that would be effective in sharing fact-based information and inspiring action in the form of vaccination.

Through two rounds of applications, ASTC and the partner associations made 100 awards to 91 unique institutions in 38 states, including 58 museums, 27 libraries, and 6 tribal or other cultural organizations.² The 50 Round 1 awards made in September 2021 ranged from \$1,500 to \$10,000 and supported activities that could be launched quickly, including information dissemination and small-scale exhibits and engagements. The 50 Round 2 awards made in December 2021 ranged from \$1,500 to \$100,000 and included several larger-scale initiatives, including comprehensive exhibits and interactive events and programming. The two largest awards of \$100,000 each were awarded to the C. Williams Rush Museum of African-American Arts & Culture in Kingstree, South Carolina and the Kansas City Public Library in Kansas City, Missouri.



Communities for Immunity awardees by institution type across both rounds of funding.

Award activities varied widely and represented the diversity of the awardee institutions, their unique strengths and abilities, and the communities they serve. Activities included information-sharing, events, programs, or exhibits, with the most common efforts including information distribution, vaccine clinics, child-focused activities, expert panels or town halls, and the creation or expansion of exhibits.

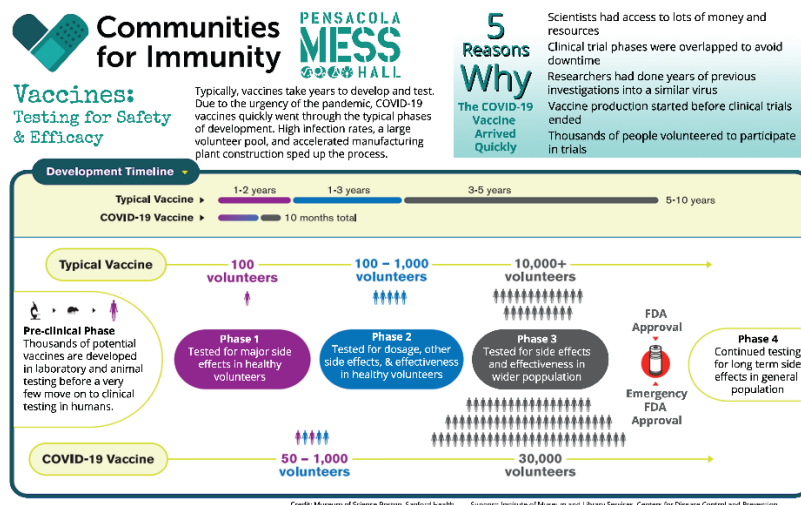
Throughout the project activities, ASTC and partner associations worked with the CDC and IMLS to support the awardees by uplifting effective, vetted resources and examples, hosting informational sessions with experts on COVID-19 vaccines and misinformation, and providing as-needed one-on-one coaching for awardees experiencing challenges implementing their projects. The project also facilitated connections between awardees taking similar approaches or facing similar difficulties.

² Eight awardees primarily support tribal communities; five of these identified as a library, museum, or other.

Designing for Local Impact

To inform their localized approaches, the majority of awardees engaged in three important design parameters: gathering information on local vaccine hesitancy, forming partnerships with other community organizations, and designing activities for target audiences and communities.

Some awardees gathered information about local vaccine hesitancy from national and local data sources and especially through direct interaction with target audiences, by talking with hesitant individuals either informally or as part of workshops or focus groups aimed at unearthing their reasons for distrusting COVID-19 vaccines. Others consulted with local partners and/or conducted further research about vaccine hesitancy in their area. Based on this research, awardees reported that the most common sources of vaccine hesitancy were misinformation, safety concerns, and government distrust. Lack of access to vaccines or accurate information were also factors. Awardees then used these data to effectively tailor messaging to allay their audiences' primary reasons for not getting vaccinated, presenting fact-based information from trusted local sources to combat misinformation, safety, and trust concerns or, in many cases, bringing vaccines directly to the populations that needed them.



Vaccine timeline developed by Pensacola Mess Hall.

To design and deliver their activities, awardees also collaborated with a wide range of partners, including health departments, hospitals, community-based non-profits, faith leaders, and schools. Depending on the needs of their specific community and target audience, other awardees partnered with food pantries, veterans' groups, radio stations, a transit authority, a youth sport league, and a local shopping mall. Partners offered medical expertise, clinical and logistical support, or added legitimacy in marketing to the target audience.

The majority of awardees defined their target audience as vaccine-hesitant people with certain shared characteristics. This included cultural groups that tended to have high rates of vaccine hesitancy, including Black, Latino, Native or Indigenous, and Pacific Islander, and

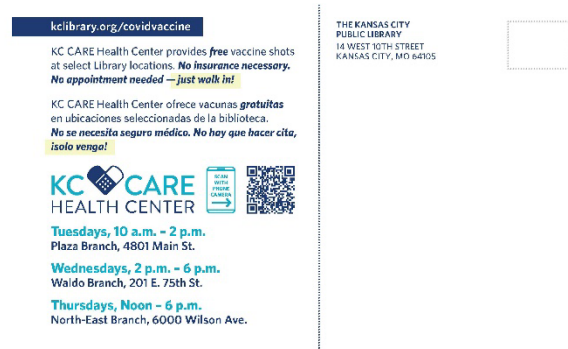
specific age ranges, primarily children aged 5–11 and families, but also teens and the elderly. Other targeted groups included rural communities, marginalized or lower-income people, individuals with disabilities, active military, veterans, first responders, and service workers. To reach these target audiences, awardees used culturally and locally responsive approaches to increase access to and trust in the vaccines. Awardees worked to meet their target audiences where they were, both in selecting key locations and times for activities that would reach desired communities and in strategic identification of partners and messengers who were well-known and well-trusted among members of their target audience. Examples of responsive approaches include holding vaccine clinics in the evenings to improve access for working people, at well-attended local events, or in rural areas with no other nearby option, or targeting promotion efforts in areas with lower vaccination rates. Drawing from the national resources ASTC and the partner associations collected and shared online, the majority of awardees also developed their own locally-responsive materials, which included translating resources into different languages and using phrasing and messages that especially resonated locally. Several awardees reported that their ability to recharacterize the source of information as the museum, library, or other trusted member of the community was especially helpful in reaching individuals who may be distrustful of local or national public health organizations.



Social media post shared by Scott Family Amazeum.



Postcard developed by The Kansas City Public Library.



The Impact

With the help of SRI Education (“SRI”), ASTC evaluated the *Communities for Immunity* project to assess the impact of the awardees’ efforts. SRI’s descriptive study drew from project reports, surveys, and interviews to understand changes in participants’ vaccine confidence, relationships between participants and awardee organizations, and organizations’ perspectives on their activities and collaboration. SRI collected data across both the 50

Round 1 awards made in September 2021—with award activity taking place September–December 2021—and 50 Round 2 awards made in November 2021—with award activity taking place January–June 2022.

By the Numbers

The scope and variation in the awardee activities across the country made measuring the collective reach of *Communities for Immunity* challenging; however, the awardees' tracking efforts and SRI's evaluation did provide promising data. Across the 100 Round 1 and Round 2 awards, awardees reached more than 1 million people with visually, informative materials including exhibits, posters, and flyers. The more participatory nature of Round 2 awardees' projects (e.g., interactive exhibits and programming) allowed more focused participant tracking. Based on the Round 2 awardee's audience tracking data, more than 50,000 people attended 388 interactive *Communities for Immunity* events, programs, and exhibits in January–June of 2022. Twenty-five of 50 awardees hosted vaccine clinics as part of their *Communities for Immunity* effort, at which more than 5,200 people were vaccinated,³ representing up to 32% of the still unvaccinated adults in attendance. Only a fraction of events supported by *Communities for Immunity* directly offered the opportunity for vaccination—and the project as a whole was focused on boosting confidence in COVID-19 vaccines among vaccine-hesitant individuals, rather than providing vaccinations for people who were already convinced of their safety and efficacy. As such, ASTC concludes that the actual number of people ultimately vaccinated as a result of a *Communities for Immunity* event is much larger.

More than 80% of Round 2 awardees and their partners reported that their *Communities for Immunity* activities increased vaccine confidence among their target audiences. Vaccine confidence was measured by the quantity of vaccines administered and inferred from participant feedback. The total number of direct survey responses from participants was small because the evaluation was designed to be minimally invasive because of the importance of maintaining trusting relationships between individuals and the awardee organizations. However, the responses that were received provided helpful insight into the *Communities for Immunity* activities' ability to shift perspectives. In particular, a total of 441 participants provided responses to the Round 2 survey, representing 1% of individuals engaged in Round 2 activities. While more than half of these survey respondents (63%) reported they were already vaccinated before

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Artwork by Gabriela Sepulveda as part of
Springfield Cultural Partnership's Trust Transfer
Project.

³ This number represents the number directly traceable to *Communities for Immunity* funding and is therefore a low estimate of direct vaccination at awardee institutions. Many museums and libraires taking part in *Communities for Immunity* reported much larger vaccination numbers across the full scope of their pandemic community outreach.

attending the *Communities for Immunity* event, nearly a quarter (101 of 441) reported getting vaccinated while participating in a *Communities for Immunity* event.

To ensure that the evaluation did not over index for shifting perspectives, SRI measured changes in participants' vaccine confidence only among adults who were still unvaccinated after participating in a *Communities for Immunity* event (64 of 441) and parents and caregivers of unvaccinated children (72 of 221 parents/caregivers). Still-unvaccinated respondents, when asked about their confidence in the adult vaccine, were split. After attending a *Communities for Immunity* event, approximately half of them reported feeling more confident in the vaccine, while the other half reported feeling less confident. Parents of unvaccinated children were six to nine times more likely to report more confidence in the pediatric vaccine than to report less confidence after participating.

An Emerging Role for Science Centers and Museums

Beyond the numbers and the specific parameters of COVID-19 vaccine advocacy, the *Communities for Immunity* initiative shows that U.S. science centers and museums are well-positioned to help their communities understand challenging socioscientific issues, and with the right resources, can motivate visitors to take action to protect their communities. Science centers and museums have the key factors needed to partner with their communities to understand and address these issues.

First, science centers and museums know how to access and engage target audiences, including on complicated and sometimes contentious issues. As science communication and engagement experts, science centers and museums have the resources to understand which individuals and organizations need to be at the table to address an issue, and how to get them to engage in a conversation. *Communities for Immunity* awardees did just this, by first identifying which members of their community were vaccine hesitant and which organizations could assist with increasing vaccine confidence, and then partnering with the identified organizations to design informative and interactive engagement across a variety of mediums to influence that target audience. Through thoughtful project design, museums engaged participants inside their institutions, out on the street, at community events, online, and through a wide range of local settings, depending on the needs of the specific audience and the most effective ways to reach them.

Some awardee organizations were initially concerned that involvement in this project might alienate some members of their communities, especially those who were not already familiar with their institutions. However, the evaluation data show that museums were effective at expanding their reach by engaging their communities on the important and timely issue of vaccination; surveys indicate that nearly a quarter (23%) of *Communities for Immunity* participants surveyed were first-time visitors and an additional 16% visited hosting organizations only 1-2 times a year. And, for those first-time and infrequent visitors, the museums' engagement strategies worked. Of the participants who had never or rarely visited before, 41% reported that they would visit more often following their participation in *Communities for Immunity* activities. Contributing to this sense of trust, more than 80% of participants reported feeling a sense of belonging and comfort with host organizations.

Second, both existing and new audiences trust that science centers and museums are sources of verified and unbiased information. In research conducted between 2001 and 2021,

museums continuously rank among the most trustworthy institutions in the U.S.⁴ The American public regards museums as highly trustworthy—ranking second only to friends and family. They are seen as significantly more trustworthy than researchers and scientists, non-governmental organizations, news organizations, the government, corporations and businesses, and social media. *Communities for Immunity* proved this trust extends even to information that is highly politicized and controversial. More than 80% of individuals who engaged in *Communities for Immunity* activities viewed the hosting organization as a trustworthy source of information about COVID-19 and as a place to learn about issues important to them.

Third, as place-based institutions typically with physically-defined markets, science centers and museums are generally not competitive with each other and are therefore primed to work collaboratively to address wide-scale social issues. Awardees were required to share resources and approaches they developed through *Communities for Immunity*, and in doing so, other museums were able to recreate or iterate on effective strategies. Museums' willingness to share resources and ideas was not limited to projects supported through *Communities for Immunity*; there were many other examples of museums' eagerly making materials available to the community, including around the COVID-19 pandemic.

Conclusion

Communities for Immunity provided insight into communication methods, effective partnerships and collaboration, and the depth of trust the public has in museums, libraries, and other cultural organizations. Most importantly, *Communities for Immunity* proves science centers and museums have a role to play in helping their communities understand complex socioscientific issues, and motivating visitors to take action. ASTC looks forward to supporting science centers and museums in using the lessons of *Community for Immunity* to address other public health challenges, as well as broader social challenges, including environmental sustainability.

⁴ Research commissioned by the American Alliance of Museums in 2001 found almost 9 out of 10 Americans find museums to be trustworthy—and no other institution rated a similar level of trust. Subsequent research, including reports issued by the Institute of Museum and Library Services (2008), Reach Advisors (2015), IMPACTS Research (2017), Wilkening Consulting (2018), and IMPACTS Research (2020) tracked sustained high levels of public trust in museums throughout the beginning of the 21st century. AAM's [Museums and Trust Report](#) (2021) most recently confirmed that Americans continue to regard museums of all types as highly trustworthy.

ABOUT THE PROJECT

Communities for Immunity was an initiative of the Association of Science and Technology Centers, Institute of Museum and Library Services, American Alliance of Museums, and the Network of the National Library of Medicine, with support from the Centers for Disease Control and Prevention, and in collaboration with the American Library Association, the Association of African American Museums, the Association of Children's Museums, the Association for Rural and Small Libraries, the Association of Tribal Archives, Libraries, and Museums, and the Urban Libraries Council.

Founded in 1973, the [Association of Science and Technology Centers](#) (ASTC) is a network of nearly 700 science and technology centers and museums, and allied organizations, engaging more than 110 million people annually across North America and in almost 50 countries. With its members and partners, ASTC works towards a vision of increased understanding of—and engagement with—science and technology among all people.



The [American Alliance of Museums](#) has been bringing museums together since 1906, helping to develop standards and best practices, gathering and sharing knowledge on issues of concern to the entire museum community. Representing more than 35,000 individual museum professionals and volunteers, institutions, and corporate partners serving the museum field, the Alliance stands for the broad scope of the museum community.



The [Institute of Museum and Library Services](#) is the primary source of federal support for the nation's libraries and museums. We advance, support, and empower America's museums, libraries, and related organizations through grantmaking, research, and policy development. IMLS's vision is a nation where museums and libraries work together to transform the lives of individuals and communities. Follow IMLS on [Facebook](#) and [Twitter](#).



The [Centers for Disease Control and Prevention](#) (CDC) works 24/7 protecting America's health, safety and security. Whether disease start at home or abroad, are curable or preventable, chronic or acute, or from human activity or deliberate attack, CDC responds to America's most pressing health threats. CDC is headquartered in Atlanta and has experts located throughout the United States and the world. For more information about CDC, visit [Centers for Disease Control and Prevention \(cdc.gov\)](https://www.cdc.gov).



The mission of the [Network of the National Library of Medicine](#) (NNLM) is to advance the progress of medicine and improve the public's health by providing U.S. researchers, health professionals, public health workforce, educators, and the public with equal access to biomedical and



health information resources and data. NNLM's main goals are to work through libraries and other members to support a highly trained workforce for biomedical and health information resources and data, improve health literacy, and advance health equity through information. NNLM engages meaningfully with current and future audiences to increase information access, with priority for Underrepresented Populations. NNLM members are the "field force" or trusted ambassadors for NLM products and services, providing information services, engagement, and instruction, or funding for projects to do the same, to the public, researchers, health professionals, and public health workforce.

The [American Library Association](#) (ALA) is the foremost national organization providing resources to inspire library and information professionals to transform their communities through essential programs and services. For more than 140 years, ALA has been the trusted voice of libraries, communicating the library's role in enhancing learning and ensuring access to information for all.



The [Association of African American Museums](#) (AAAM) is a nonprofit member organization established to support African and African American focused museums nationally and internationally, as well as the professionals who protect, preserve and interpret African and African American art, history and culture. Established as a representative and principal voice of the African American museum movement, the Association seeks to strengthen institutions and individuals committed to the preservation of African-derived cultures.



The [Association of Children's Museums](#) (ACM) champions children's museums worldwide. With more than 450 members in 50 states and 12 countries, ACM leverages the collective knowledge of children's museums through convening, sharing, and dissemination.



The [Association for Rural & Small Libraries](#) (ARSL) recognizes the uniqueness of small and rural libraries and is committed to providing an environment that encourages excellence within this community of practice, supporting their goals of service and speaking on behalf of this important constituency. Since 1 in 3 public libraries in the U.S. serve a population of fewer than 2,500 people, there is a great opportunity to support this set of library professionals that are often overlooked. We believe in the value of rural and small libraries and strive to create resources and services that address national, state, and local priorities for libraries situated in rural communities. Our mission: ARSL builds strong communities through professional development and elevating the impact of rural and small libraries.



The [Association of Tribal Archives, Libraries, and Museums](#) (ATALM) is an international association dedicated to preserving and advancing the language, history, culture, and lifeways of Indigenous peoples. Founded in 2010, ATALM maintains a network of support for Indigenous cultural programs, provides professional development training, enables collaboration among tribal and non-tribal cultural institutions, and works to sustain the cultural sovereignty of Native Nations.



The [Urban Libraries Council](#) (ULC) is an innovation and action tank of North America's public library systems. ULC drives cutting-edge research and strategic partnerships to elevate the power of libraries as essential, transformative institutions for the 21st century. More than 150 urban member libraries in the U.S. and Canada rely on ULC to identify significant challenges facing today's communities and provide new tools and techniques to help libraries achieve stronger outcomes in education, digital equity, workforce and economic development, and race and social equity.



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