



# Knowledge Fund Investment

Funded by

Nevada Governor's Office of

ECONOMIC DEVELOPMENT



Since its initial allocations in 2013, the Knowledge Fund (KF) has performed as its champions intended, driving dynamic new research, innovation, and public-private partnerships at UNLV in areas that Nevada has targeted for economic growth. KF projects have translated ideas into commercial products and paved the way for partnerships between the university and industry that are driving workforce development in support of a broad-based economic ecosystem in Nevada. The lessons learned from the most successful projects can now be applied to support Governor Sisolak's focus on economic growth, jobs, and workforce development to bolster Nevada's recovery and enhance its global competitiveness.

## Programs Supported: Serving Nevada's Economic Growth

### Global Gaming Capital Initiative

Launched at UNLV's International Gaming Institute (IGI) in 2013 to "diversify from" Nevada's tourism ecosystem, this is now a flourishing academic incubator, producing more issued and commercialized patents than any lab at UNLV. Just as importantly, this project was charged with building a "global intellectual capital" to lead our tourism sector through challenging times by branching out into new and dynamic areas – and it has succeeded. Starting with only two pre-KF employees, the IGI now has a globally recognized team of 38, most all of whom are funded on diverse, non-KF projects.

- Important driver of NFL's Raiders relocation to Las Vegas – and ~\$5B in associated relocation and economic impacts.
- "Expanding the Leaderverse," a public-private partnership with NV Legislature and Wynn Resorts, partners with CCSD to inspire diverse student minds to engineer and innovate our way forward.
- Last year, these industry successes led Caesars Entertainment to partner with UNLV in opening Black Fire Innovation within the debut research building at the Harry Reid Research & Technology Park in southwest Las Vegas.

### Nevada Institute of Personalized Medicine (NIPM)

NIPM is working to improve individual and community health in Nevada through research and technology commercialization, education, and workforce training. NIPM is moving Nevada from the trial-and-error medicine of today to the data-driven decision-making of tomorrow by decoding genomes to predict disease susceptibility, sift through treatment options, and fine-tune drug dosages to minimize adverse effects and help Nevadans lead longer, healthier lives.

- Created medical genetics clinic and Genome Sequencing Center.
- Named a National Institutes of Health Center for Research Excellence, focusing on COVID community spread
- Secured more than \$16 million in federal funding – an ROI of more than \$4 for every dollar invested.

### Applied Research Collaborative (ARC)

The Applied Research Collaborative (ARC) is modeled after a similar, successful program in northern Nevada, bringing together Nevada businesses and academia to promote innovation, research programs, and startups.

## Smart Lane Safety Systems

Smart Lane Safety Systems, a technology placed into roadways that alerts drivers to pedestrians and potential hazards, is crucial to mitigating pedestrian fatalities and other accidents, and adds another component to the regional effort to develop mobility technologies and autonomous vehicle infrastructure.

- Intellectual property licensed to Rebel Roadways Systems, LLC formed in 2019.
- Prototype installed on Harmon Avenue in Las Vegas for testing and development.
- Commercially viable product finalized in 2020 with sales anticipated by or before 2022.

## Stakeholder & Community Commercialization

The UNLV & Community Stakeholder Commercialization Project is focused on the development and successful commercialization of UNLV-based inventions. The UNLV Office of Economic Development has a project goal of increasing both the total number of inventions licensed and the number of start-ups established. This project brings UNLV together with community groups, service providers, subject matter experts, and entrepreneurs to help identify and assess UNLV inventions, to “de-risk” those inventions, and provide guidance and mentorship.

- More than 24 innovations have been analyzed for commercial development into the marketplace.
- Provided greater than \$60,000 in “gap-funding” and translational research funding.
- Development and testing of an air purifying technology to combat the COVID-19 virus and bacterial contaminants.

## Sports Research & Innovation Initiative

Nevada has seen a rapid and recent transformation into a professional sports mecca, and thanks to KF support it now boasts its own center of excellence to convene and serve this industry’s thought leaders.

- Catalyst grant program “seeded the sports innovation field” at UNLV, issuing 16 grants for intellectual property development in engineering, medicine, health sciences, hospitality, education, and several other colleges.
- Secured major federal research funding traumatic brain injury research on athletes (alongside UFC).
- Launched with fanfare the Al Davis-Eddie Robinson Leadership Academy for minority coaches/GMs (with the Raiders).

## Making a Difference for Nevada

### Innovation Supporting University Infrastructure

Thanks to the Knowledge Fund, UNLV launched a never before seen in Nevada innovation pipeline: the \$35M Black Fire Innovation facility, lauded by Senator Harry Reid and Governor Sisolak at its grand opening in January 2020. Already, this has provided an enticing gateway to attract new businesses to Nevada, such as Intel, Palo Alto Networks, Panasonic, Adobe, LG, Avaya, Salesforce, Nutanix, and Zoom.

*“Collaborating in partnership with UNLV is the perfect recipe for success. Black Fire Innovation is unprecedented, bringing together top researchers and industry experts in a unique and dynamic environment that enables emerging student talent, technology partners and the community to work together.” -Tony Rodio, Caesars CEO*

*“(These) collaborations between industry and academia simply aren’t possible on many college campuses today.”- Governor Steve Sisolak*

*“Black Fire is a cornerstone. This will benefit Nevada for many years to come. I was involved in getting the legislation passed in Washington, but to be honest with you, I didn’t know it would end up like this!” – Senator Harry Reid*

*“Don’t you just love smart kids?” – Gayle King, CBS News This Morning, reacting to a story on UNLV’s student-faculty innovation programs sponsored by the Knowledge Fund.*

**5**  
Spin-Off Companies  
Created

**\$2,381,000**  
Commercialization  
Revenue

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