

Innovatrics Ranks First Across Four Key NIST ELFT Accuracy Metrics

BRATISLAVA, SLOVAKIA, July 29, 2026 /EINPresswire.com/ -- Latest NIST Evaluation of Latent Friction Ridge Technology results place Innovatrics first across selected rank-based and threshold-based latent fingerprint [identification](#) measures in a 12-vendor comparison

Innovatrics, an independent provider of biometric technology, today announced that the latest NIST Evaluation of Latent Friction Ridge Technology, or ELFT, results place Innovatrics first across four selected measures of latent fingerprint identification accuracy in a comparison of 12 vendors.

NIST's ELFT benchmark measures how accurately algorithms can search latent [fingerprints](#) against large reference databases. Latent prints are often partial, unclear, or recovered from surfaces at crime scenes. The evaluation covers searches using raw fingerprint images alone, as well as searches supported by features manually marked by experienced forensic examiners.

The latest results highlight Innovatrics' performance across both rank-based and threshold-based latent fingerprint searches, which are important for [law enforcement](#) agencies and forensic laboratories handling large candidate lists, difficult image quality, and time-sensitive casework.

First Place Across Four Accuracy Measures

The comparison highlights Innovatrics' first-place performance across four specific metrics reported by NIST.

For Rank-1 Hit Rate with no threshold, Innovatrics reached 99.3 percent. This means the correct subject appeared first in the candidate list in 99.3 percent of searches.

#	Vendor	Rank-1 Hit Rate (%)	Rank-100 Hit Rate @ FPIR=10% (%)	DoD FNIR @ FPIR=0.01 (%)	DoD FNIR @ Rank 1 (%)	Avg rank
1	Innovatrics	#1 99.3	#1 98.9	#1 4.85	#1 3.01	1.00
2	Beijing Hisign	#3 98.9	#3 98.2	#2 5.14	#4 3.61	3.00
3-4	Neurotechnology	#4 98.6	#2 98.6	#4 6.35	#3 3.23	3.25
3-4	Rank One Computing	#2 98.9	#4 98.2	#5 7.49	#2 3.18	3.25
5	IDEMIA	#5 97.5	#5 96.8	#3 6.22	#5 3.80	4.50
6	NEC	#6 96.1	#6 93.7	#6 16.78	#6 7.78	6.00

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For Rank-100 Hit Rate at FPIR = 10 percent, Innovatrics reached 98.9 percent. This means the correct subject appeared within the first 100 candidates in 98.9 percent of searches when a threshold was used to automatically filter out weaker results.

On DoD-Provided Dataset #1, Innovatrics recorded a false negative identification rate, or FNIR, of 4.85 percent at FPIR = 0.01. This means missed identifications were 4.85 percent when the algorithm operated at a strict false positive identification rate of 1 percent.

On the same DoD-provided dataset, Innovatrics recorded an FNIR at Rank 1 of 3.01 percent. This means the correct subject was missed as the top candidate in only 3.01 percent of searches on the challenging dataset.

Supporting Faster Candidate Review

Rank-1 accuracy indicates how often the correct subject appears at the top of the candidate list presented to a human examiner. By achieving a 99.3 percent Rank-1 Hit Rate, Innovatrics secured the highest result in the selected vendor comparison.

The result was achieved using the latent fingerprint image alone, without relying on features marked manually by an examiner. For forensic teams, placing the correct subject first can help examiners reach the relevant record sooner and reduce time spent reviewing unlikely candidates.

Strong Results in Threshold-Based Searches

In addition to rank-based matching, Innovatrics achieved a 98.9 percent Rank-100 Hit Rate at FPIR = 10 percent.

Threshold-based searches use automated similarity scores to filter out weaker candidates before results are presented for human review. This can help control the number of unlikely records entering the workflow while retaining the correct subject in the candidate list.

The results on DoD-Provided Dataset #1 also show performance under both threshold-based and rank-based conditions. The 4.85 percent FNIR at FPIR = 0.01 measures missed identifications at a strictly defined operating threshold, while the 3.01 percent FNIR at Rank 1 measures how infrequently the correct subject failed to appear first.

Built for Expert-Led Forensic Workflows

Latent fingerprint technology is designed to search large databases and return highly probable matches for trained examiners. It does not make the final forensic identification on its own.

For law enforcement agencies and forensic laboratories, stronger rank-based accuracy can shorten candidate review times. Strong threshold-based performance can help control the volume of weak matches entering the workflow. Together, these capabilities support more efficient investigations while preserving expert oversight.

Results shown from NIST do not constitute an endorsement of any particular system, product, service, or company by the U.S. Government.

About Innovatrics

Innovatrics is an independent provider of biometric technology for identity management and secure digital services. Since 2004, the company has delivered biometric solutions that have helped more than 1 billion people in 80+ countries, supporting use cases ranging from criminal investigation and border control to digital onboarding and secure access.

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