"Providing partners a simple solution to send and receive files is invaluable"

Researchers at Manaaki Whenua – Landcare Research Group (MWLR), part of the Bioeconomy Science Institute, have welcomed the arrival of FileSender as a game-changer in data sharing – resolving many of the long-standing challenges they faced in transferring research data efficiently and securely. FileSender, as a solution, has proven to be invaluable; it is straightforward, simple, and user-friendly. Guest vouchers enable external users to share data easily with the host. In the year since launching FileSender in August 2024, MWLR users have uploaded 4,688 files totalling 1.7 TB and downloaded 6,914 files totalling 2.2 TB.

MWLR is dedicated to the sustainable management of the terrestrial environment and biodiversity that underpin New Zealand's bioeconomy. Through innovative science and research, MWLR is uniquely positioned to harness the emerging economic, environmental, and social opportunities that shape the future of Aotearoa New Zealand. MWLR supports all of New Zealand's land-based sectors by addressing complex challenges, to deliver research impact and positive outcomes.

"A key challenge is that we work with very large amounts of data. For example, part of our scientific and commercial activities, MWLR utilises drones to take high-resolution imagery and light detection and ranging (LiDAR) scans of forest canopies and farmland. We also use large satellite image files. These images and point clouds need to be delivered to and from clients and collaborators as part of our research, government obligations, and science outputs," says Kim Klinkhamer, MWLR Group Infrastructure Manager.
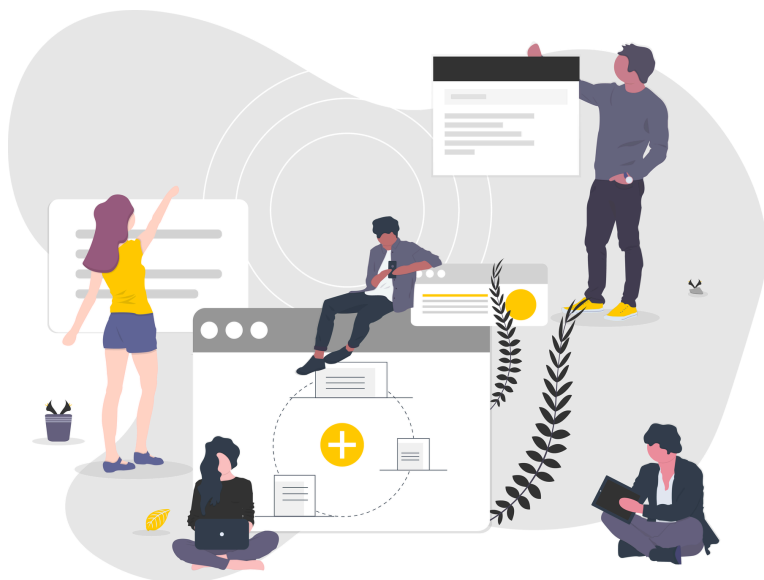
Simplifying
the transfer of data
to and from third parties

FileSender at REANNZ, New Zealand's National Research and Education Network (NREN), allows users to share files as large as 5TB in one go, easily and securely. Users simply drag and drop files into their web browser, then send a link to the recipient once they have uploaded the data. A notification lets the sender know when content has been downloaded, and files are automatically deleted after 15 days. The product is now freely available to REANNZ members participating in the Tuakiri identity federation.

MWLR was the first REANNZ member to pilot its use, trialling it for the transfer of large files, both in number and size.

"Previous methods of file transfer involved using cloud services, public FTP, sharing files as email attachments, and even the shipping of physical hard drives. These approaches were unreliable for handling large data sets, lacked reporting, and in some cases were insecure. Some users resorted to sharing files via email, and we were keen to remove the need to do this, particularly as using emails runs the risk of data breaches and serious compliance consequences. Users outside of MWLR also had to learn how to use the various services, such as FTP. FileSender addressed these issues – simplifying the transfer of data into and out of MWLR."

Kim Klinkhamer, Infrastructure Manager
Bioeconomy Science Institute, New Zealand
Manaaki Whenua – Landcare Research Group

The introduction of FileSender has been a game-changer at MWLR. It's easy to use with no new application to install for either the sender or receiver. Additionally, its end-to-end encryption option ensures the security of the files in transit on the internet. FileSender utilises single sign-on, provides usage statistics, and meets MWLR's needs regarding data sovereignty.

Researcher and Science Team Leader, Ben Jolly, described how FileSender freed up time and mental capacity: "In the past, data sharing could take up hours of a researcher's chargeable time and often involved input from the IT team. The problem-solving required between the sender and the receiver was a drain on time and energy, which distracted staff from their core work. With FileSender, data transfer tasks aren't something we need to think about anymore; it's much easier."

FileSender is a big step up over previous solutions, particularly in terms of cost and ease-of-use for clients. The command-line tool for uploading datasets is also incredibly useful when sending data directly from data analysis servers or high-performance computing (HPC) systems.

A guide for using FileSender is provided to staff on the MWLR intranet and aligns with its IT service management and security policies.

While FileSender is a federated service, meaning members must have Tuakiri enabled, it does offer a one-time voucher system to allow users to nominate non-Tuakiri members to send files. This feature enables external partners to send and/or receive data.

REANNZ has partnered with Catalyst Cloud, ensuring data is hosted in Aotearoa New Zealand by a locally-owned and operated organisation, which aligns with Māori data sovereignty and Privacy Act requirements.