

Making Knowledge Workers more Knowledgeable



Ardenno Collaboration Center™

Ardenno Helps Knowledge Workers to

Collaborate Better Globally

by Making Information more **Accessible**

While Increasing **Search Capabilities and**

offering **Information Context and Relevancy**



Making Researchers More Productive

Tomorrow's knowledge worker will be the intellectual driver for successful companies, empowered by individualized tools, knowledge, informational sources, social networks, and employment styles.

Gartner

Today's research community is faced with the stark reality that the velocity that data is being created will continue to accelerate at exponential rates over the next decade. The key to the success for tomorrow's research organization will be determined by how they enable this large amount of data with context and content relevancy. It has become vital for organizations to identify logical content relationships amongst the vast amount of data.

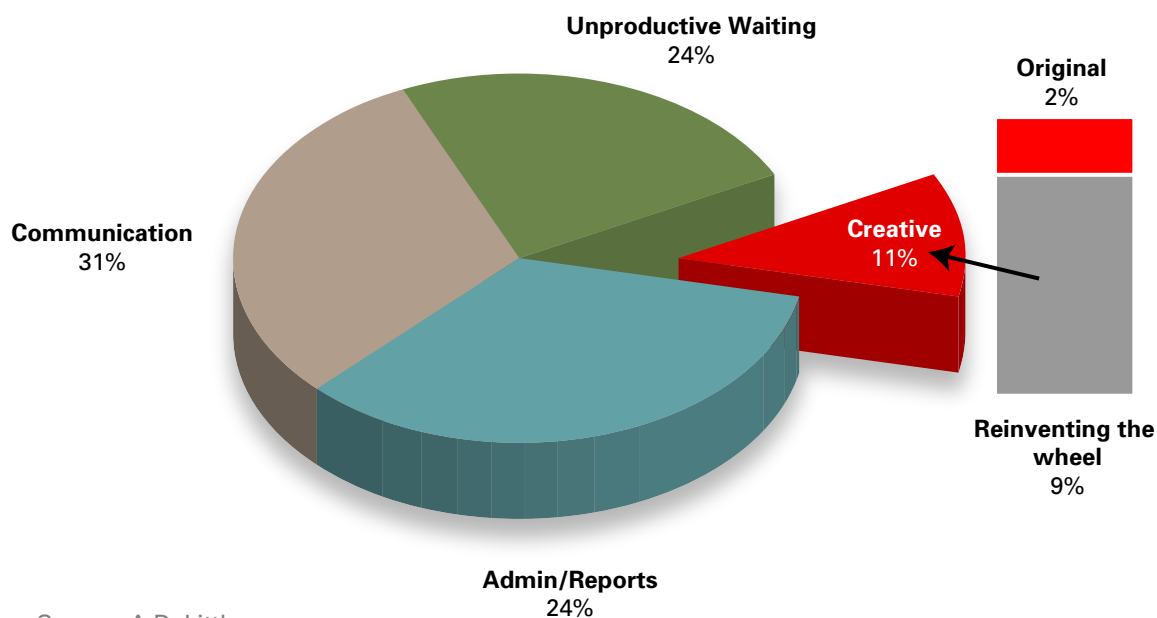
Research organizations are realizing that in order for their teams to work collectively and not as groups of individuals, they must create an automated knowledge management environment that fosters sharing and collaboration, without adding any additional administrative overhead to the individual researcher. Given the vast array and magnitude of available data, collaboration is becoming the difference between success and failure and beating your competition to the market. Ardenno provides a rich collaborative solution to enable research organizations to better collaborate and make better use of existing content within their organization.

The key problem that Ardenno solves is in making today's researcher more productive and more knowledgeable. As the graphic below from an A.D. Little study shows, today's researcher spends less than 11% of their time working on creative research. In order to increase the creative time of a researcher, solutions must be put in place to maximize their research time. Ardenno is a company focused specifically on solving this research & development business challenge. Our products have been designed by people from the research industry. We understand the challenges and realities confronting researchers and global teams.

The Ardenno Collaboration Center™ solution helps address key business pains related to information accessibility, information relevancy, the ability to easily locate and access structured and unstructured content with meta tags and the ability to provide management and metrics on laboratory equipment.

My Data Syndrome- Data Accessibility

Researchers frustrated with the inability to access and locate needed files have taken matters into their own hands by hoarding much of their active research, which can elegantly be called the "My Data Syndrome". Of course, this completely is contrary to existing storage and compliance system SOP's to secure your valuable intellectual property. Often, storage managers and IT staff have been forced to keep an excessive amount of data available on a very costly storage environment in order to appease their user community.



Source: A.D. Little



Balancing IT & Research Needs

The My Data Syndrome has individually solved for each researcher, their own concern for data accessibility. The hoarding of files clearly does not enable any serious level of information sharing or team collaboration. And we wonder why we continue to be disappointed with the return of investment on research spending. If your new product pipeline is not as strong as you think it should be, you may be inflicted with the My Data Syndrome. Ardenno can help.

Please Don't Move that File, It Might be Important One Day

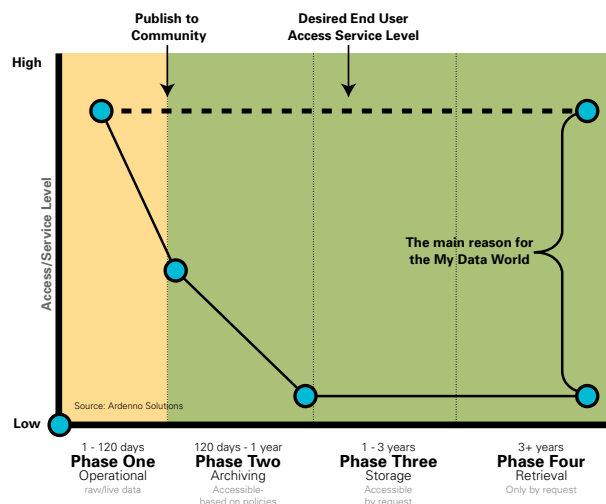
IT is losing the storage battle with research. The low cost of storage infrastructure, has made it almost too easy to just add a couple of terabytes of storage to meet growing storage needs. In a recent CFO.com survey, more than half of the corporate executives surveyed said their businesses have two to three times the amount of information available to them as they had 12 months ago. The worst thing about all this data is that most of the "information" about these files is buried in a sea of useless clutter. We've come to accept data clutter as a way to appease the user community.

There must be a better way to establish the "importance and relevancy" of a file. It would be of great value to the IT organization if they could have a "sense" of what files were really important and could find a way to continuously and automatically rank the relevancy of files ---- as long as the solution leveraged the existing archiving and storage infrastructure. The balancing of IT and Research needs can easily be addressed with a solution that can automate the process of providing file and data relevancy. Ardenno can help quickly solve this situation.

Data Here. Data There. Data Everywhere.

The mountains of data that today's researcher is confronted with is overwhelming. Scientists are also confronted with a myriad of data formats. The data comes in either a structured format (i.e. Word, Excel, ERP, LIMS, Mascot, instrument data, etc.) or in an unstructured format (i.e. text in emails, text on websites, images, pictures, graphics, etc.). It's important that the researcher has access to all types of content, when they want it. The problem though, is that much of the unstructured data has had to be shoe horned into various internally developed databases in order to fit into existing database systems.

As a researcher, it is important to find ways to quickly "review" and locate useful content in a timely manner. One of the biggest cost drivers in research today is the duplication of previously executed work, which can be directly attributed to being



unable to locate amongst the massive amounts of data, similar research efforts and results. It is vital that improved internal searching be made available to support behind the firewall content searching. There clearly is a difference between consumer searching, such as Google and having a business oriented search capability that must ensure intelligential proper protection. Ardenno can help.

The Time has Come for Key Laboratory Metrics

A key missing link in most research environments is the inability to generate metrics for key research resources, be that people, equipment, or the inability to track resource allocation and lab capacity. Researchers are looking looking for a way to increase their lab efficiency and improve turnaround times. If you have this same need, Ardenno can help.

Take Ardenno for a 30-day test drive and see for your self how we can help make your team more knowledgeable on day one!

Ardenno promotes a collaborative research environment across multiple user Industries. Key industries supported include:

- Pharmaceutical & Life Science Research and Development
- Biotechnology Research and Development
- Diagnostics & Healthcare Research and Development
- Consumer Goods Manufacturing Research and Development
- Semi-durable Goods Manufacturing Research and Development
- Durable Goods Manufacturing Research and Development



Reduce your Administrative Overload

In a climate of globalization, mergers and the never-ending drive to accelerate product development, organizations need—more urgently than ever—to tap into resident knowledge.

CIO.com

Ardenno Solutions provides a Collaborative Knowledge Management software solutions that enable research teams to produce and deliver research of the highest quality, with an improved utilization of time and project resources and minimizes project redundancy. Ardenno's Collaboration Center™ is purpose built to deliver almost instant collaboration benefits, without adding administrative project overhead. Ardenno applies graphical social networking visualization techniques to provide knowledge workers with improved data relevancy which is vital for disparate research organizations.

Traditional information management systems use folders and focus on separating information—they force you to divide information into containers. Separating information in this way creates barriers between information and ignores the naturally occurring relationships inherent in the information. Ardenno takes the opposite approach—it enables you to link information into a network of logical associations or ontology's.

Market forces are driving companies to construct overlaying knowledge management frameworks, while enabling companies to leverage their existing information management system investments in solutions such as ERP and Portals. Many companies have attempted to address these macro-information-based issues with structured portal solutions and document management systems. Unfortunately, the research community just can not successfully fit into a structured solution whose focus is document management or a company wide intranet environment that needs to support the entire organization. Electronic lab notebooks, although interesting to some, have generally not been as successful as hoped in research, due to their structured environment and seem to add yet another administrative layer for today's researcher to navigate their way to support company SOPs. Researchers are looking for solutions that reduce their administrative work, not add to it.

Capabilities Summary:

- ✓ Provides collaboration framework to minimize "My Data Syndrome"
- ✓ Provides automated way to create secure and collaborative copies of native files
- ✓ Provides visual social networking concepts to aid research efforts
- ✓ Streamlines ability to add intelligent meta tags and industry specific meta tag ontologies to files
- ✓ Provides Knowledge Bags™ for easy knowledge access
- ✓ Offers a multi-level natural language filtering and searching engine
- ✓ Provides automated scheduling for *Set-it and Forget-it Collaboration™*
- ✓ Provides graphical view of file relevancy with Ardenno *Heat Index™*
- ✓ Provides embedded graphical management reporting
- ✓ Provides laboratory resource metrics with flexible graphical reporting
- ✓ Fully leverages existing storage and archiving environment

Ardenno helps researchers do more research... not less

Meeting Knowledge Management Market Requirements

The paradox of knowledge management is that technology can't really manage knowledge, which by definition resides in people's heads. At best, companies can build an environment that fosters and encourages the capture, sharing, and transfer of explicit, recorded information when it's available, and identifies expertise when it's not.

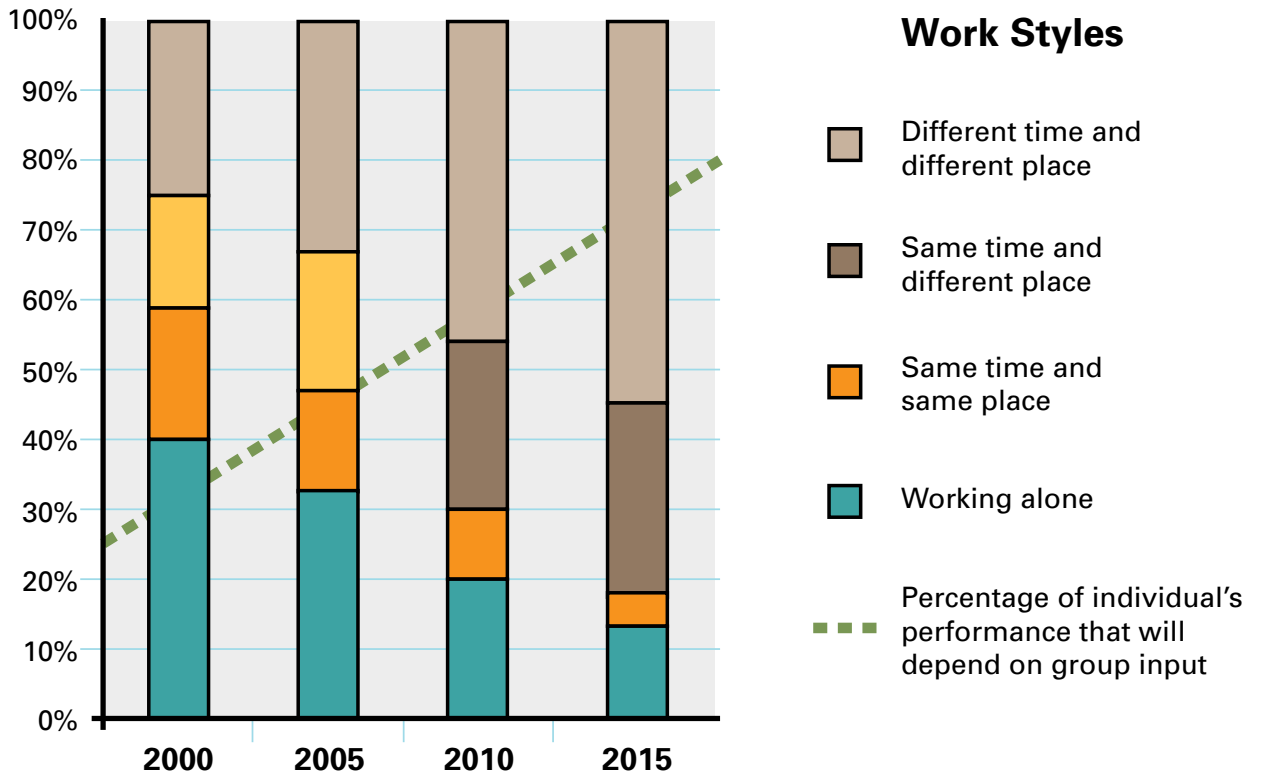
AMR Research

Collaborative Knowledge Management—that is, the sharing of intelligence across the enterprise and with partners—is rapidly taking hold in the research community. Leading companies are looking for better ways to foster positive working environments for their knowledge workers. Your ability to provide a constructive collaborative working environment is becoming

a work place requirement, as the workforce undergoes widespread change. Increasingly, these changes will enable people to “customize” their workplace, information sources, tools, learning options and community networks. As broadband and wireless networks continue to grow and proliferate, the work place will reshape itself rapidly.

As the graphic below indicates, the work environment is experiencing dramatic change.

The importance of physical proximity will greatly diminish. After all, if you are can recruit or retain a key employee without physical boundaries, your resource talent pool grows exponentially. Who really cares if they live in Beijing, San Paulo, Hyderabad, San Jose, Manchester, or Tokyo? This is not feasible without a strong collaborative knowledge management framework for the researcher. Ardenno can help.



Source: Gartner (March 2006)



Solving the Research Knowledge Management Challenge

R&D is increasingly important to maintaining margins, but the dollars available to fund R&D are shrinking. "Questioning these costs used to be heresy; now there is much greater pressure to be more productive.

CEO of a Fortune 500 Company

In today's competitive global business environment, making sure that the right data gets to the right place at the right time is often the difference between success and failure. Teams exist as groups of individuals, rather than as teams working collectively on common problems. Teams have become swamped in administrative tasks and the explosive growth of available data is overwhelming teams to miss important pieces of information available to advance their findings.

The key business challenge that Ardenno addresses is the enablement of researchers to maximize their productivity. Other key business challenges solved by Ardenno include:

Provide Effortless Team Collaboration over Time ✓

One of the biggest issues that faces a research team is the loss of key member and the addition of new members. Teams lose momentum when senior staff members transition off a project and are required to support a new team member during their ramp up period. One company stated that, "When a key researcher left in the middle of the project, the new researcher had almost a whole year getting up to speed. The project took over four years to complete instead of three." **Ardenno solves this business challenge** by providing an active and accessible data repository of structured and unstructured data files to enable new members to rapidly ramp up. Our *Set-it and Forget-it Collaboration™* ensures that automated processes continue to execute without manual intervention. Ardenno's Town Hall™ helps provide quick visual access and presentation of relevant files with social community networking capabilities.

Minimize Duplicate Research Effort ✓

Researchers have to replicate work that may have already been done to get the information they need. **Ardenno solves this business challenge** by offering a unique *Relevancy Heat-Index™* for each file indexed in the Ardenno repository to help researchers more easily search and locate similar research activities to reduce costly and time consuming duplicate research efforts. The *Relevancy Heat-Index* also provides team members with a quick understanding of what others are finding pertinent and valuable.

Eliminate Information Silos ✓

Conventional strategies for storing R&D data have forced investigators to operate in a "My Data" environment. Files are usually saved on the researcher's desktop or stuck on a server outside the mainstream storage infrastructure, where no one can find them, except the author. **Ardenno solves this business challenge** by securely storing newly created files within the storage infrastructure, making native collaborative file copies available in a separate location for shared access. Ardenno also provides each user with their own unique *Knowledge Bags™* for easy access to their favorite files, which helps apply relevancy factors for others to learn and understand what others have determined as important.

Provides Improved Equipment and Resource Utilization Metrics Reporting ✓

Research projects are often difficult to resource cost effectively because there is minimal utilization metric reporting available. Research project bottlenecks are mostly overcome, by over buying resource constraining instruments. **Ardenno solves this business challenge** by providing integrated summary and detailed resource usage reporting metrics by project, study, experiment, instrument, datasource, etc. to enable managers to better justify equipment purchases and to minimize project bottlenecks due to constrained staffing or financial resources.

Provide IT Solution that Requires Minimal Resource Commitment ✓

The increasing demands on IT has often stifled the ability for staffing internal development projects to address the needs to improve collaboration for their research department customers. **Ardenno solves this business challenge** with an easy to implement collaboration knowledge management solution that can be operational in hours and days; not weeks or months.

Securing Raw Instrument Data ✓

The recent scientific fraud case of Dr. Hwang Woo-suk in Seoul National University is causing dramatic changes globally on how raw instrument data is secured. Additional cases continue to come to light, such as the case of a professor in Sichuan University who published a famous paper on tumor immunology in Nature Medicine and now someone is questioning him about his data's reality, and the professor can not show his raw data. If he had Ardenno, the raw instrument data, such as the PCR and electrophoresis would be easy to review and validate. **Ardenno solves this business challenge** by automatically routing a copy of all raw Intellectual Property instrument data evidence to a secure location.



Capabilities Summary

Facilitates collaboration among knowledge workers

- Makes all operational data easily searchable and retrievable
- Provides visual social networking concepts to aid research efforts
- Eliminates information silos that thwart collaboration
- Provides autoamted scheduling for Set-it and Forget-it Collaborationtm
- Adds unlimited intelligent meta tags to files for classification ans searching purposes
- Offers a multi-level natural language filtering and searching engine
- Provides graphical view of file relevancy with Ardenno Relevancy Heat Index™
- Allows users to rapidly locate desired files by specific metadata criteria

Fast, low-cost implementation

- Eliminates the time and expense of custom application development
- Provides an off-the-shelf platform for R&D information sharing
- Can be operational in as little as a few hours

Securely stores all R&D files

- Protects intellectual property from the moment of its creation or change
- Automatically creates a secure archive copy of each file
- Uses a scheduling engine to automatically locate files to both secure and active collaborative locations
- Transfers files from potentially unsecured IP data collection instruments, analytical software products and knowledge workers' computers without manual intervention
- Accommodates the complex file structures of data acquisition software
- Permits flexible transfer control within a compliant data auditing framework

Improves utilization of existing infrastructures

- Complements and extends the capabilities of storage products from leading suppliers such as EMC, IBM, HP, Hitachi and Fujitsu
- Adds vital functions unavailable in legacy storage products, including indexed meta tags for easier file retrieval and audit trails for increased regulatory compliance
- Supports the addition of suffixes and prefixes to newly added Ardenno cataloged files for improved source file folder organization
- Provides embedded graphical management reporting
- Provides laboratory resource metrics for better utilization



Ardenno Collaboration Center

Seven Reasons to say YES to Ardenno

- 1 Ardenno gives you the ability to collaborate and share information faster, smarter and more secure.
- 2 Ardenno provides you with a superior level of data relevancy to better empower your collaboration and secure business search efforts.
- 3 Ardenno's Relevancy Heat Index adds a level of unmatched file context to enhance your collaboration and information sharing.
- 4 Ardenno provides embedded graphical metrics management reporting for improved resource utilization.
- 5 Ardenno helps automate the securing and collaboration of research intellectual property with our Set-it and Forget-it Collaboration.
- 6 We provide superior social networking and file relevancy with Ardenno Town Hall™.
- 7 Ardenno offers a pragmatic solution with aggressive pricing that can be quickly implemented by project teams and can scale to meet enterprise needs.

www.ardenno.com

About Ardenno Solutions

Ardenno Solutions, Inc. (pronounced R-den-O) is a provider of Collaborative Knowledge Management software solutions that aid knowledge workers become more knowledgeable. We enable research teams to produce and deliver research of the highest quality, with an improved utilization of their time and project resources and help them minimize project redundancy. Ardenno is purpose built to deliver almost instant collaboration benefits, without adding administrative project overhead. Ardenno applies graphical social networking visualization techniques to provide knowledge workers with improved data relevancy and data context, which is vital for disparate research organizations.

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