



Ver 1.3/ 15.05.2009/rm

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# DrawMGT Return of Investment

## 1. Summary

DrawMGT, a construction project and document management system, saves approximately 5 times its cost.

## 2. Purpose

This document is intended to provide a model for calculating whether it is financially worthwhile to purchase a project and document management system.

We present guidelines, via a case study, on how to calculate the ROI (return of investment) of a project and document management system for a construction project.

## 3. Applicability

Construction projects with teams and team members spread over multiple departments, companies and/or locations.

The ROI calculation is one of many factors that should be considered when making a purchase decision, and should not necessarily be used as the only criteria when evaluating project and document management systems.

## 4. Definition of Terms

ROI	Return of investment e.g. financial benefits
Kárahnjúkar	Kárahnjúkar hydropower project, the largest ever construction project in Iceland
KEJV	Kárahnjúkar Engineering Joint Venture (VST Consulting Engineers, Pöyry and Rafteikning)
Landsvirkjun	Iceland's national power company, owner of Kárahnjúkar project

## 5. ROI of Generic Project and Document Management System

The ROI is measured as the relationship between the organisation's total cost for the project and document management system and the estimated savings from using it. The benefits are mainly related to direct time savings by project staff. Essentially, the system provides efficiencies to all personnel who are required to produce manage and/or use project documentation.

An independent study by Agerra Consulting concludes that using a web based generic project management and documentation system (study was done on a mid-size and a large construction project) gives an average ROI rate of 4.5. In other words a web based project and document management system is worth 4.5 times the cost.

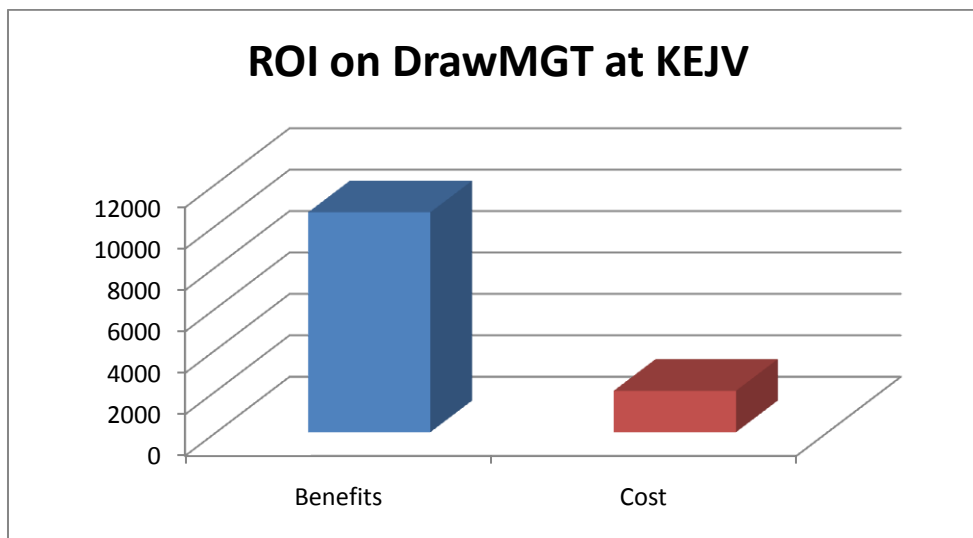
## 6. KEJV case study

SoftXS analyzed the costs and savings of the DrawMGT implementation for KEJV. The use of the system was studied over a four year period, over which time the system had over 300 registered users. The analysis itself is based on discussions with KEJV managers and engineers; and personnel at Landsvirkjun (the project owner).

The results were: By using DrawMGT, each of KEJV's project managers saved approximately 21 man-hours per month. Other project members each saved approximately 9 man-hours per month. Clerical staff saved an average of 12 man-hours per month. At the project level, KEJV is therefore saving more than 290 man-hours per month. This is approximately equal to two full-time staff positions, or approximately EUR 10,400 per month.

The total cost of using DrawMGT per month for KEJV is EUR 2,000; thus the ROI-ratio is 5.2. This means that, per year, the KEJV saved an average of EUR 124,000. Note that this figure does not include any estimates for cost savings by the site supervision or contractors.

The ROI of 5.2 for KEJV is higher than the ROI found by the Agerra Consulting study. This is not surprising because KEJV was using a **project specific** project and document management system, which delivers benefits to a wider range of project participants, as compared to the **generic solutions** used in the other study.



## 7. Benefits

Using DrawMGT saves time throughout the project. Since the tool makes a project's structure, content, phases and areas of responsibility very clear and easy understand, new and temporary project members are easily able to find documentation without training or requiring assistance; meaning that they are productive immediately upon their arrival. The management of an ongoing project is also more efficient, since much of the planning, control and follow-up is integrated.

Since all project information and documents are accessible via the Internet, project members can work from wherever they are, and are productive even when away from their office or the project site. They also avoid wasting time searching for information. Time lost due to the uncertainties of identifying the current revision of a document is eliminated.

DrawMGT is a web-based service, which requires no ongoing administrative efforts from an IT department, as is often required for traditional client-server based solutions. These are direct saves that we can calculate.

We believe DrawMGT can reduce the need for some physical meetings (and their associated travel costs). There can also be a reduction in costs associated with physical document distribution: printing, packaging, postage and express couriers.

The study also identified some intangible benefits from using DrawMGT, which are difficult to quantify. Some KEJV member companies have stated that their quality was improved because of the better transparency and tracking opportunities provided by DrawMGT. Overall quality also benefits because the entire project is forced to apply a uniform project methodology.

KEJV was perceived by the project owner as a more trustworthy and professional project partner thanks to the standardization, uniform structure, and improved control and accessibility that DrawMGT provided. In particular, the project owner was able to directly monitor the production and quality of the project documentation itself, without requiring assistance from KEJV.

## **8. Conclusion**

DrawMGT saves approximately 5 times its cost.

DrawMGT enhances the collaboration within project organizations, and between project's management team and its owner. This leads to time savings which generate direct project cost savings that can be calculated.

There are additional, difficult to quantify, savings, such as: improvements in the project's quality, reduction of errors and conflicts due to improved transparency, and improved perception of project partner's professionalism.

While we are convinced that DrawMGT will lower project costs, caution is required when attempting to calculate ROI. Every project is different and the actual savings and benefits depend on many project specific factors. Further the introduction of the system must be carefully managed, and its usage carefully monitored to ensure that you actually get the maximum benefit.

The following table shows how we calculated the ROI for DrawMGT for the Kárahnjúkar project. This model, appropriately adjusted, can be used for other projects. Should you need assistance please contact us.

# Return of Investment on DrawMGT Project and Document management System

Time & Cost Savings

		Saved hours per months & user	Number of users	Avg. time on project	Effect during % of project	Saved hours total/ month	Avg. Salary EUR/ hour	Cost saving EUR/ month	
Project management	Faster Delivery Cycles								
	Manager/ Lead Engineer	4	4	80%	100%	12.8	40	512	
	Other Project Member	2	25	25%	100%	12.5	30	375	
	Rapid Project Start-Up/ PM	8	4	80%	1%	0.3	30	8	
Communication	Effective Distribution of Informatoin								
	Manager/ Lead Engineer	6	4	80%	100%	19.2	40	768	
	Other Project Member	2	300	10%	100%	60	30	1800	
	Fewer/Shorter Meetings								
	Manager/ Lead Engineer	3	4	80%	100%	9.6	40	384	
	Other Project Member	2	25	15%	100%	7.5	30	225	
	Lower Travelling Costs	Price/ return trip:		600		# of travellers:		1	600
Document Mgmt	Spent Less Time Searching								
	Manager/ Lead Engineer	6	4	80%	100%	19.2	40	768	
	Other Project Members	3	300	15%	100%	135	30	4050	
Quality	Higher Quality Standards								
	Manager/ Lead Engineer	2	4	80%	100%	6.4	40	256	
	Other Project Member	0	300	15%	100%	0	30	0	
Print cost	Lower printing and distribution cost								
	Clerical staff	12	1	100%	100%	12	25	300	
	Printing charges & distribution cost							400	
Total	Total Savings in hour and EUR/ month					294		<b>10446</b>	