

The Art Engine is a Content Management System (CMS) specifically designed for artistic organizations and institutions. Currently Art Engine is being developed for use in Flaggfabrikken - Center for Contemporary Art, Hordaland Kunstsenter and Platform Stockholm. In short the Art Engine is both a system specifically designed to make a public website that fits the special needs of communicating culture and a task management system to run the daily activities of an arts insitution more effeciently. It has a both a versatile and user-friendly set up, that fits the fluctuating and diverse activities of art institutions on all scales.

The system includes functions for contract writing, renting out space and equipment, organization of public events, workflow for administrative tasks etc. All functions are integrated into a shared system that reduces the work between insitutions. Art Engine will makes organizations more efficient, leaving more time to develop artistic projects. The costs for the first phase of the project were received from all three of these insituions 50 000 HKS, 60 000 Flaggfabrikken and 60 000 from Platform Stockholm an accumulative 170 000 krs. This amount was 50 000kr short of our needs so we have not been able to complete all the objectives. Below are some of the key features of Art Engine and the development cycle that we are currently on.

~ DEVELEOPMENT KEY DATES VERSION 1 ~

PHASE 1:

October 20th, 2014 ~ Hordaland Art Center : Art Engine Startup 50 000kr

January 30th, 2015 ~ Hordaland Art Center : Initial Site Launched

Februray 12th, 2015 ~ Platform Stockholm Receives 50, 000 kr

April 7th, 2015 ~ Flaggfabrikken Funding Received 60, 000kr

April 7th, 2015 ~ Smartsheet Workflows Expanded to Hordaland Art Center

August 8th, 2015 ~ Art Engine Staging Servers Created

November 23rd, 2015 ~ Art Engine: Pages

Februray 20th, 2016 ~ Smartsheet Synchronization Intigration

Februray 20th, 2016 ~ Smartsheet Automated Exhibition Workflows

March 15th, 2016 ~ Art Engine & Smartsheet Statistics Dashboards

March 25th, 2016 ~ Flaggfabrikken Webpage Released

March 15th, 2016 ~ Art Engine & Smartsheet Statistics Dashboards

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August 1st, 2016 ~ Platform Stockholm Webpage Release

~ STAGING SERVERS ~

Staging servers are mirrors of Art Engine that are not currently live or being used for real functions in the art institution. They are testing sites where new functions can be viewed and tested before launching on the live site. Users can play test out the new functions without harming the live site.

Here is a link to the Flaggfabrikken staging site where you can explore and play with the Art Engine. <http://staging.flaggfabrikken.net/login> user:Flaggfabrikken password:FlaggFlagg

~ MULTIPLE SITES & PAGING ~

Art Engine can be thought of as website that is split in between multiple institutions. When a function is created for Art Engine is automatically shared with all the other sites. Although the sites look different they can borrow from each other's layouts. If HKS for instance would like to have one page use the same layout as Flaggfabrikken they can easily choose that option in the pages section of the configuration panel. Pages can also create a page by filter posts based on dates, tags, text, or combine a multitude of layouts. This ability to exchange information back and forth between institutions does not stop at the layout of the website but also extends to all the shared administrative workflows through cloud based systems. .

~ CLOUD BASED SYSTEMS ~

Cloud based systems put simply are software systems that run on the internet rather than a desktop software application. Gmail, Box.net, Google Drive, Mailchimp, and Campaign monitor are but a few examples of cloud based systems that you may of heard of. With the increase of speed in the internet these types of systems that run on the internet are becoming more powerful and easier to use.

Cloud systems can be accessed from anywhere with an internet connection and multiple people can collaborate easier because the files exist online and do not require transferring of files between computers. Systems are also dramatically cheaper than their desktop counterparts because services are rented and the software is distributed widely. The most important feature and is a current growing trend in the software industry is that these systems can be interconnected and share information between them.

This online interconnection is the basis of which Art Engine is built upon. AE is a cloud based system that is connected to a variety of other cloud based systems to synchronize information between them and even automate tasks that would otherwise be manual. This network of interconnected systems represents a digital infrastructure made possible through Art Engine. Some of the most important systems that Art engine connects to is a contract management system called Echosign (legally binding contracts that can be easily signed over the internet with a click of a button through email), Campaign Monitor (mass emailing system to send out marketing), Klipfolio (dashboard and statistics system), Facebook and most importantly Smartsheet.

~ SMARTSHEET CONNECTION ~

Smartsheet is a robust project management system. Simply put it is a series of online spreadsheets with a variety of different coordination features that make it easy to automate tasks and collaborate on projects in teams. It is the connection we have built between between Art Engine and Smartsheet which provides a strong platform for automation and has been one the most important steps thus far in the development of Art Engine system.

What we have been able to do is to synchronize the entire content of each AE website in Smartsheet essentially fusing the website with the management tools that run the art institution. This has given us the ability to increase the functionality of Art Engine through Smartsheet and has also given Art Engine access to all the different systems that Smartsheet is also integrated with. (which are many)

~ TASK MANAGEMENT ~

Smartsheet has a very important feature in called alerting. It can send emails or sms to anyone based on a task in a list of tasks. (rows in a sheet) This allows all the staff of all the institutions using Art Engine to be alerted to task they need to complete within a certain period of time. Below is an example of the Flaggfabrikken yearly workflow that is used to keep all Flaggfabrikken members up to date with what is happening next. Members can also create an overview of what tasks just they have to complete in one central sheet.

Task	assigned	Done/Skipped	Status	Begins
MAIN DATE (set to first day of the current year)	Cameron MacLeod			01/01/16
ALL YEARLY RECURRING TASKS				
yearly folder duplication	Cameron MacLeod			01/01/16
Duplicate yearly folder -- alerts, no checkbox				01/01/16
Set main date in new version of this sheet	Cameron MacLeod			01/01/16
Remove sheets to 2016				01/01/16
yearly meeting	Cameron MacLeod			01/21/16
2 weeks notice before meeting	Cameron MacLeod			01/21/16
Documents sent out 1 week before	Cameron MacLeod			01/21/16
send out invite with http://bitcode.com with the following info	Cameron MacLeod			01/21/16
budgets from the previous year	Benedicte Clementsen			01/21/16
new budgets	Benedicte Clementsen			01/21/16
issues raised must be sent to everyone	Cameron MacLeod			01/21/16
revaluation of statuses	Cameron MacLeod			01/21/16
yearly meeting report http://www.bmg.no/eng/	Cameron MacLeod			01/21/16
Organization Changes	Cameron MacLeod			01/21/16
yearly accounting	Benedicte Clementsen			01/29/16
Upload Transactions	Cameron MacLeod			01/29/16
upload receipts to Box	Cameron MacLeod			01/29/16
upload transactions Drift/ Res Flagg and tag	Benedicte Clementsen			01/29/16
upload receipts to Box				01/29/16
Link Cameron transactions Collecting Expenses	Cameron MacLeod			01/29/16
Link Cell Fields from Collecting Expenses to overall Budget Report	Benedicte Clementsen			01/29/16
Link Cell Fields from Budget Report to Yearly Report	Benedicte Clementsen			01/29/16
yearly application				02/01/16
Feb 1st numerous new applications BK	Cameron MacLeod			02/01/16
Accept BK budget for this year	Cameron MacLeod			02/19/16
get recent activities for all members				04/01/16
Apply for Residency and Drift for next year	Cameron MacLeod			04/01/16
Report Residency last year				04/01/16
Budget Report Commune	Cameron MacLeod			04/01/16
Create New Graphics Template for next year				

Sheet Name	Primary	assigned	Begins	Done/Skipped
Yearly workflow Flagg 2016	budgets from the previous year	Benedicte Clementsen	01/21/16	
Yearly workflow Flagg 2016	new budgets	Benedicte Clementsen	01/21/16	
Yearly workflow Flagg 2016	yearly accounting	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	upload transactions Drift/ Res Flag	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Login into Nordea	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Dagligbank/Kontoinformasjon/Tran	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Select Account and Dates	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Export Excel link bottom of page	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Login SmartSheet	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Copy Old Flagg Residency or Drift	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Delete other transactions	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Go to Home/Import select Nordea	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	open file after import	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	cleanup excel sheet to match the F	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	copy data	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	paste into copy of Flagg "" Collecti	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	delete uploaded bank account	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Link Cell Fields from Collecting Ex	Benedicte Clementsen	01/29/16	
Yearly workflow Flagg 2016	Link Cell Fields from Budget Repo	Benedicte Clementsen	01/29/16	

Since 2011 Platform has been building workflows in Smartsheet for our gallery and studios collective. These workflows are a series of tasks listed in spreadsheet form that describe all the activities needed in order to run the institution. When three insituations are borrowing each others sheets and refining them they are essentially developing strategies together to reduce work in thier insitutions Art Engine make sthis collaboration possible.

~ ART ENGINE AUTOMATES SMARTSHEET ~

Smartsheet only provides some of the functionality needed in order to create automation. For instance some functionality does not exist like automatically copying folders of files. The following is an example of an automated exhibition workflow created by Art Engine and Smartsheet combined.

1. An exhibition is input into the HKS Art Engine website.

The screenshot shows the Art Engine website interface. On the left, there is a 'Drag & Drop New Images Here' area with several image thumbnails. Each thumbnail has a 'Priority:' field and a 'caption' field. On the right, there is a configuration panel for 'ArtEngine' with various settings:

- Column width: 5
- Priority: 1
- Module Height: [empty field]
- Embedded URL: [empty field]
- Module Link: [empty field]
- Exhibition Tag: [checked]
- Non-Expandable: [unchecked]
- Show Facebook Share Button: [checked]
- Categories:
 - exhibitions: [checked]
 - residency: [unchecked]
 - front-page: [unchecked]
 - kior: [unchecked]
 - events: [unchecked]
 - publishing: [unchecked]
 - about: [unchecked]
 - texts: [unchecked]
 - yes: [unchecked]
 - cafe: [unchecked]
 - bookshop: [unchecked]

2. This is updated in the Smartsheet spreadsheet that includes all the posts from the HKS website.

Account ? Help Search... KUNSTSENTER

Home ES CURATOR LIST Grant workflow 2013 Module List (Art Engine Database Sync) ... +

	id	titleEN	Start Date	startTime
4	5747fb2d9fe8cb71044034ea	Magnhild Øen Nordahl: Standard Primitives	06/10/16	19:00
9	5770ec79efafec362199e888	Artist in Residence Programme		
33	5767cc8d9fe8cb71044034f0	Kristin Austreid, Ingrid Furre, Jason-Hendrik Hansma, Audun Mortens	06/24/16	19:00
34	57611e4d9fe8cb71044034ef	FIAT VACUUM: DESTRUCTIVE MANIFESTOS AND THE ARTICULA	06/21/16	19:00
35	575e98ce9fe8cb71044034ee	Hordaland kunstsenter is a member institution of the national network		
36	57592d969fe8cb71044034ed	Hans Carlsson: "26 minutes from the horizon – Transcendental knowl		
37	574d59779fe8cb71044034ec	Artist talk: Magnhild Øen Nordahl and Hans Carlsson	06/11/16	11:00
38	574c2d209fe8cb71044034eb	Øyvind Renberg & Miho Shimizu: "Möbius"		
39	5746d4b89fe8cb71044034e9	Volt Teoriverksted III: Rosi Braidotti	05/30/16	20:00
40	57458db39fe8cb71044034e8	Damsgård country mansion: Finissage and artist talk	06/05/16	14:00
42	5735baa93b0e17a37ba804c8	Launch: NUMER #108	05/29/16	18:30
43	573192d73b0e17a37ba804c5	freethought invites ... Andy Merrifield: "The Amateur of Life"	05/28/16	19:00
44	57306df13b0e17a37ba804c4	Archipelago: Museum of Museum, "SLOWLY, SURELY"	05/13/16	18:00
45	57288ab43b0e17a37ba804c3	Volt Teoriverksted III: Plato and Deleuze	05/23/16	20:00
46	5727118f3b0e17a37ba804c2	DAMSGÅRD COUNTRY MANSION: Miho Shimizu & Øyvind Renberg	05/07/16	14:00
47	571e02f93b0e17a37ba804bf	Seminar: Deviating strategies – art in public space	05/14/16	11:00
48	571e0a713b0e17a37ba804c1	Artist presentation: Ibrahim Mahama	05/05/16	19:00
49	571e07d33b0e17a37ba804c0	Annual meeting for VISP	04/28/16	19:00
50	56dd69723b0e17a37ba804b0	Archipelago: Mikko Kuorinki – "Will whistle"	03/18/16	19:00
52	56e023fe3b0e17a37ba804b2	Book launch: "Dublett – Elsebeth Jørgensen"	04/23/16	19:00
53	570f822a3b0e17a37ba804bc	Volt Teoriverksted III: Quentin Meillassoux	04/18/16	20:00
54	570b8fd3b0e17a37ba804bb	Archipelago: Eleanor Clare & Dillan Marsh	04/22/16	19:00

3. When an exhibition post is updated in a row in the Smartsheet spreadsheet Art Engine creates an exhibition folder for the new exhibition in Smartsheet. In the folder there are three sheets Exhibition Budget, Exhibition Tasks and Artist Details.



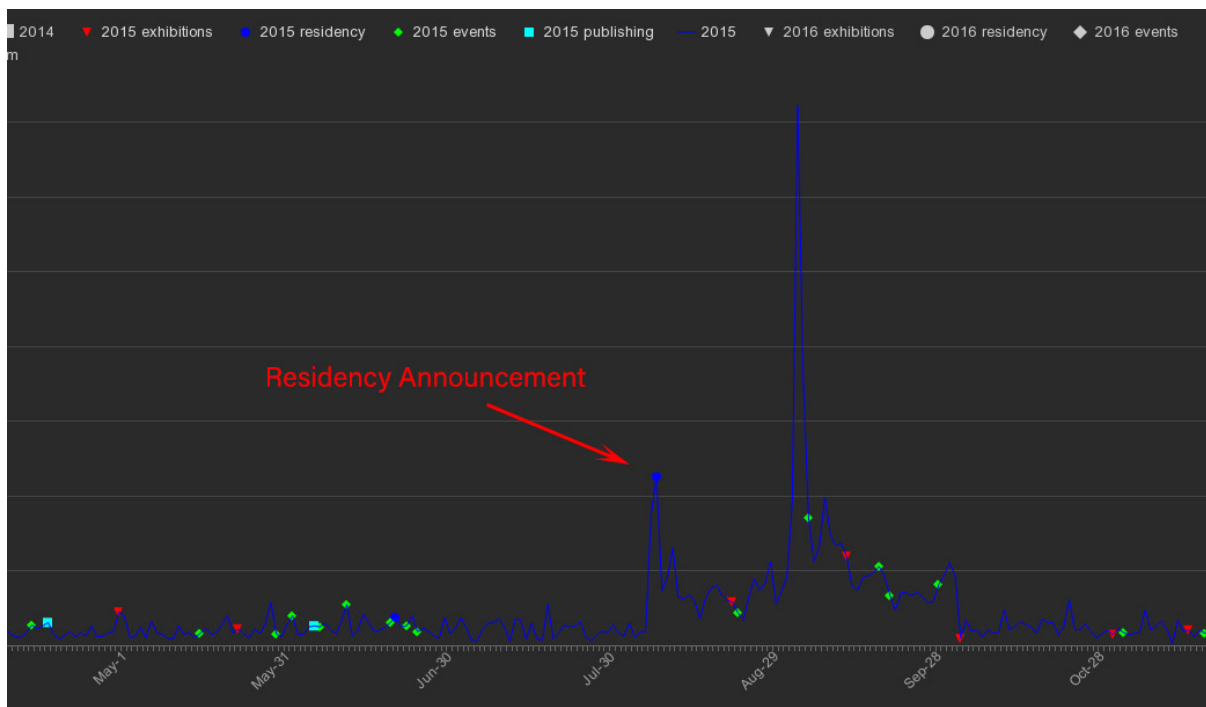
All the staff are notified to about the new tasks for the upcoming exhibition, artists are prompted to input all the necessary information that HKS needs from them, are included in the exhibition tasks sheet, and are automatically sent a digital contract. The budget is assigned to the exhibition manager.

All the information for multiple exhibition folders can then be automatically collected in yearly budgets and statistical reports.

~ STATISTICS DASHBOARD ~

We have began testing is dashboards and real-time statistics. There is a direct connection between Smartsheet and various different statistics systems. This can used to give art institutions better overview of what is happening in their institution to make better decisions.

Currently we have been Klipfolio to display information from Art Engine through Smartsheet. Here is an example of a line graph that plots released events on a line that depicts their web traffic. You can clearly see how a residency open call has pushed the website traffic up dramatically on this site.



~ FUTURE DEVELOPMENT ~

The first phase of the Art Engine is almost complete and provides a robust structure to reduce administrative work but after the first phase the cost of development to time saved is reduced. The initial project required basic functionality to be developed but now that these basic functionality is created development will become less costly and provide truly ambitious results.

Permissions System

A permission system with users will give institutions leaders to control to which degree users see this information. Can also be used with Curatron Integration.

Further Integration Smartsheet

our first test integration with smartsheet has provided a wealth of administrative functionality. We would like to expand this integration further by giving users control over what smartsheet sheets they would like to synchronize with what data in Art Engine in order to give greater control by institutions over the workflow design process. Can also be used with Curatron Integration.

Granting Workflow

A series of automation steps to keep applications and all staff up to date the their applications and reduce time in the application process.

Marketing Synchronization

Currently many institutions have multiple marketing platform that they use in order distribute information to the general public. Facebook, Mailchimp, their webpage, Instagram etc. This creates major problems as the information needs to be reformatted for multiple formats and if some information changes then it has to be re-edited in all of the platforms. Curatron already has an emailing system embedded to automatically send information to all its members and Art Engine could use this system to design multiple templates that filter in the information and keep things synced which would reduce administrative work dramatically. Can also be used with Curatron Integration.

Connection to Smart Devices

Smart devices are wireless devices that are connected to the internet and can be monitored and controlled from online software. Smart locks are a good example of these devices. They are basically locks for doors that can give or restrict access to certain areas based on commands from the internet. Connecting these devices to Art Engine would fore-instance give new studio members access to studios after the contract is signed or give artists access to a gallery when selected for a curatron show.

Connection to Art Engine and Curatron

Connecting to Art Engine to Curatron would create an explosive amount of functionality between the two systems. Each system would be able to exchange information and control the other. Fore-instance, Curatron has an emailing system embedded in it which curatron does not and Art Engine has a sophisticated workflow management for the post selection process that could be use for Curatron exhibitions to make the process of making exhibitions even more efficient. *See information about Curatron in the attached Curatron document.*

~ CONCLUSION ~

We presently have built the foundation of an extremely flexible digital infrastructure for art institutions using Art Engine and connecting to other Cloud based systems. The system still remains in the first phase of development and will require more development in order achieve its full potential. Much of the needs a lot of manual exchange of information between systems a lot of which requires specialized knowledge but the initial project has thus far proven to be an extremely powerful initiative to decrease the workload of administrators, staff and artists, increase institutional transparency and make better decisions with more coherent information.