# The Usage Data Project

## Overview

The Software product is being used globally amongst 1,000 customers. They use it in various ways. Each customer uses the software a bit differently. Their adoption levels amongst their users is also different. Some customers have lots of users in our software daily. In others, there are only a couple of ‘power users’ who do all the work, while the other users barely use our software, even though they are paying for the other users.

## Targets

* Adoption (is the customer getting the most out of our software. Are people logging in daily and are they using the software on an ongoing basis?)
* Usage (what windows are their favorite and who uses them the most?)
* Seasonality (is there a down-time where activity in the software is very light?)
* At Risk Customers (customers who rarely use our software)

### Data Points

We’ve put together a data structure that captures “usage” data. For each entity that we have, such as ‘Service Orders’, we collect who entered it, when they entered it, and which customer they are a part of. For some entities, we collect other attributes of that entity, such as ‘Amount’ on Service Orders to capture how many dollars the order was for.

## ER Diagram

Below is an ER diagram explaining which entities we have data collected and what properties we collect. For each entity other than the few ‘lookup’ entities, each one has a few standard properties:

* SiteId – Identifies which customer the data is for
* OrgCode – This is not on all entities, but on most. It identifies for which organization within the customer that data point was for. As an example, some customers operate multiple corporations within our software. Each corporation can then be setup as an ‘Organization’.
* EnteredBy – The UserId (Users.Id) that entered the data point
* EnteredOn – The Date/Time in which the data point was entered/created.

Each table links back to the Users table though the ‘EnteredBy’ property and links to ‘Users.Id’. As an example, ServiceOrders.EnteredBy -> Users.Id

There will also be a ‘Sites’ table that links to every entities’ ‘SiteId’ property. As an example, ServiceOrders.SiteId -> Sites.Id



## Possible Questions to be Answered:

* Logins - Top 10 Users per site  
  Logins - Who hasn't logged in within past month per site
* Logins - Last Login Date per user per site
* Window Usage - Top Windows Used per site
* Window Usage - Top users who open windows per site
* Reports - What are the top 10 / bottom 10 reports being run
* -logins per user, per month, per year
* -total “window opens” by user, by month/year
* -exactly which windows (edit service order, booking calendar, etc.) were used by user, by year/month
* -exactly which windows by name and v19 or v20 by user, by month/year
* -Data entries (adds) per user, per organization, per subject (opportunities, events, functions, orders, invoices, documents, contracts, etc.) per year/month
* -which crystal reports were run, by user, by year as well as the duration it took run the report in seconds

The data into usage report can be very helpful for figuring out which users use the software the most, what windows they use, etc.

It can help establish which users should be trained the most

It can tell you which windows you should focus on when optimizing a customers them I.e. the most frequently used windows.... I will say, while most customers use between 500-1000 windows, there are generally 50 windows that represent 90% of usage

## Table Creation Scripts:

/\*\*\*\*\*\* Object: Schema [Usage] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

CREATE SCHEMA [Usage]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Activities] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Activities](

[EnteredOn] [datetime] NOT NULL,

[EnteredBy] [varchar](10) NOT NULL,

[UserId] [varchar](10) NOT NULL,

[SiteId] [varchar](12) NOT NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Bookings] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Bookings](

[SpaceCode] [varchar](150) NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[EventStart] [datetime] NULL,

[OrgCode] [varchar](2) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Contracts] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Contracts](

[Id] [int] NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[SiteId] [varchar](12) NULL,

[OrgCode] [varchar](2) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Documents] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Documents](

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[OrgCode] [varchar](2) NULL,

[SiteId] [varchar](12) NULL,

[DocType] [varchar](150) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Events] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Events](

[Id] [int] NULL,

[OrgCode] [varchar](2) NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[EventStart] [datetime] NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[FulfillmentOrders] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[FulfillmentOrders](

[Number] [int] NULL,

[OrgCode] [varchar](2) NULL,

[Total] [int] NULL,

[EventId] [int] NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[Source] [varchar](150) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Functions] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Functions](

[Id] [int] NULL,

[EventId] [int] NULL,

[FuncTypeId] [varchar](6) NULL,

[BookingId] [int] NULL,

[OrgCode] [varchar](2) NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Invoices] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Invoices](

[Number] [int] NOT NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[Amount] [int] NULL,

[TransSource] [varchar](50) NULL,

[EventStart] [datetime] NULL,

[OrgCode] [varchar](2) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Logins] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Logins](

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Notes] Script Date: 1/7/2020 9:00:32 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Notes](

[OrgCode] [varchar](2) NULL,

[SiteId] [varchar](12) NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[Type] [varchar](150) NULL,

[Class] [varchar](150) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Opportunities] Script Date: 1/7/2020 9:00:33 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Opportunities](

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[Description] [varchar](150) NULL,

[OrgCode] [varchar](2) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Payments] Script Date: 1/7/2020 9:00:33 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Payments](

[Amount] [int] NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[TransDesc] [varchar](150) NULL,

[Type] [varchar](150) NULL,

[OrgCode] [varchar](2) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[RegistrationOrders] Script Date: 1/7/2020 9:00:33 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[RegistrationOrders](

[Number] [int] NOT NULL,

[OrgCode] [varchar](2) NULL,

[Total] [int] NULL,

[EventId] [int] NULL,

[EventStart] [datetime] NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[RegistrantCount] [int] NULL,

[Source] [varchar](150) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Reports] Script Date: 1/7/2020 9:00:33 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Reports](

[SiteId] [varchar](12) NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[Name] [varchar](150) NULL,

[Duration] [int] NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[ServiceOrders] Script Date: 1/7/2020 9:00:33 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[ServiceOrders](

[Number] [int] NOT NULL,

[OrgCode] [varchar](2) NOT NULL,

[Total] [int] NULL,

[EventId] [int] NULL,

[EventStart] [datetime] NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[Source] [varchar](150) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Sites] Script Date: 1/7/2020 9:00:33 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Sites](

[Id] [varchar](12) NOT NULL,

[Name] [varchar](150) NULL,

CONSTRAINT [PK\_Sites] PRIMARY KEY CLUSTERED

(

[Id] ASC

)WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON) ON [PRIMARY]

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Users] Script Date: 1/7/2020 9:00:33 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Users](

[Id] [varchar](10) NOT NULL,

[SiteId] [varchar](12) NOT NULL,

[AccessMode] [varchar](1) NULL,

[Name] [varchar](150) NULL,

CONSTRAINT [PK\_Users] PRIMARY KEY CLUSTERED

(

[Id] ASC,

[SiteId] ASC

)WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON) ON [PRIMARY]

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[Windows] Script Date: 1/7/2020 9:00:34 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[Windows](

[Id] [varchar](6) NOT NULL,

[Title] [varchar](150) NULL,

[AppType] [varchar](1) NULL,

CONSTRAINT [PK\_Windows] PRIMARY KEY CLUSTERED

(

[Id] ASC

)WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON) ON [PRIMARY]

) ON [PRIMARY]

GO

/\*\*\*\*\*\* Object: Table [Usage].[WindowUsage] Script Date: 1/7/2020 9:00:34 AM \*\*\*\*\*\*/

SET ANSI\_NULLS ON

GO

SET QUOTED\_IDENTIFIER ON

GO

CREATE TABLE [Usage].[WindowUsage](

[WindowId] [varchar](6) NULL,

[EnteredOn] [datetime] NULL,

[EnteredBy] [varchar](10) NULL,

[SiteId] [varchar](12) NULL

) ON [PRIMARY]

GO

ALTER TABLE [Usage].[Activities] WITH NOCHECK ADD CONSTRAINT [FK\_Activities\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Activities] NOCHECK CONSTRAINT [FK\_Activities\_Users]

GO

ALTER TABLE [Usage].[Bookings] WITH NOCHECK ADD CONSTRAINT [FK\_Bookings\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Bookings] NOCHECK CONSTRAINT [FK\_Bookings\_Users]

GO

ALTER TABLE [Usage].[Contracts] WITH NOCHECK ADD CONSTRAINT [FK\_Contracts\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Contracts] NOCHECK CONSTRAINT [FK\_Contracts\_Users]

GO

ALTER TABLE [Usage].[Documents] WITH NOCHECK ADD CONSTRAINT [FK\_Documents\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Documents] NOCHECK CONSTRAINT [FK\_Documents\_Users]

GO

ALTER TABLE [Usage].[Events] WITH NOCHECK ADD CONSTRAINT [FK\_Events\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Events] NOCHECK CONSTRAINT [FK\_Events\_Users]

GO

ALTER TABLE [Usage].[FulfillmentOrders] WITH NOCHECK ADD CONSTRAINT [FK\_FulfillmentOrders\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[FulfillmentOrders] NOCHECK CONSTRAINT [FK\_FulfillmentOrders\_Users]

GO

ALTER TABLE [Usage].[Functions] WITH NOCHECK ADD CONSTRAINT [FK\_Functions\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Functions] NOCHECK CONSTRAINT [FK\_Functions\_Users]

GO

ALTER TABLE [Usage].[Invoices] WITH NOCHECK ADD CONSTRAINT [FK\_Invoices\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Invoices] NOCHECK CONSTRAINT [FK\_Invoices\_Users]

GO

ALTER TABLE [Usage].[Logins] WITH NOCHECK ADD CONSTRAINT [FK\_Logins\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Logins] NOCHECK CONSTRAINT [FK\_Logins\_Users]

GO

ALTER TABLE [Usage].[Notes] WITH NOCHECK ADD CONSTRAINT [FK\_Notes\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Notes] NOCHECK CONSTRAINT [FK\_Notes\_Users]

GO

ALTER TABLE [Usage].[Opportunities] WITH NOCHECK ADD CONSTRAINT [FK\_Opportunities\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Opportunities] NOCHECK CONSTRAINT [FK\_Opportunities\_Users]

GO

ALTER TABLE [Usage].[Payments] WITH NOCHECK ADD CONSTRAINT [FK\_Payments\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Payments] NOCHECK CONSTRAINT [FK\_Payments\_Users]

GO

ALTER TABLE [Usage].[RegistrationOrders] WITH NOCHECK ADD CONSTRAINT [FK\_RegistrationOrders\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[RegistrationOrders] NOCHECK CONSTRAINT [FK\_RegistrationOrders\_Users]

GO

ALTER TABLE [Usage].[Reports] WITH NOCHECK ADD CONSTRAINT [FK\_Reports\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[Reports] NOCHECK CONSTRAINT [FK\_Reports\_Users]

GO

ALTER TABLE [Usage].[ServiceOrders] WITH NOCHECK ADD CONSTRAINT [FK\_ServiceOrders\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[ServiceOrders] NOCHECK CONSTRAINT [FK\_ServiceOrders\_Users]

GO

ALTER TABLE [Usage].[WindowUsage] WITH NOCHECK ADD CONSTRAINT [FK\_WindowUsage\_Users] FOREIGN KEY([EnteredBy], [SiteId])

REFERENCES [Usage].[Users] ([Id], [SiteId])

GO

ALTER TABLE [Usage].[WindowUsage] NOCHECK CONSTRAINT [FK\_WindowUsage\_Users]

GO

ALTER TABLE [Usage].[WindowUsage] WITH NOCHECK ADD CONSTRAINT [FK\_WindowUsage\_Windows] FOREIGN KEY([WindowId])

REFERENCES [Usage].[Windows] ([Id])

GO

ALTER TABLE [Usage].[WindowUsage] NOCHECK CONSTRAINT [FK\_WindowUsage\_Windows]

GO