

# Scaling Businesses with HubSpot Platform Functionality

HubSpot Developer Advocates:  
Hannah Seligson & Dennis Edson



# Dennis Edson

**Developer Advocate,  
HubSpot**

**Twitter:**

@billyoncetoldme

**LinkedIn:**

[linkedin.com/in/dennisedson](https://linkedin.com/in/dennisedson)



# Hannah Seligson

**Developer Advocate,  
HubSpot**

**Twitter:**

@TechWithHannah

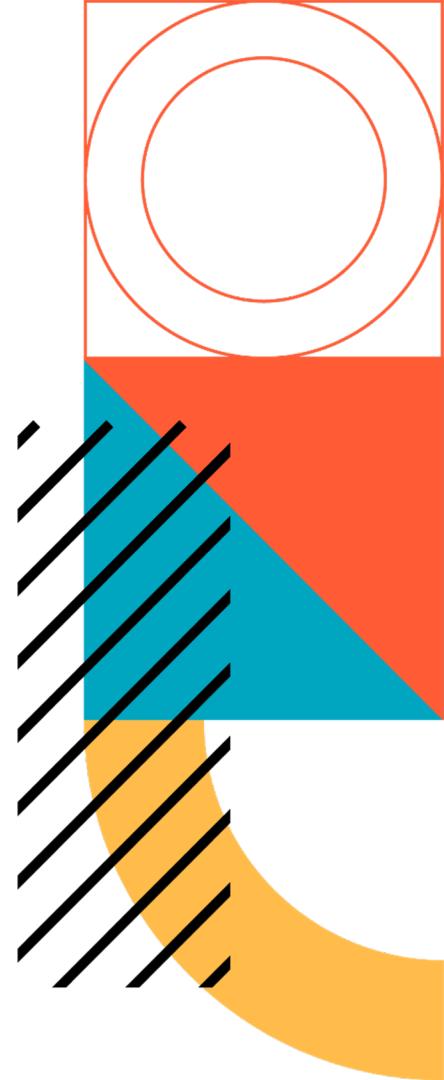
**LinkedIn:**

[linkedin.com/in/hannahseligson](https://linkedin.com/in/hannahseligson)



# Agenda

1. Introduce Case Study
2. HubSpot Out of the Box
3. Customize HubSpot
4. Extend HubSpot
5. Leverage Best Practices





Time on HubSpot:  
1 year

Previous Platforms:  
Construction-standard  
CRM platform

HubSpot  
Subscription:  
Starter tier

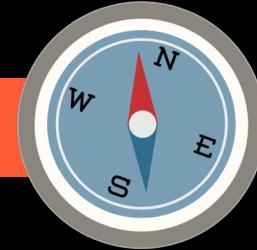
# Meet 3 Little Pigs Construction: A scaling business

3 Little Pigs Construction started 3 years ago as a business renovating retail spaces. They have been using HubSpot the last year as their main project management and invoice system.

However, their recent growth has left them needing more from the CRM platform so their reps can manage client projects and invoicing better. They've reached out to Hannah and Dennis to seek guidance about how HubSpot can scale to meet their business needs.

# HubSpot Out of the Box





# Scaling Journey

**Out of Box**

**Customize**

**Extend**

**Leverage**

**Sustained  
Growth**

Establishing  
a Solid  
Foundation

Customizing  
the Route  
for Your  
Business  
Needs

Enhancing  
the  
Journey  
with UI  
Extensions

Execute  
API Best  
Practices

Unlock  
the full  
potential  
of  
HubSpot  
CRM

# Out of the Box

## Standard Objects

- Contacts
- Companies
- Deals
- Tickets

## Lists and Forms

- Invoice
- Payment
- Form
- Supplier List

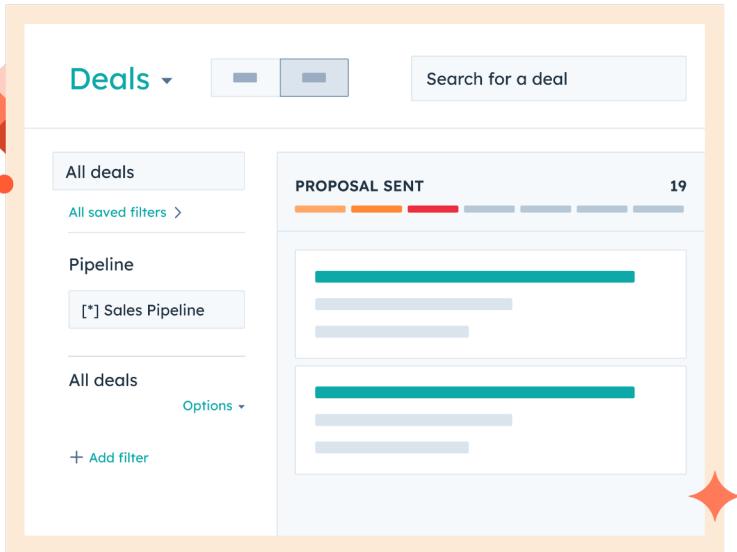
## Pipelines

- Construction Project Pipeline
- Sales Pipeline

## Engagements

- Task Engagements
- Note Engagements
- Call Engagements

# Out of the Box



## Construction Project Pipeline:

**Stage 1: Lead/Opportunity**

**Stage 2:**

Qualification/Estimation

**Stage 3: Proposal/Contract**

**Stage 4: Project Planning**

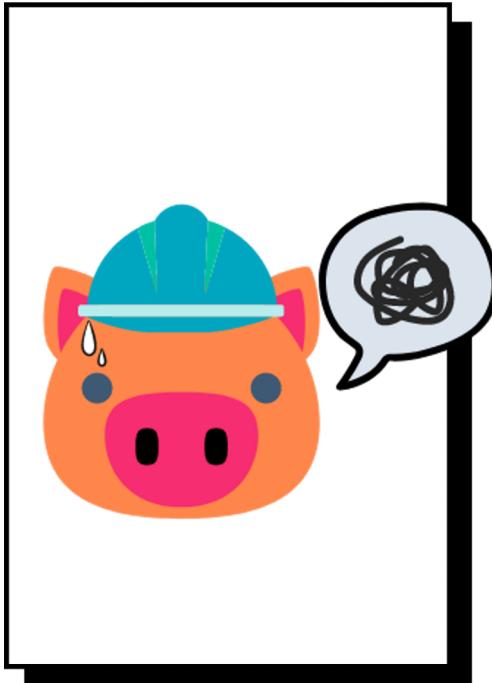
**Stage 5: Project Execution**

**Stage 6: Invoicing**

**Stage 7: Project Completion**

**Stage 8: Customer Satisfaction**

# Out of the Box Challenges



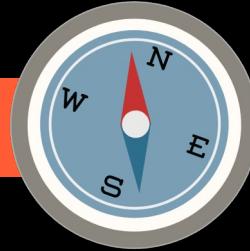
3 Little Pigs Construction **still need:**

- A centralized system to enhance project visibility for reps
- Easily invoice bulk projects
- Centralize data from their external accounting tool and project management system
- Real-time data

# Customize HubSpot



# Scaling Journey



**Out of Box**

**Customize**

**Extend**

**Leverage**

**Sustained  
Growth**

Establishing  
a Solid  
Foundation

Customizing  
the Route  
for Your  
Business  
Needs

Enhancing  
the  
Journey  
with UI  
Extensions

Execute  
API Best  
Practices

Unlock  
the full  
potential  
of  
HubSpot  
CRM

# Customize: Custom Objects

## Custom Object

: when your business requires a relationship, data, or process beyond the standard HubSpot objects (company, contact, deals, and tickets) for your CRM.

# Customize: Custom Objects



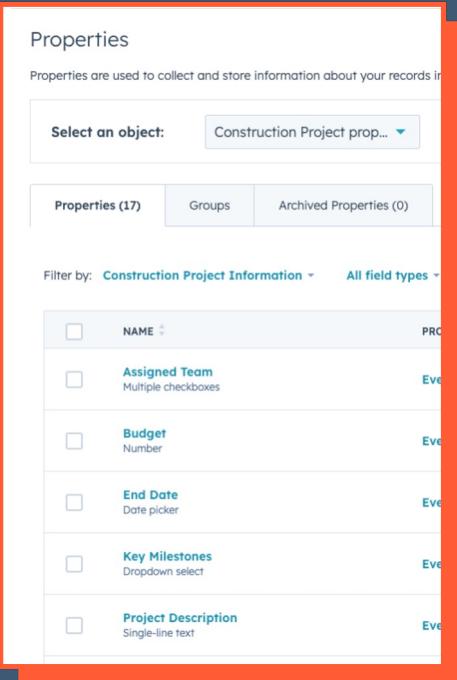
Define the **purpose** of the object

- Create a CRM card to leverage the object data...
- Create a workflow from the object...
- Create a pipeline from the object...

Define the **lifecycle** of the object

- What steps will the object go through and be interacted with?
- What users need to interact with the object?

# Creating the object schema for Construction Project:



The screenshot shows the 'Properties' page in the Salesforce interface. A red border highlights the main content area. At the top, there's a heading 'Properties' and a sub-instruction: 'Properties are used to collect and store information about your records in'. Below this is a 'Select an object:' dropdown set to 'Construction Project prop...'. There are three tabs: 'Properties (17)', 'Groups', and 'Archived Properties (0)'. Underneath, a 'Filter by:' section includes dropdowns for 'Construction Project Information' and 'All field types'. The main list displays 17 properties, each with a checkbox, name, type, and description:

NAME	TYPE	DESCRIPTION
NAME	Text	Primary key for the record.
Assigned Team	Multiple checkboxes	Team assigned to the project.
Budget	Number	Estimated cost of the project.
End Date	Date picker	Planned completion date.
Key Milestones	Dropdown select	Major milestones of the project.
Project Description	Single-line text	Detailed description of the project.

- **Project Name:** string
- **Project Description:** string
- **Start Date:** date
- **End Date:** date
- **Project Status:** enumeration
- **Assigned Team:** enumeration
- **Budget:** number
- **Key Milestones:** enumeration

Custom Object

# Customize

## Custom Coded Actions

- Custom code actions extend workflow functionality

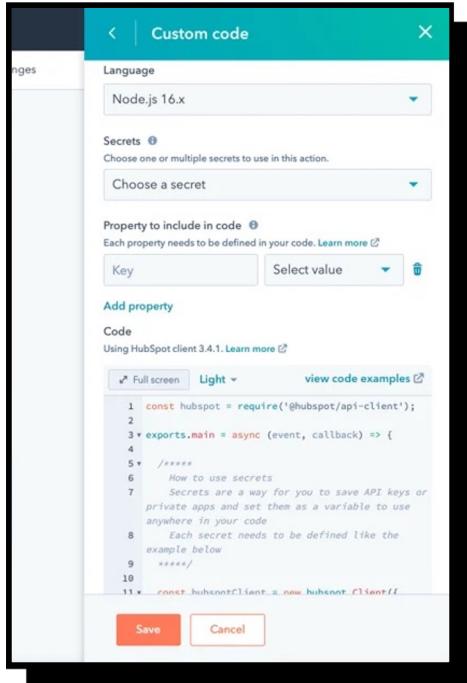
## Workflows

- Workflows automate processes using webhooks to sync data

## Webhooks

- Webhooks help streamline workflows retrieving & sending data from external systems

# Customize: Custom Coded Actions



## Custom Coded Actions (CCA)

: allows you to extend workflow functionality within and outside of HubSpot.

- Integrate HubSpot with other tools and leverage data through the APIs in CCAs or Webhooks
- Use Workflow Schedule to run business processes

# Custom coded action for Construction Project and Invoicing Process:

- Deal Closed/Won
- Trigger Workflow for Third Party Project Creation
- Send Invoice
- Invoice payment Confirmation
- Trigger Workflow for Project Start
- Notify Relevant People
- Send Receipt

```
1 const axios = require('axios');
2 const hubspot = require('@hubspot/api-client');
3 const asana = require('asana');
4
5 exports.main = async (event, callback) => {
6   const dealId = event.inputFields['deal_id'];
7   const dealData = await getDealData(dealId);
8
9   const asanaProjectData = {
10     name: dealData.properties.project_name,
11     due_on: dealData.properties.estimated_completion_date,
12     notes: `Project Manager: ${dealData.properties.project_manager_name}`,
13   };
14   console.log(dealData)
15   await createAsanaProject(asanaProjectData);
16 };
17
18 async function getDealData(dealId) {
19   // Fetch deal data from HubSpot API
20   const hubspotClient = new hubspot.Client({ accessToken: process.env.HUBSPOT_ACCESS_TOKEN });
21   const dealData = await hubspotClient.crm.deals.basicApi.getById(dealId);
22   console.log(dealData)
23   return dealData;
24 }
25
26 async function createAsanaProject(projectData) {
27   // Create new project in Asana
28   const asanaClient = asana.Client.create().useAccessToken(process.env.ASANA_ACCESS_TOKEN);
29   const workspaceGid = 'your_workspace_gid'; // Replace with your actual Asana workspace GID
30   const project = await asanaClient.projects.createInWorkspace(workspaceGid, projectData);
31   return project;
32 }
```

**Custom Coded Action**

[Back to workflows](#)Create Asana Project 

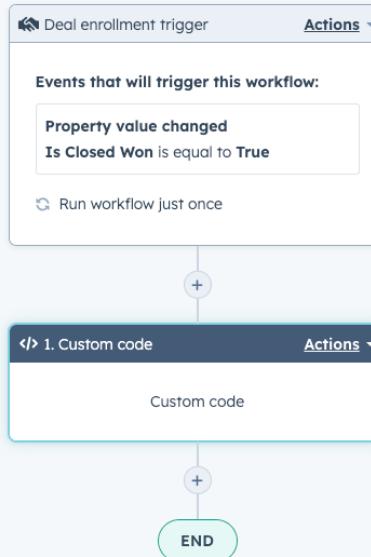
X

[Alerts](#) [Details](#)

Actions

Settings

Changes

  100%[Show minimap panel](#)

## 1. Custom code

[Edit action](#)

Deals in action

[Create action](#)

## Language

Node.js 16.x

Secrets 

Choose one or multiple secrets to use in this action.

INBOUNDAPP

asana

Property to include in code Each property needs to be defined in your code. [Learn more](#)

hs\_object\_id

Record ID



target\_due\_date

Target Due Date



dealname

Deal name



hubspot\_owner\_id

Deal owner

[Add property](#)

## Code

Build your own custom logic. To get started, read the documentation [documentation](#) or view code examples [of problems that can be solved with code.](#)

[Full screen](#)

HubSpot Client v8

Light

Dark

```
1 const fetch = require('node-fetch'); // Used to make API Requests
2 const asanaTeam = 1205155076356947; //ID of the team. might need to be workspace in your account
3 const asanaApiKey = process.env.asana; // Replace 'YOUR_ASANA_APP_KEY!' with your actual
```

[Save](#)[Cancel](#)

N 23

▼ Create action

Language

Node.js 16.x

Secrets ⓘ

Choose one or multiple secrets to use in this action.

INBOUNDAPP X

asana X

Property to include in code ⓘ

Each property needs to be defined in your code. [Learn more ↗](#)

hs\_object\_id

Record ID



target\_due\_date

Target Due Date



dealname

Deal name



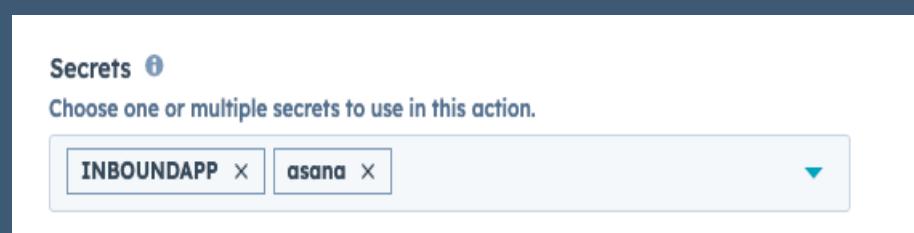
hubspot\_owner\_id

Deal owner



Add property

```
const asanaApiKey = process.env.asana;  
const hubspotBearerToken = process.env.INBOUNDAPP;
```



```
const dealId = event.inputFields['hs_object_id'];
const projectName = event.inputFields['dealname'];
let projectManager = event.inputFields['hubspot_owner_id'];
```

Property to include in code ?

Each property needs to be defined in your code. [Learn more](#)

hs_object_id	Record ID	<small>▼</small>	
target_due_date	Target Due Date	<small>▼</small>	
dealname	Deal name	<small>▼</small>	
hubspot_owner_id	Deal owner	<small>▼</small>	

[Add property](#)

```
exports.main = async (event) => {  
};
```

```
Exports.main = async (event) => {
  const dealId = event.inputFields['hs_object_id'];
  const projectName = event.inputFields['dealname'];
  let projectManager = event.inputFields['hubspot_owner_id'];

  if (projectManager) {
    projectManager = 1205155076356935
  }
};
```

```
exports.main = async (event) => {
// ... prev code ...

try {
    const dealData = await getDealData(dealId);
    const asanaProjectData = {
        "data": {
            "default_view": "calendar",
            "name": `${productName}`,
            "owner": `${projectManager}`,
            "notes": `Project Manager: ${dealData.properties.project_manager_name}`,
            "team": `${asanaTeam}`
        }
    };

    const asanaResponse = await createAsanaProject(asanaProjectData);
    const asanaProjectId = asanaResponse.data.gid;
    const customObjectRecordId = await getCustomObjectRecordId(dealId);

    await updateCustomObjectWithAsanaId(customObjectRecordId, asanaProjectId);
    console.log("Asana project created successfully with ID:", asanaProjectId);
} catch (error) {
    console.error("Error:", error.message);
}
};
```

Home

My tasks

Inbox

Reporting

Portfolios

Goals

Projects

Organize and plan your work with projects

New project

Teams

3 Little Pigs Constr...

3 Little Pigs Construction Corp

Overview Messages Calendar

Members (1)

Add member Dennis Edison Manage members

Projects

New project

Templates

New Send feedback Explore all templates

Deals

Construction Projects All deals

Search name or description Deal owner Create date Last activity date Close date Advanced filters Hide Insights Board actions Save view

BETA

TOTAL DEAL AMOUNT \$150K WEIGHTED DEAL AMOUNT \$150K OPEN DEAL AMOUNT \$0 CLOSED WON \$150K NEW DEAL AMOUNT \$0 AVERAGE DEAL AGE 3 days

Avg \$150,000 per deal Avg \$150,000 per deal

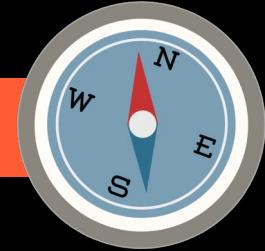
APPOINTMENT SCHEDULED 0 QUALIFIED TO BUY 0 PRESENTATION SCHEDULED 0 DECISION MAKER BOUGHT 0 CONTRACT SENT 0 CLOSED WON 1

Ceramic Barn - New Deal  
Amount: \$150,000  
Close date: 07/31/2023

High

# Extend HubSpot





# Scaling Journey

**Out of Box**

**Customize**

**Extend**

**Leverage**

**Sustained  
Growth**

Establishing  
a Solid  
Foundation

Customizing  
the Route  
for Your  
Business  
Needs

Enhancing  
the  
Journey  
with UI  
Extensions

Execute  
API Best  
Practices

Unlock  
the full  
potential  
of  
HubSpot  
CRM

# Extend: Custom Card for UI

## Custom Card

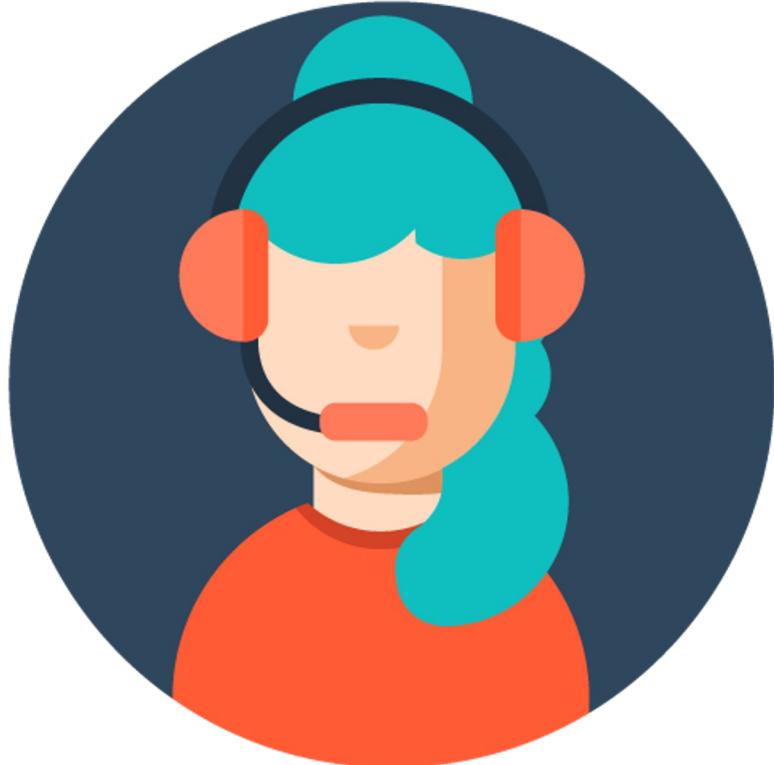


: a type of UI extension that displays information from external systems, organizes HubSpot information, and more. Custom cards can be positioned in the record middle pane and sidebar, allowing you to customize the content with components.

# Extend: Custom Card for U

**Surface up-to-date  
project data easily**

The construction PM team want to access & view the most up-to-date project details without leaving HubSpot to reference a third-party project management tool or invoicing tool.



Contacts Conversations Marketing Sales Service Workflows Reports CRM Development

**Companies** Actions

Ceramic Barn  
ceramicbarn.com

Note Email Call Task Meeting More

About this company

Company domain name: ceramicbarn.com

Industry: Retail

Company owner: Hannah Seligson

Type: Other

City: Cambridge

State/Region: MA

Postal code:

Number of employees: 5,000

Annual revenue:

Time zone: Eastern

Description:

LinkedIn company page

[View all properties](#) [View property history](#)

Custom

Project Details

Assigned Construction Projects

SEE MORE	ASANA ID	PROJECT NAME	BUDGET	PROJECT STATUS
<a href="#">View Project Record</a>	<a href="#">12051624850 27645</a>	XYZ Retail Complex	150 000	Planning Initiated
<a href="#">View Project Record</a>	<a href="#">12052184499 76516</a>	North Randall Mall	250 00	Assigned
<a href="#">View Project Record</a>	<a href="#">12052266014 34800</a>	Beachwood Mall	200 000	In Progress

Add new construction project Assign existing construction project

Customize this tab

Contacts (1) + Add

Julia Potter  
COO at Ceramic Barn  
ceramicexpert@ceramicbar...  
Phone: --  
Project Decision Maker

View associated contacts

Construction Projects (3) + Add

**Beachwood Mall**  
Project Status: --  
Project Description: Nested within t...  
Assigned Construction Project

**North Randall Mall**  
Project Status: Initiate Planning  
Project Description: Ceramic Barn S...  
Assigned Construction Project

**XYZ Retail Complex**  
Project Status: Initiate Planning  
Project Description: The Ceramic B...  
Assigned Construction Project

View associated Construction Projects

Deals (1) + Add

**Ceramic Barn - New Deal**  
Amount: \$150,000.00  
Close date: July 31, 2023  
Stage: Closed won

**UIE Custom Card**

The screenshot shows a GitHub Project Details page for a repository named "DevRel-Sample-CRM-Cards". The page includes a sidebar with project navigation and a main content area displaying code for a component named "ProjectDetailsCard". The code uses React hooks like useState and useEffect, and includes comments explaining its purpose. Below the code, there is a terminal window showing command history and a status bar indicating the file is on branch "in23/project-details-card".

Project Details

.gitignore

README.md

```
35 // fetchProperties=actions.fetchCRMObjectProperties
36 //>
37 });
38 // Define the Extension component, taking in runServerless, context, & sendAlert as props
39 const Extension = ({ context, runServerless, sendAlert, fetchProperties }) => {
40 // Holds the record ID of the custom object being viewed, used to fetch associations and associate new projects
41 const [objectId, setObjectId] = useState(null);
42 // Holds the Hub ID for record links
43 const portalId = context.portal.id;
44
45 // State variables that track which parts of the card are visible/disabled:
46 // Show/Hide the "create new" form
47 const [showAddNewForm, setShowAddNewForm] = useState(false);
48 // Show/Hide the form & search fields for assigning an existing project
49 const [showAssignForm, setShowAssignForm] = useState(false);
50 // Show/Hide the buttons to add/assign projects
51 const [showAddAssignButtons, setShowAddAssignButtons] = useState(true);
52 // Boolean to disable all forms while any processing is happening
53 const [isFormDisabled, setIsFormDisabled] = useState(false);
54 // Existing projects matching search term
55 const [projectSearchResults, setProjectSearchResults] = useState(null);
56 // Collections for data displayed in tables:
57 // Projects currently associated with the viewed record
58 const [projectDetails, setProjectDetails] = useState(null);
59
60 const statusOptions = [
61 { label: 'Assigned', value: "assigned" },
62 { label: 'Planning Initiated', value: "planning" },
63 { label: 'In Progress', value: "In Progress" },
64 { label: 'Completed', value: "Completed" }
```

PROBLEMS OUTPUT TERMINAL GITLENS DEBUG CONSOLE

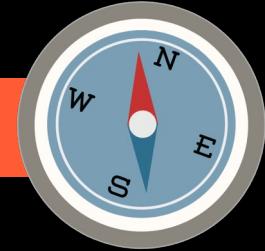
zsh - Project

```
~/Documents/GitHub/DevRel-Sample-CRM-Cards/Project Details on in23/project-details-card . . .
-----
```

```
~/Documents/GitHub/DevRel-Sample-CRM-Cards/Project Details on in23/project-details-card . . .
----- at 04:28:21
~/Documents/GitHub/DevRel-Sample-CRM-Cards/Project Details on in23/project-details-card . . .
> [ ]
```

# Leverage Best Practices





# Scaling Journey

**Out of Box**

**Customize**

**Extend**

**Leverage**

**Sustained  
Growth**

Establishing  
a Solid  
Foundation

Customizing  
the Route  
for Your  
Business  
Needs

Enhancing  
the  
Journey  
with UI  
Extensions

Execute  
API Best  
Practices

Unlock  
the full  
potential  
of  
HubSpot  
CRM

# Leverage: Best Practices

Scaling can create **challenges** like...

- Managing millions of objects and creating complex queries

OR

- Moving data back and forth and exceeding rate limits that can cause stale data

# Leverage

## Batching

- Use the BATCH endpoint

## Cache Data

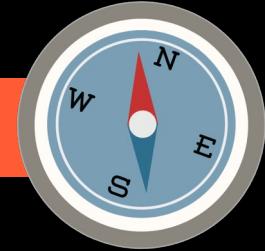
- Implement TTL (Time To Live)
- Use the Search API

## Associations

- Associate objects
- Utilize association labels

## Rate Limits

- Use an API add-on or use a Private App with OAuth



# Scaling Journey

**Out of Box**

**Customize**

**Extend**

**Leverage**

**Sustained  
Growth**

Establishing  
a Solid  
Foundation

Customizing  
the Route  
for Your  
Business  
Needs

Enhancing  
the  
Journey  
with UI  
Extensions

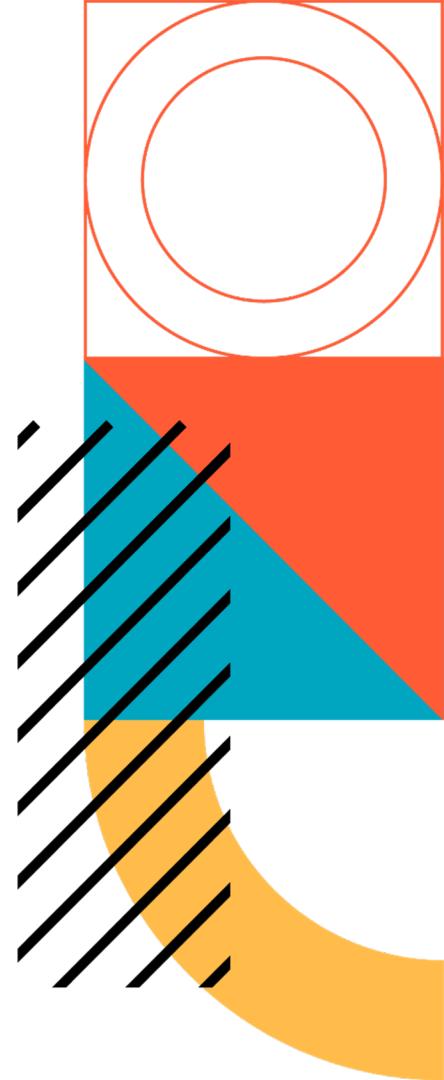
Execute  
API Best  
Practices

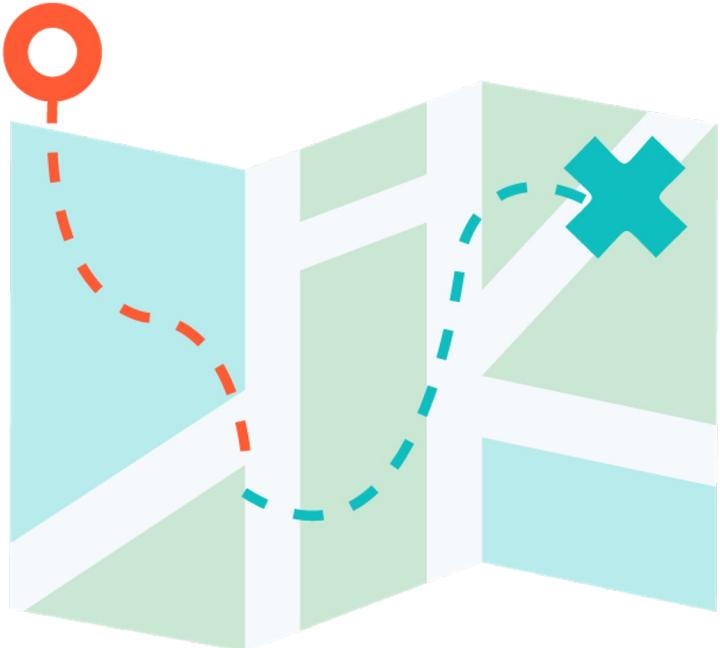
Unlock  
the full  
potential  
of  
HubSpot  
CRM

# Final Outcome

Using HubSpot's CRM Enterprise subscription 3 Little Pigs Construction was able to customize their platform to their specific requirements. Through their wholehearted adoption of automation and adherence to API best practices, they managed to simplify their workflow and enhance their invoicing processes, leading to a marked improvement in efficiency.

**3 Little Pigs Construction business flourished as they experienced unprecedented growth and success!**





We provided you with the map  
to help guide you to scale your  
business like  
**3 Little Pigs Construction.**

**YOU'VE GOT THIS!**

# The Community is here for you



## Mike Eastwood

Founder, Webalite

- “I enjoy the challenge of solving the unsolvable – those things you think HubSpot could do but aren’t as easy as you think.”



## Anton Bujanowski

Head of Web & Creative, Thought Leader Systems

- “As you grow, the HubSpot Community is there with you every step of the way.”



- **Out of the Box:**

- [HubSpot CRM Starter](#)
- [Standard Objects](#)
- [Lists](#)
- [Workflows](#)
- [Forms](#)

- **Customize:**

- [Custom Coded Actions](#)
- [Custom Objects](#)
- [Serverless Functions](#)

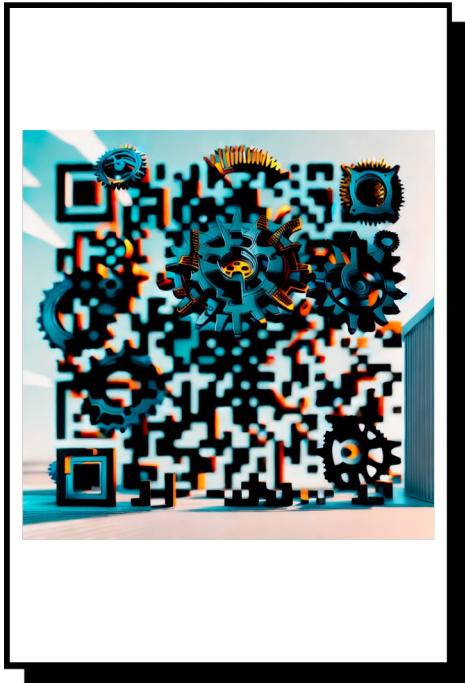
- **Extend:**

- [Custom Card Extension](#)
- [Projects](#)
- [Private Apps](#)

- **Leverage:**

- [API Batching](#)
- [Rate Limits](#)
- [Associations](#)
- [Search API](#)

# INBOUND Developer Sessions



Scan our QR code to access a curated GitHub repository filled with resources showcased in this presentation and other developer sessions at INBOUND.

## Recommended sessions:

- Grow Better with Powerful CRM Extensibility
- Fireside chat on extending and customizing the HubSpot CRM Platform



# Thank You!

**Make sure to complete our survey and  
visit the Developer + Ecosystem demo  
station!**