

Power Apps Component Framework

STRATITEQ



Our Speakers



Stefan Hult

Senior Business Analyst

STRATITEQ



Kim Hedberg

Manager Strategy and Offerings

STRATITEQ



Danijel Buljat

Microsoft Dynamics Consultant

STRATITEQ

Agenda

Power Apps Component Framework workshop

01

Power Platform overview

How to build professional-grade apps the easy way. Quick overview and capabilities of the Power Apps platform.

02

Developing Climate Apps

Announcement of the Climate hackathon and example how to tackle climate related problem with weather aware applications.

03

Power App demo

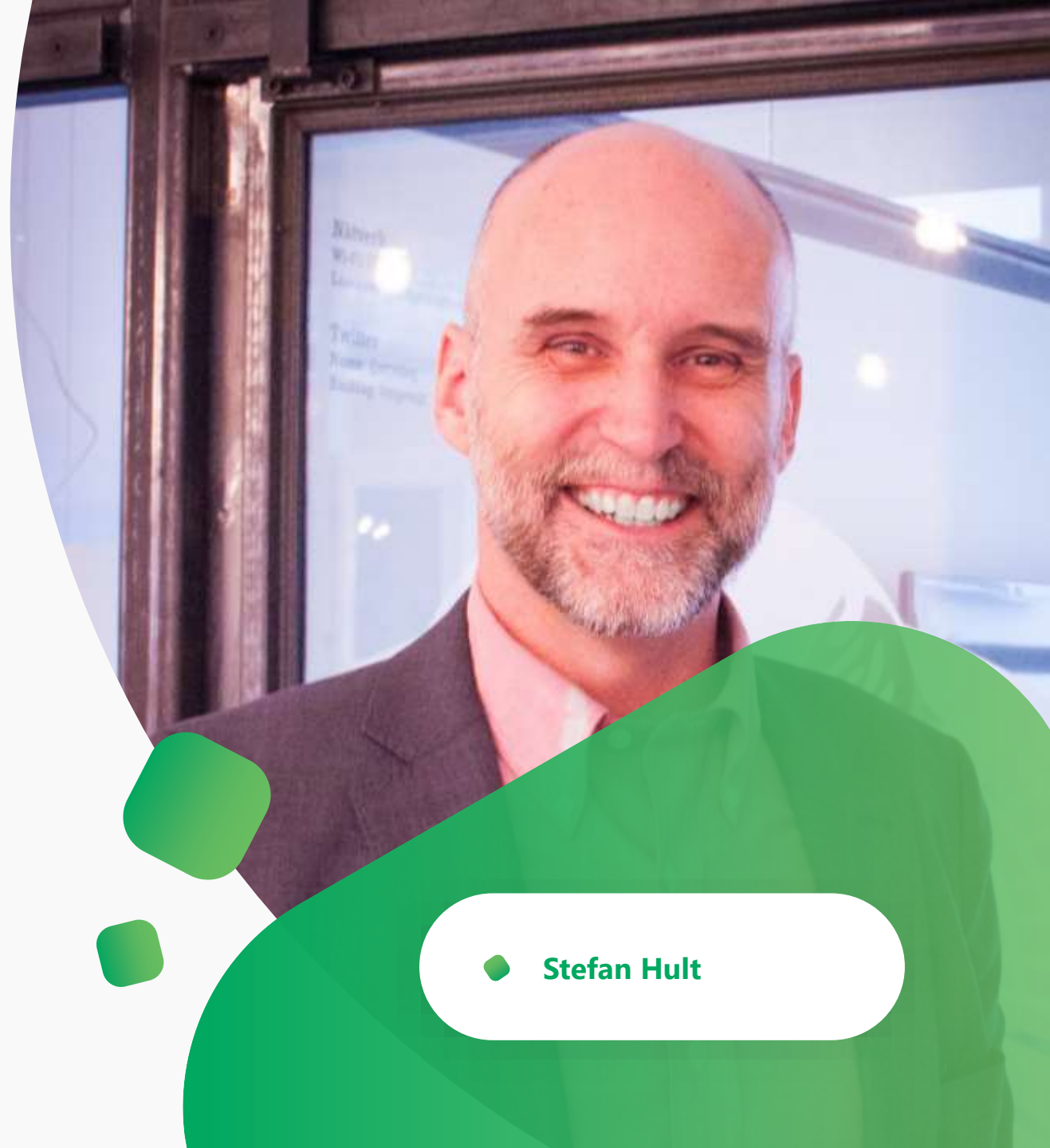
Demonstration of building Power App from the scratch that integrates with a weather API, and code component for canvas app that utilizes weather data.

STRATITEQ

Stefan Hult

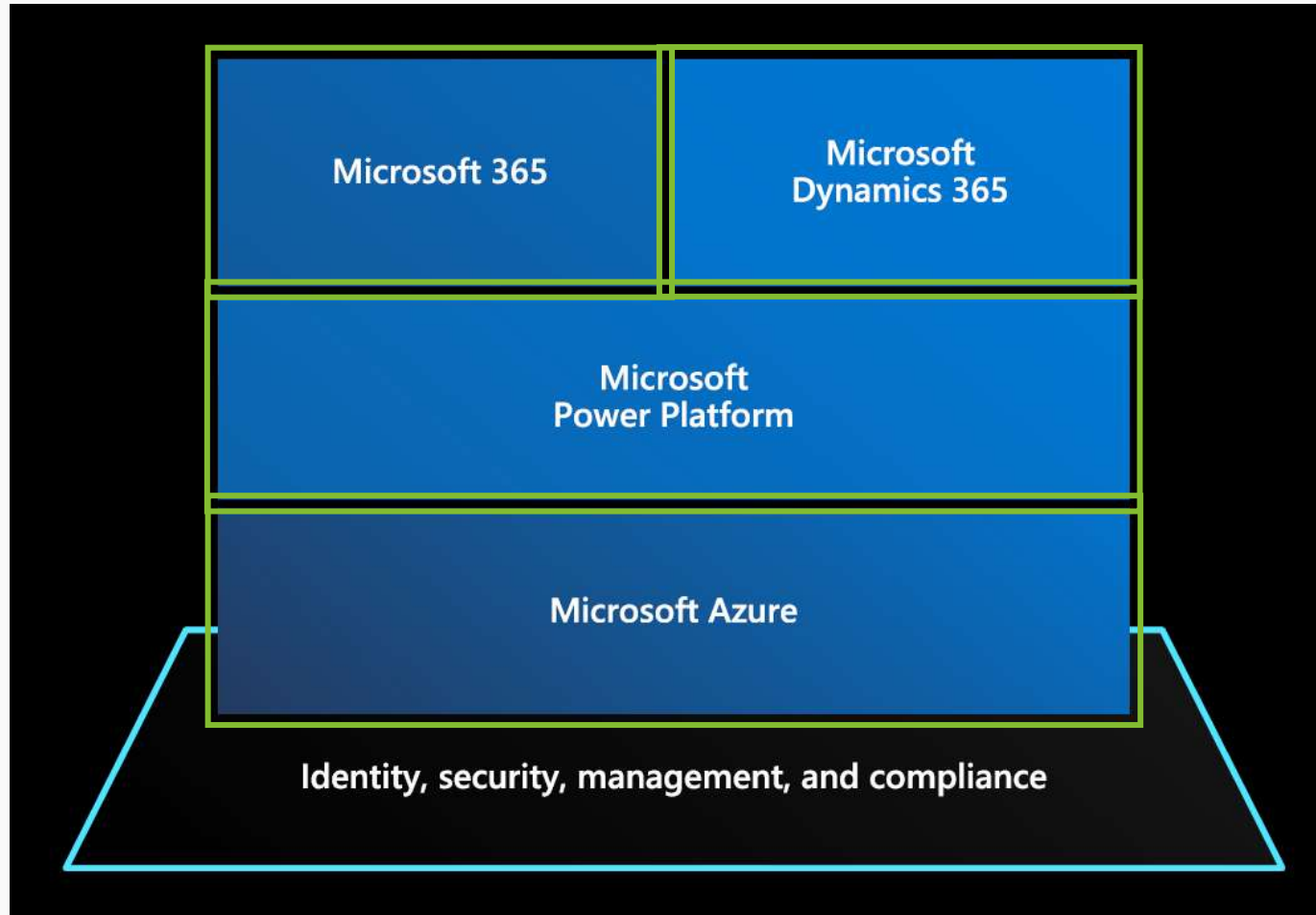
Senior Business Analyst

I have experience from different parts of Microsoft ecosystem including Microsoft 365, Dynamics 365 and Power Platform. My focus in the projects that I'm involved in is to ensure the involvement from the people using the tools. I enjoy combining business knowledge with technical understanding to create solutions that meet real business needs.



Stefan Hult

Microsoft cloud



Microsoft Power Platform



Power Apps

Build apps in hours that easily connect to data, use Excel-like expressions to add logic, and run on the web, iOS, and Android devices.



Power Automate

Include powerful workflow automation directly in your apps with a no-code approach that connects to hundreds of popular apps and services.



Power BI

Unify data from many sources to create interactive, immersive dashboards and reports that provide actionable insights and drive business results.



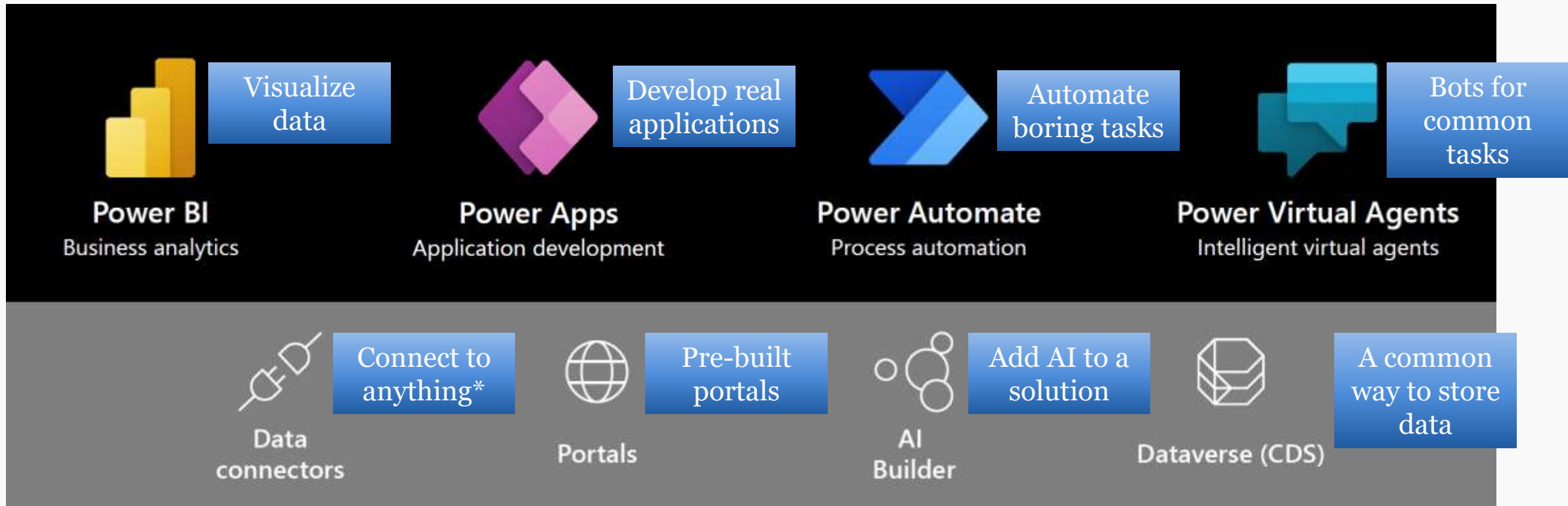
Power Virtual Agents

Empower everyone to easily build chatbots that engage conversationally with your customers and employees, with no coding required.

Microsoft Power Platform

Build powerful end-to-end business solutions by connecting Power Apps across the entire Microsoft Power Platform

Microsoft Power Platform



* Standard connectors, premium connectors and custom-built connectors

Microsoft Power Platform



* Standard connectors, premium connectors and custom-built connectors

Some misconceptions about Power Apps

01

Power Apps is for end-users who want to automate simple tasks

02

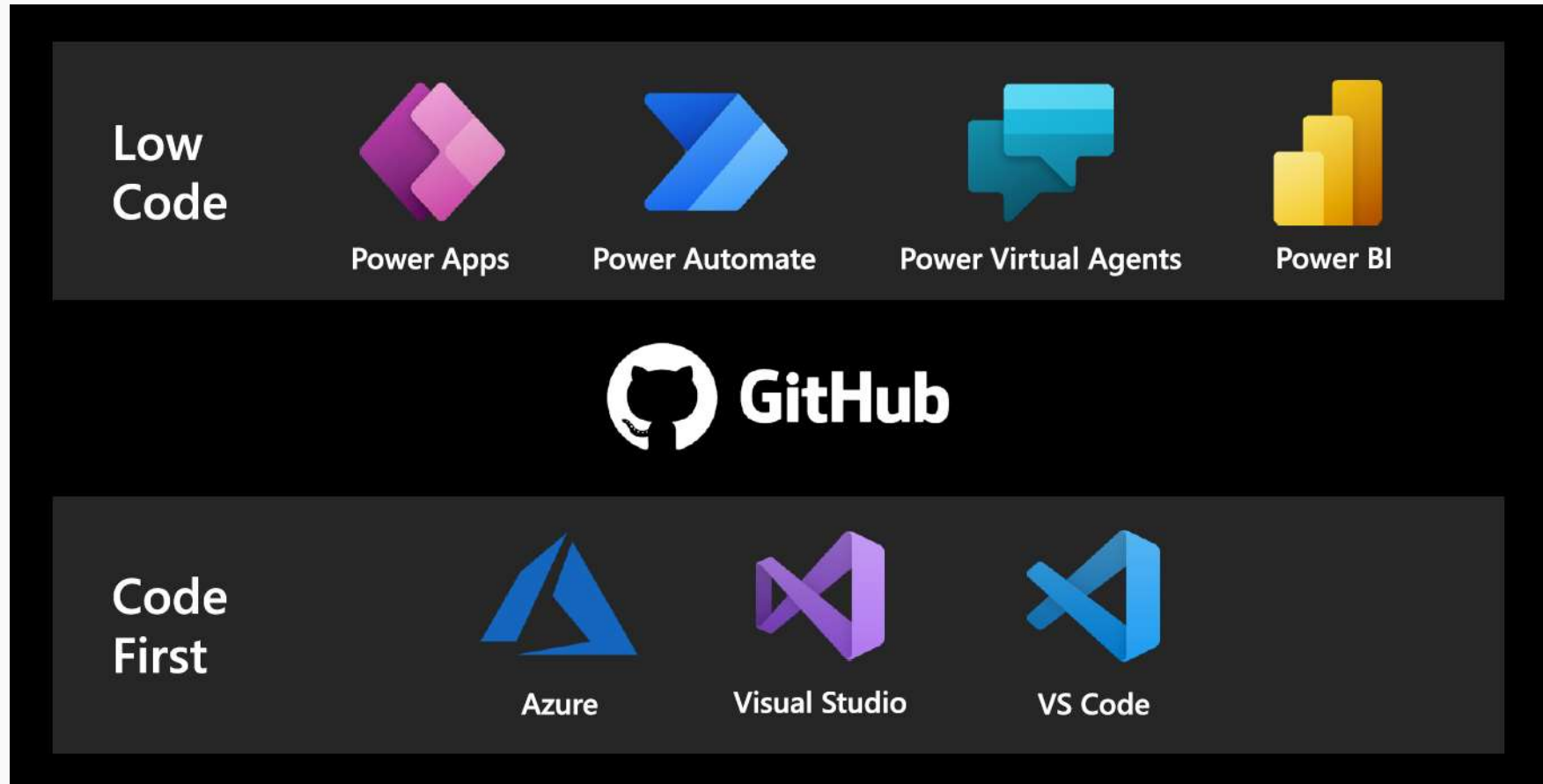
It's not for real development

03

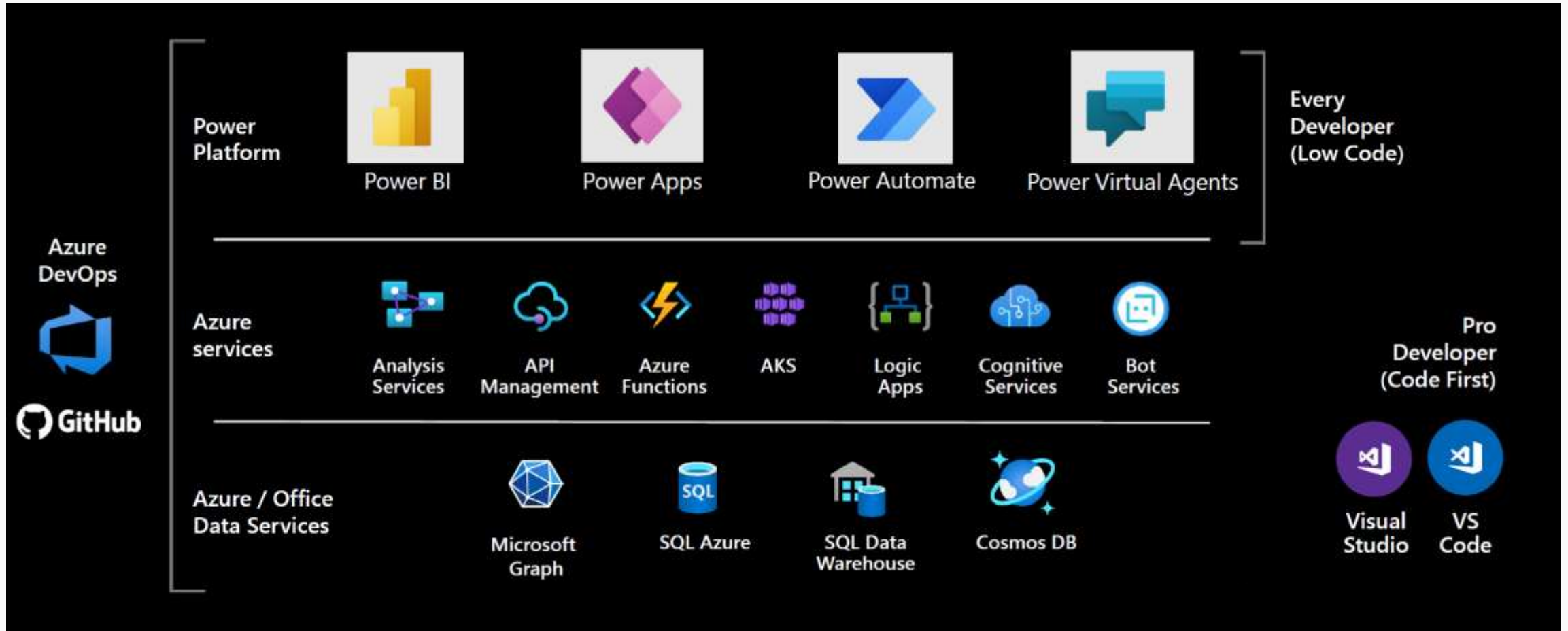
Using Power Apps is expensive



Modern app development



Different levels of complexity



Licensing

01

Microsoft 365 and Dynamics 365 has some Power platform licensing included

02

The standard connectors can be used free of charge

03

Using Power Platform as a base simplifies possibilities for integration and a streamlined user interface – The license cost needs to be compared to stand-alone development projects



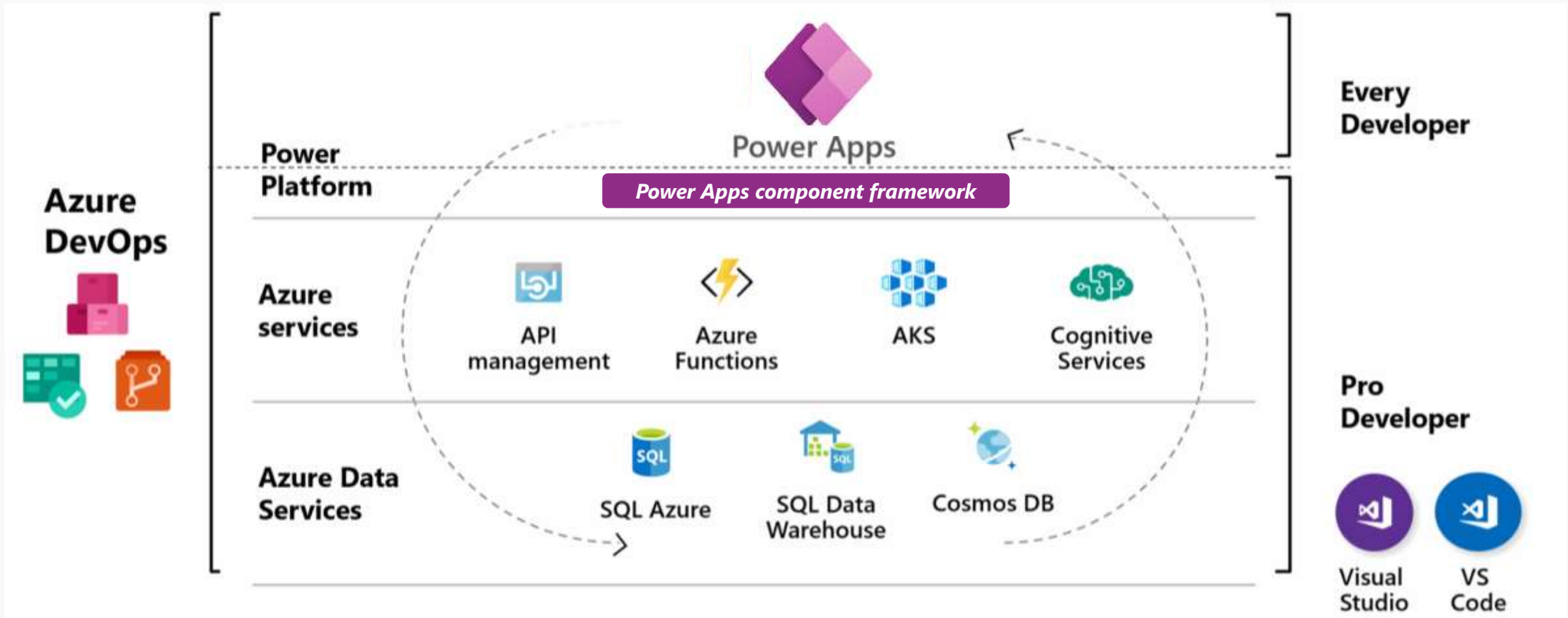


Power Apps

Power Apps component framework

Develop faster than ever before

Power Apps + Azure = No limits



Model-driven apps vs. Canvas apps

Power Apps component framework allows developers to enhance Power Apps functionality in addition to the low-code framework. There are two types of Power Apps – Model-driven and Canvas apps



Takes Power Apps to the next level!



Canvas apps

Helps business-power-users to create and use custom business apps across platforms using Microsoft 365 standard tools:

- Connect to data & systems you're already using easily
- Create apps, forms and workflows without code
- Use apps on any device – both web & mobile



Model-driven apps

Model-driven apps uses a standard framework (model) that defines business processes, tables and fields

- Rich component-focused no-code design environments
- Add business rules and business process flows to model your business processes
- Create complex apps with custom features for web & mobile including D365/M365 functionality



Main advantages of Power Apps component framework

01



Supported Apps

Possibility to create code components for both model-driven and canvas apps (public preview)

02



Seamless experience

Unlike HTML web resources, code components are rendered as a part of the same context creating a seamless experience for the users

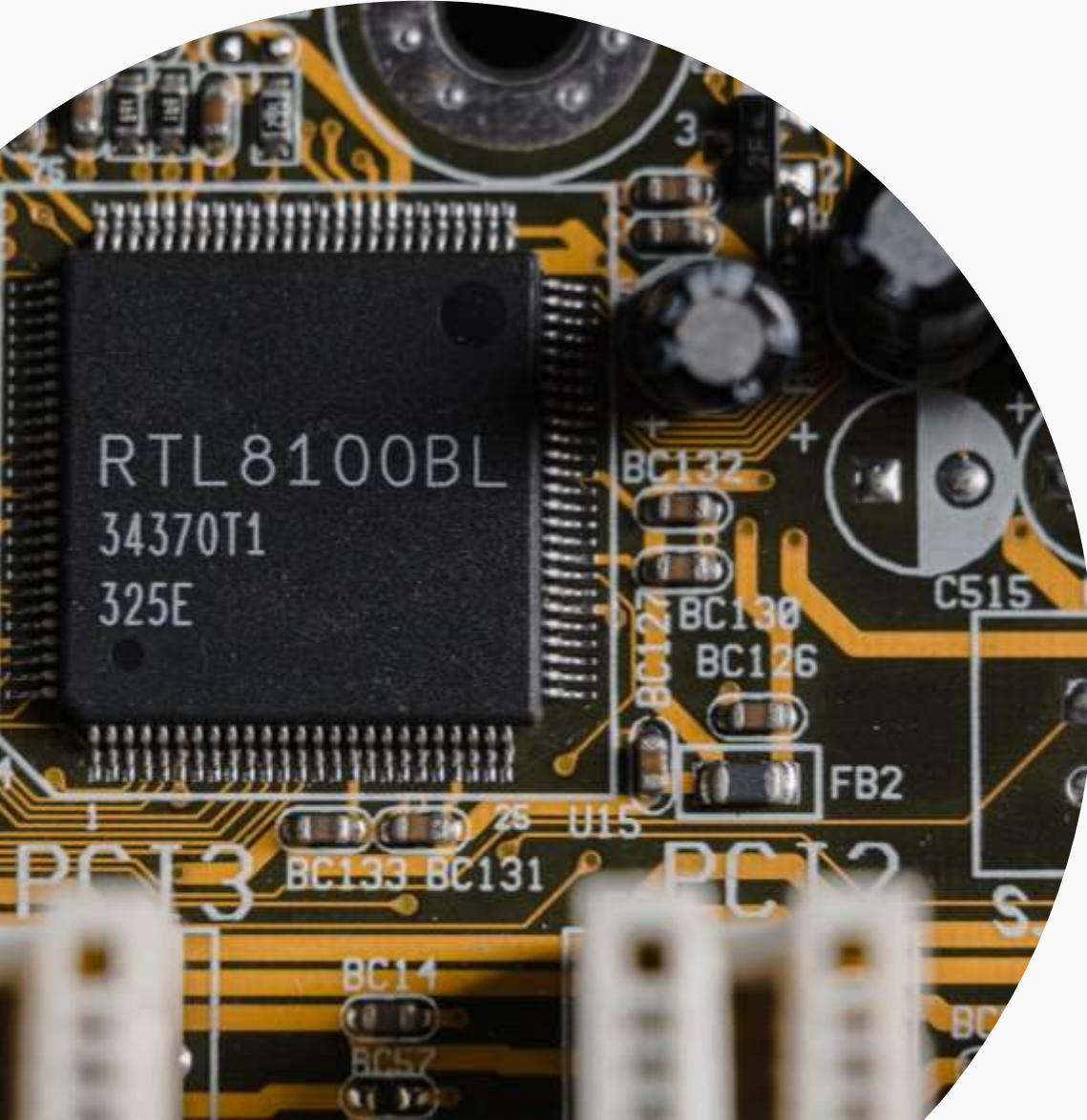
03



Bundle in one file

Bundle all the HTML, CSS, and TypeScript files into a single solution package file and move across environments, and ship through AppSource

Code components



- Code components are a type of solution components - can be included in a solution file and installed in different environments
- You add code components by including them in a solution and then import it into Microsoft Dataverse
- Code components has three parts:

1

Manifest

2

Component implementation

3

Resources

Definition and implementation is the same for both model-driven and canvas apps



Modify the UI

Power Apps component framework is a way to modify the User interface in a supported way



Use “real” code

Ability to write “real” code to create functionality that meets specific, advanced needs



Reusable

Since it is a component it can be reused in all parts of an environment

Main take-aways about Power Apps component framework



Let's look at a live scenario!

STRATITEQ

Kim Hedberg

Mgr. Strategy and Offering

I combine vast experience from sales and marketing in various industries with management and business consulting within the digital area. Design sprints, Business Model Canvas, Lean start-up and other design thinking methodologies are part of my toolbox. I use my pragmatic, result-oriented, can-do personality and energy to drive and accelerate change.



◆ Kim Hedberg

Climate Hackathon

Join the movement. Hack the climate!

Come up with innovative solutions to the challenges of non-profit organizations, for an even more sustainable world.

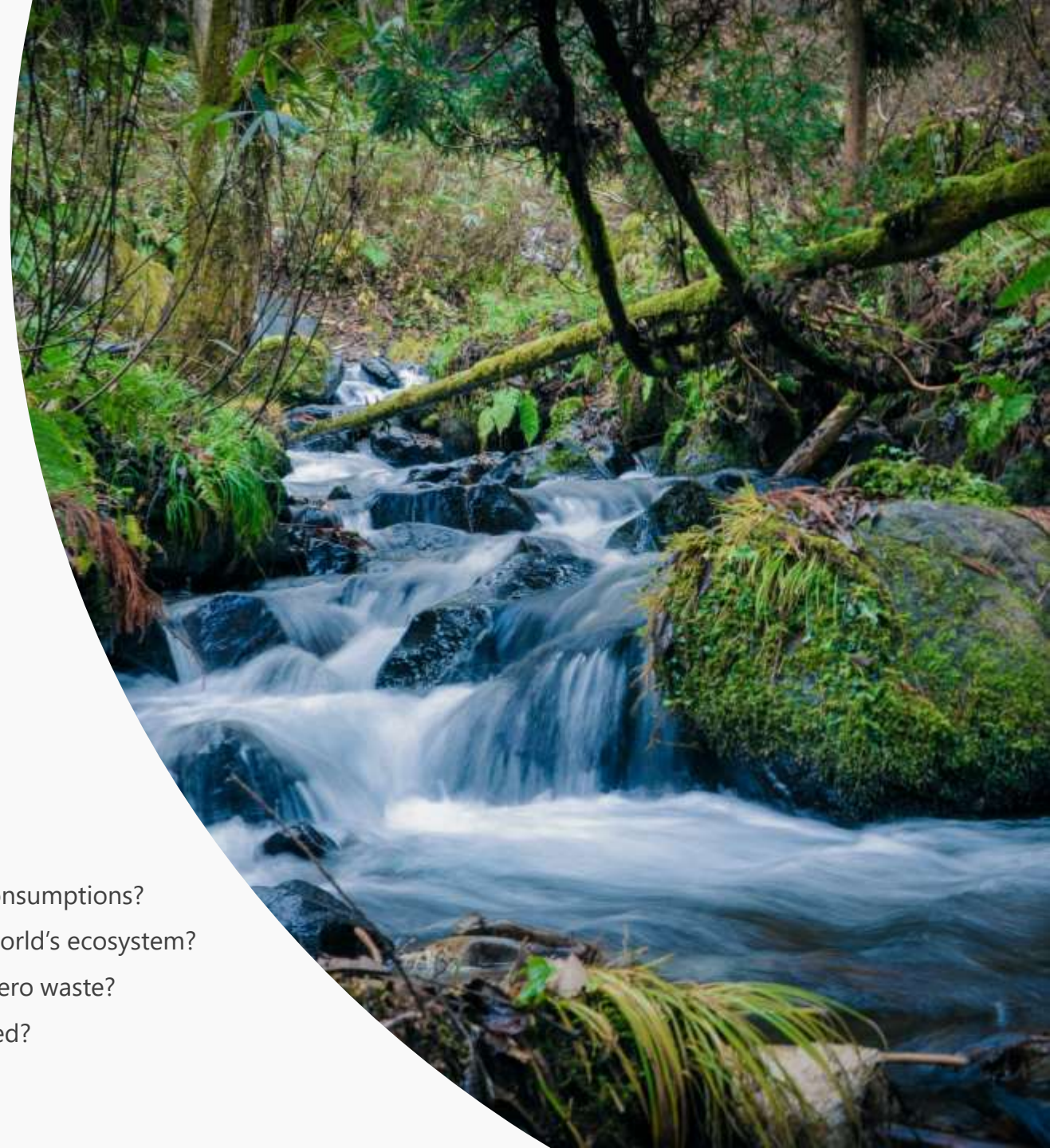
Developers of all backgrounds and skills are welcome.

22 - 26 March 2021

Register here: <https://hacktheclimate.devpost.com/>

Hackathon challenges:

- Carbon: How to go low carbon, by reducing emissions and cut energy consumptions?
- Ecosystem: How to preserve and protect biodiversity and health of the world's ecosystem?
- Waste: How to become more sustainable, by developing products with zero waste?
- Water: How to be water positive, meaning replenish more water than used?



Forest Hackathon

An aerial photograph of a dense evergreen forest, likely spruce or fir, with a rich green color palette. The trees are tightly packed, creating a textured canopy. The text 'Forest Hackathon' is overlaid in the upper left quadrant in a white, sans-serif font.



Spruce Bark Beetle

Infests spruce trees and causes serious damage to the forest and a financial loss in the millions of SEK each year



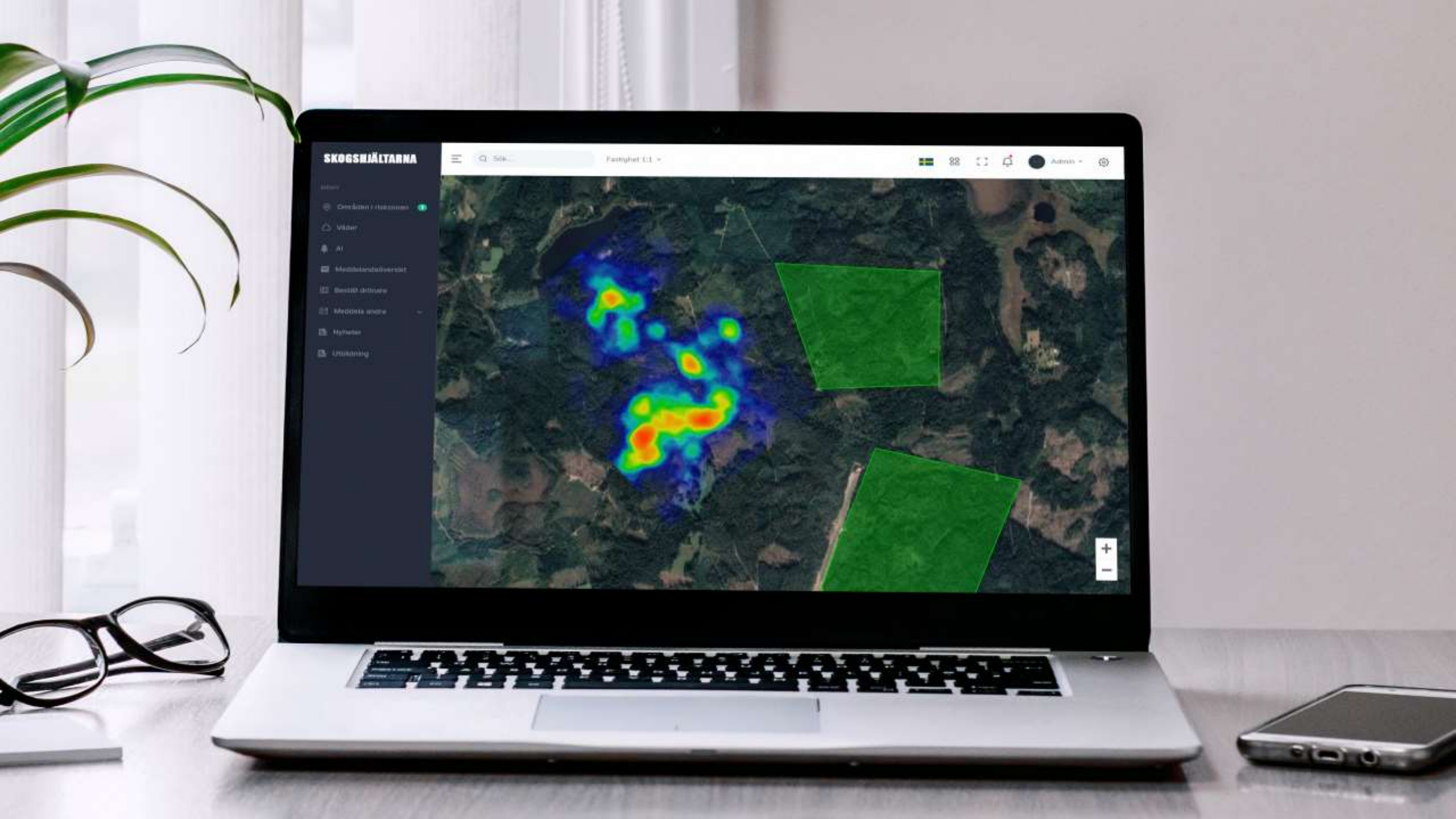
Damaged Spruce Tree

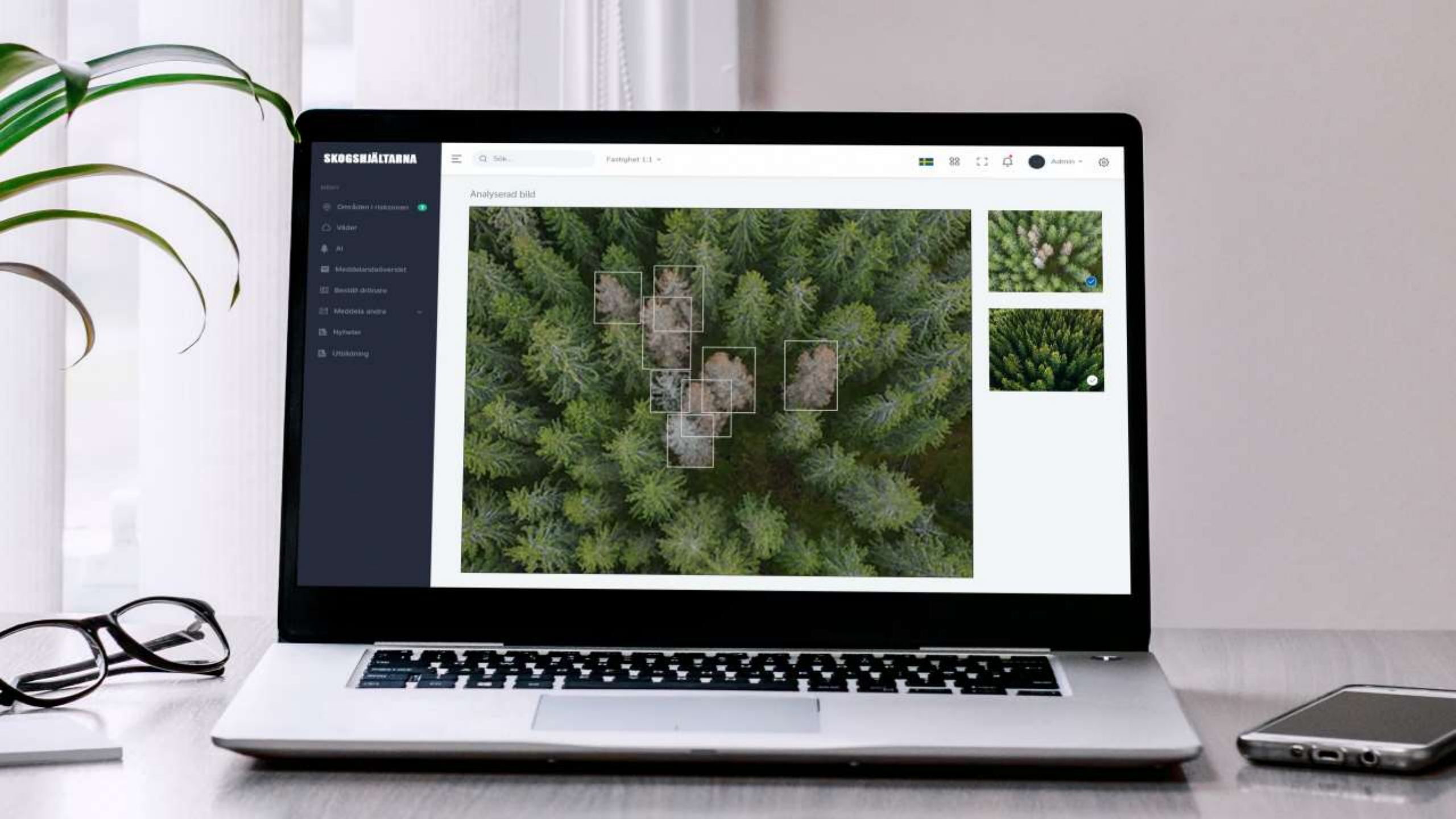
Spruce tree damaged by spruce bark beetle boring into the tree bark. Infested trees have to be found and removed quickly to stop spreading



Spruce Forest Dying

Spruce bark beetle can quickly destroy vast areas of spruce forests.





SKOGSHÄLTARNA

Meny

Om oss / Hjälp

Välj

AI

Medlemskap

Skicka data

Medlemskap

Hjälpen

Uppskatning



Sök

Fästighet 1:1



88



Admin



Analyserad bild



SKOGSHJÄLTARNA

Meny

- Översikten / Huvudmeny
- Väder
- AI
- Meddelandeförväntat
- Senaste delarna
- Meddelanden
- Hjälper
- Uppskatning

Sök

Fastighet 1:1



88



Admin



Vädertidspåbörjan



Meddelande

Senaste meddelande

#	Datum	Titel	Text
1	2020-07-21 10:26	Dygnstemperaturen förväntas sjunka under gränsvärden	Säsongen för Granbarkborra förväntas avta.
2	2020-07-05 14:15	51 dygnsgader prognos	51 dygnsgader förväntas uppnås den 25 april. Förmodat äggläggning påbörjas. Kontrollera riskområden
3	2020-06-30 10:10	18+ grader prognos	Granbarkborren förväntas börja svärma
4	2020-06-15	Första svärmning påbörjad	Kontrollera riskområden var 4e vecka

Weather Data

With analysis of the weather data, forest owners can be notified to act on time!

Notifications:

- Temperature increase, start with preventive measures
- Temperature will soon be 18C° and bark beetle will start to swarm
- Swarming has started, inspect the forest
- Notifications from IoT bark beetle traps
- Sum of temperature is 550 degrees, new swarm of bark beetles is expected
- Temperature decreases and risk in lowering

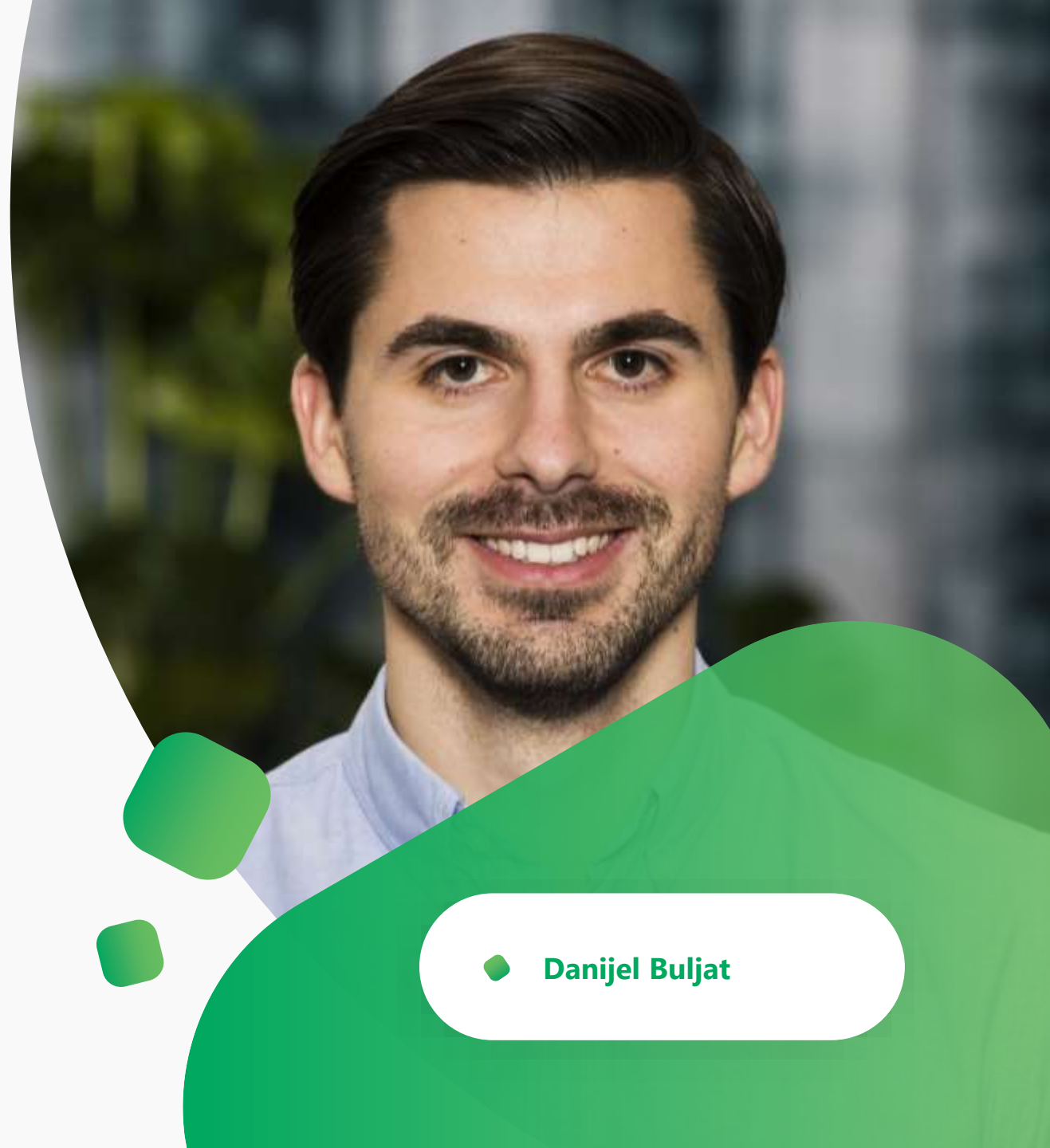


STRATITEQ

Danijel Buljat

Microsoft Dynamics 365 Consultant

Solution focused engineer with a passion for statistics,
algorithms and coding.




◆ **Danijel Buljat**



Let's code!

Demonstration of building Power App from the scratch that integrates with a weather API, and code component for canvas app that utilizes weather data.



To conclude

Code components
has three parts



Manifest

Manifest is the metadata file in XML format that defines a component. It contains:

- The name of the component
- The kind of data that can be configured, either a field or a data-set
- Any properties that can be configured in the application when the component is added
- A list of resource files that the component needs
- The name of the TypeScript function in the component implementation library that returns an object that applies the required component interface



Component implementation

The component implementation is one of the key steps when developing code components using Power Apps component framework

- Implement a component using TypeScript
- Each code component must have a **index.ts** file that includes the definition of a function, which returns an object that implements the methods described in the code component interface
- index.ts** is autogenerated via CLI tooling with main stub methods



Resources

Each code component should have a resource file to construct its visualization

- You can define a resource file in the manifest
- The resource node in the manifest file refers to the resources that the component requires to implement its visualization



Repository Link



<https://github.com/PowerPlatformProfessor/GraphPCF/tree/pcf-demo>



Thank you!

STRATITEQ



Microsoft