

# Robotic Process Automation

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## ROBOTEUR BY SPACEPENCIL

EVERYTHING ELSE IS JUST NOISE

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Roboteur is an RPA platform and development environment that makes it simple and inexpensive to automate processes

[www.spacepencil.co.uk](http://www.spacepencil.co.uk)

**49%**

of Companies are planning to introduce RPA within the next 12 months

(Forrester research)



International  
Distribution  
**INCUBATOR**

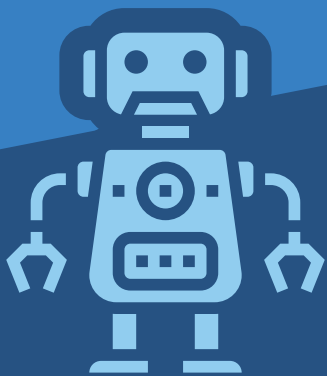
# Robotic process automation

As the world of work undergoes fundamental shifts, we are starting to realize that it's not necessary for a worker to perform every process – at any rate, not a human worker. The idea that computers are just as capable of performing certain tasks is quickly being replaced by the notion that they may actually be more appropriate, efficient and adept at certain repetitive tasks. Robotic process automation (RPA) is all about letting technology take care of repetitive or automatable tasks, thus freeing up human workers to attend to things that require more creativity or non-linear thinking.

PROCESS DRIVEN			
Robotic Desktop Automation (RDA)	Happens on one user's desktop and on his applications	Robotic Process Automation (RPA)	Spans multiple machines, users and departments

DATA DRIVEN			
Machine learning	Utilise statistics to find patterns in analytics and make decisions	Artificial intelligence (AI)	Deductive analysis



## What is RPA in layman's terms?

RPA, is nothing particularly 'new' or extraordinarily special. At a basic level RPA is a process of making a computer do repetitive tasks, it requires expected inputs and outcomes, with clearly defined decision-making capabilities.

## RPA market trends

Staying competitive



Fast track innovation through process optimisation



Reducing costs



The need to grow with less



Enhance agility



# Where to introduce RPA

In RPA when a robot or a bot is referred to, it is not a physical machine or AI, that is robotics or IOT which requires some RPA to function. A bot is a program on a computer or on a server executing specific programmed tasks or work executions mostly in the background. These bots are the pieces of logic that can automate tasks.

## Types of BOTs

Attended robots interact with humans on a desktop (Front office unscheduled)

Unattended robots execute the entire function without human interaction (Back office scheduled)

Hybrid RPA, where a mix of attended and unattended bots are combined to perform the task

## RPA is:

The automation of activities across multiple functions, integration of data from multiple systems and/or software that does the reading, typing, clicking instead of the human.

## RPA is not:

An industrial robot (Car manufacturing), an Android talking robot or chat bot and not a digital worker replacing a human.



Highly manual and repetitive processes



Processes that follow standard rules



Processes that have a low exception rate



Processes with a standard readable electronic input



Processes that have a high volumes, low inputs



Processes that are stable and that don't change too often

## Common RPA use cases

- ✓ Operating and extracting **data from PDFs** or interacting with **spreadsheets**
- ✓ Filling in **forms**
- ✓ Reading and writing to **databases**
- ✓ Following **if/then/else decisions**
- ✓ Connecting to **system APIs**
- ✓ Making **calculations**
- ✓ Collecting **statistics** (social media, etc)

## Benefits of RPA

Enhanced customer experience

Increased productivity

24/7 and scheduled workforce

Improved process efficiency

Improved accuracy

Employee engagement and satisfaction

# Quick and value-driven ROI

## Is RPA expensive?

It is relative to the cost of not automating, considering the above-mentioned factors, Staff and customer satisfaction, time and money saved.







There are different levels of RPA and each level requires different skills. RPA within an environment that has multiple business inputs requires in-depth understanding of RPA and a good knowledge of the processes you want to automate, but for something simple on your personal computer or within a small organization, you don't need a whole team to execute an automated process if you use the right software. You need to remember with RPA we are more often than not building an unknown system, you are taking current manual systems or processes and automating them.

Each process needs to be taken on its merits, automations that cost millions of \$ but give great RIO are much cheaper than automating a process that costs a thousand \$ with little-to-no ROI. In essence, we believe the decision to engage RPA comes down, quite simply, to return on investment (ROI).

HR SERVICES	SUPPLY CHAIN	IT SERVICES	FINANCE & ACCOUNTING	CUSTOMER SERVICE
Payroll	Inventory management	Server & application monitoring	Vendor requisition, PO management	Customer inquiries
Time & attendance	Demand & supply planning	Routine maintenance & monitoring	Payment processing, reporting & invoicing	Order management
Onboarding & offboarding	Invoice & contract management	Batch processing	Quote management	Setting up customer accounts
Benefits administration	Work order management	Email processing & distribution	Credit management	Document processing
Recruitment processes	Returns processing	Password resets & unlocking	Bank reconciliations	Data capturing & systems entry
Personnel administration	Freight management	Backup & restoration	Close consolidations	
Education & training				



## The key factors to RPA success

-  Alignment of RPA strategy to overall digital initiative
-  Buy in of all stakeholders (leaders, employees) and adoption of technology
-  A clear operating and governance model in relation to roles and responsibilities
-  An early engagement with all role-players involved (IT, HR etc)
-  The selection of the right processes to automate (POC or pilot)
-  Building up a library or reusable RPA macros and processes

Can I do my own automation?



The simple answer is YES.

## Enter Roboteur

Roboteur is an RPA platform and development environment that makes it simple and inexpensive to automate processes. Roboteur, talks to ROI, anything else is noise.

What we were dealing with was many years of abstraction and design by committee. So we set out to make something where we had more control, with a visual programming platform and business tool to help users define automated tasks. We wanted to make it user-friendly with not much training required. "Roboteur ticks all those boxes, plus it is granular enough to handle edge cases as well as the more complex scenarios."

"Essentially, it is a visual programming platform with a lot of intelligence built in." It is different from the status quo because it's built on new technology and is distributable – you can run it as a desktop app or on a web browser, in the cloud or locally. "It is a general automation tool that ticks all the boxes from the core outward. It builds out the conceptual layers that are the entry point for RPA tools; and, as a granular

visual programming tool, it is powerful and complete. Roboteur's stand-out feature has to be its ease of use."

A business analyst could use the tool to map out the high-level process functions and a developer could quickly and easily complete the project to spec and expected outcome. For simple automation tasks, the business or process owner could even develop their own tools. We were aiming for a consumer-like product without complex interfaces. Something that doesn't look or feel like homework, that is easy and pleasant to use. It needs to be an extension of the developer's ability rather than a hindrance.

**It needs to make your life easier:  
when you open it,  
you want to use it.**

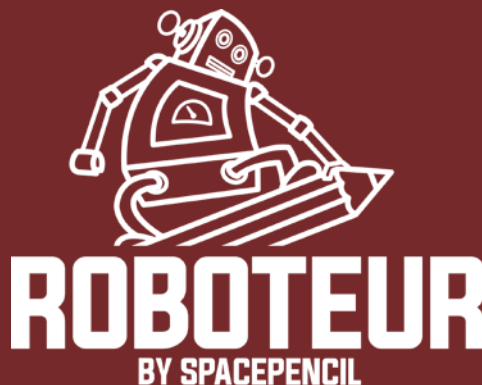
Most tools are really complex, even if your desired outcome is relatively simple. Roboteur's design intent approach is to start off really simple, and you then build up layers of complexity. But if you want to automate a simple process, you can do it. "At the same time, if you have an enterprise-level job to do, with layers of governance and compliance, you can do that too."

## Why Roboteur?

Low cost to  
automate vs  
competitors

Simplistic drag  
& drop user  
interface

Faster project  
completion



Product ease  
of use

Reduced training  
required

It's all about  
the ROI

# Roboteur from SpacePencil



1

**Business and  
Enterprise Edition**



2

**Development Environment/  
Free Sandbox Environment**

There is no technical or development strategy difference in the Roboteur RPA tool across Enterprise, Business or Development Environment options, the functionality and use is from the same technology base (see Matrix for detail). This enables developers that have worked in the Development Environment or the Free-to-use sandbox environment of Roboteur to seamlessly move to the Business/Enterprise development as the skill set and tool use remains the same.



## Current environment

New automation environment  
and industrial movement

Number of early adopters  
with low scale knowledge

Learn as you go... finding and  
making the strategic fit for  
your unique company

Number of large and small  
enablers to choose from



**Business**



**Process**



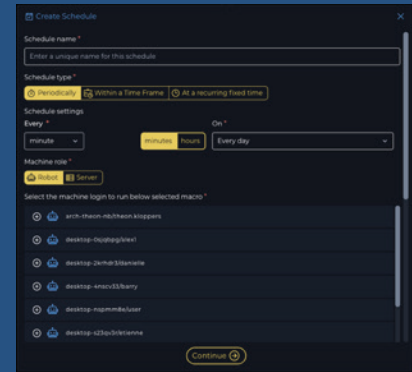
**Economic**

## Easy to use front end

With our drag and drop system you can do complex tasks with no coding required. Every command is managed and represented in the same way. There is no need to relearn as you move between the different commands.

## Allows scheduling

Any macro can be scheduled from a single server to manage all the bots on your network. Some bots need to start at different time and the starting will be managed from the server so long as the bot is available on the network.



## Free developer licence

Anybody with the right permissions can log on to the server and do the required development for any bot on the network at no cost.

## Extensive command list

A macro will be made up of a group of configured commands, Roboteur has over 130 commands, we found that most commands in the development world where just repeated with different variables to get the different results. So, we built the command with the ability to adjust the variables and develop a system without the need to code.

## Free training videos

There are several videos, and the number is growing, that you can watch and learn how to use Roboteur. Online coffee sessions covering different aspects of Roboteur can be requested where you can ask for your own topic to be covered enabling you to get your specific need covered in a training session.

## Blog support

There is a blog available where an active community is available to ask any questions you may have.

## Training courses

Should the morning coffee training and videos not be enough we have appointed a Roboteur Certified Training Centre who will make formal training courses on Roboteur as an RPA tool available shortly. See website for availability and contact detail.

## Analysis required

Before you start any project, you need to understand the requirements of the project. Depending on whether it is a simple personal requirement, an advanced enterprise need, or anything in between, would determine the amount of analysis before you start the build. The analysis determines what the desired outcome of the build should be and also establishes the value of the ROI to the business embarking on the RPA endeavour.

## Technical Understanding Recommended

Do you need to be a propeller-head to create an automated process. Sometimes there is a need for the average person to create something to meet a simple need. At the business level you might need a deeper understanding of the requirements and impacts as the processes become more complex requiring wider and advanced impact assessment to address the business or enterprise type process outcomes.

## Development skills Recommended

In the traditional sense this would be someone who has been trained and become skilled in a computer language. These skills can range from intern developers to seniors. Inexperience and unfamiliarity often scares people off from attempting the most basic RPA tasks. Roboteur changes this and even relatively complex RPA tasks can be achieved using Roboteur without any previous RPA or much programming experience.

## Team required

When engaging an enterprise RPA project and equally many business development projects you may need to have many different skills available in order for the project to be a success. This often prohibits the development of the smaller RPA Projects that may not need as many experts. These can often be deployed with a single person fulfilling the different roles needed (Analyst, Developer, Data provider). Some projects will require a team of experts while others will only need the person whose requirements need to be met, deploying the project.

## Commands

In Roboteur a command is a drag and drop box that has been preconfigured by an engineer to perform a set task. You can change the variables to vary the inputs and expected outputs but each command has a specific function.

## Macro

A macro is a group of commands configured to achieve a process outcome. A macro can have variable inputs and produce the required outputs based on the requirements of the process in the macro.

## Internal macro

All macros can be reused in another macro. When you use a macro in another macro it is referred to as an internal macro.

## Command line execution

This can be used on the odd occasion where there is a need to build a command that has not been pre-built for Roboteur. You can build anything that can be run from the command line of your OS, adding arguments from Roboteur, and returning the results back into Roboteur. Roboteur is language independent. As long as it can be run for the command line in the OS it will interface into Roboteur.

## Supported Platforms



Windows



Apple MacOS



Unix and Linux



RaspberryPie

	Enterprise Edition	Business Edition	Development Environment/ Free Sandbox Environment
Easy-to-use front end	✓	✓	✓
Allows scheduling	✓	✓	✓
Free developer licence	✓	✓	✓
Extensive command list	✓	✓	✓
Free training videos	✓	✓	✓
Blog support	✓	✓	✓
Training courses	✓	✓	✓
Light analysis required	✓	✓	✗
Technical understanding recommended	✓	✓	✗
Senior development skills recommended	✓	✗	✗
In-depth analysis required	✓	✗	✗
Team required	✓	✗	✗
Complex user requirements	✓	✗	✗
Medium user requirements	✓	✓	✗
Simple user requirements	✗	✗	✓
Free to use	✗	✗	✓
Unlimited commands	✓	✓	✓
Unlimited macros	✓	✓	✗
Unlimited internal macros	✓	✓	✗
Single internal macro	✓	✓	✓
Command line execution	✓	✓	✗

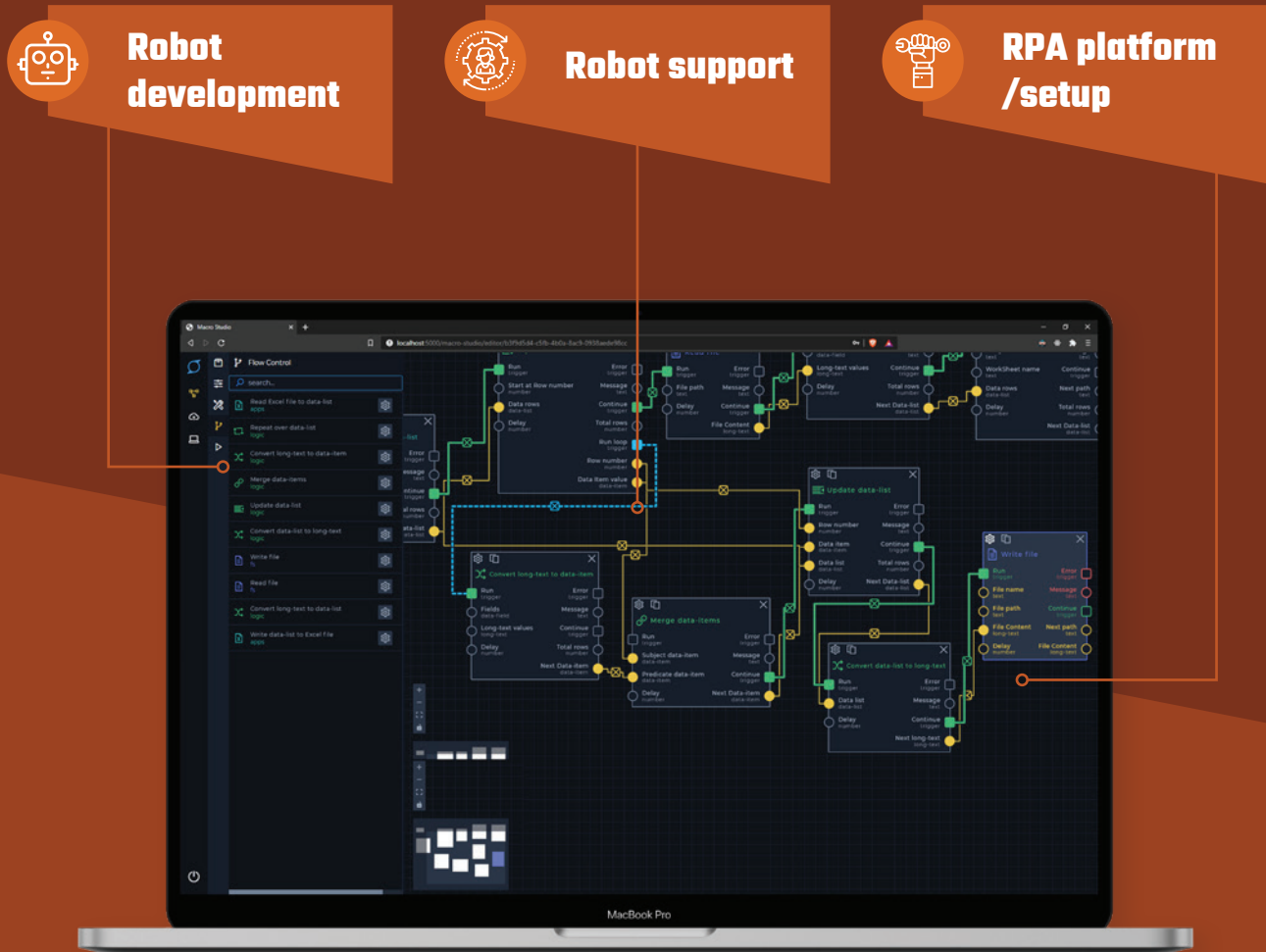


# Roboteur by SpacePencil

SpacePencil, together with its partners, is able to offer you the full range or selected building blocks to enable you to successfully embark on RPA projects ranging from the Developer edition use through to the Enterprise Edition for business critical Automation.



SpacePencil will not only provide a purposefully-built, easy to use and understand RPA tool to deliver real value RPA with, but can provide varying services throughout the lifecycle of deploying RPA environments, Robot development, support and deployment with tools that are extensible and modularly grow with your needs and skills base and development over time into the future.



# Case study: Banking Industry in South Africa

Leverage RPA to avoid creation of duplication in combination of processes

## Situation

A financial institution required an automated process to provide customers with documentation such as cross-border letters, tax certificates and account confirmation letters via a self-serve channel.



## Approach

Review As-Is business processes with business SME's

Conduct a detailed process walk-through at key stroke

Review available automation tools

Agree and develop the enhanced To-Be process

SME's acceptance review and testing

Deployment with business approval (unattended)

Support and maintenance based on handover activities

## Results

Annualised benefits in excess of R15m

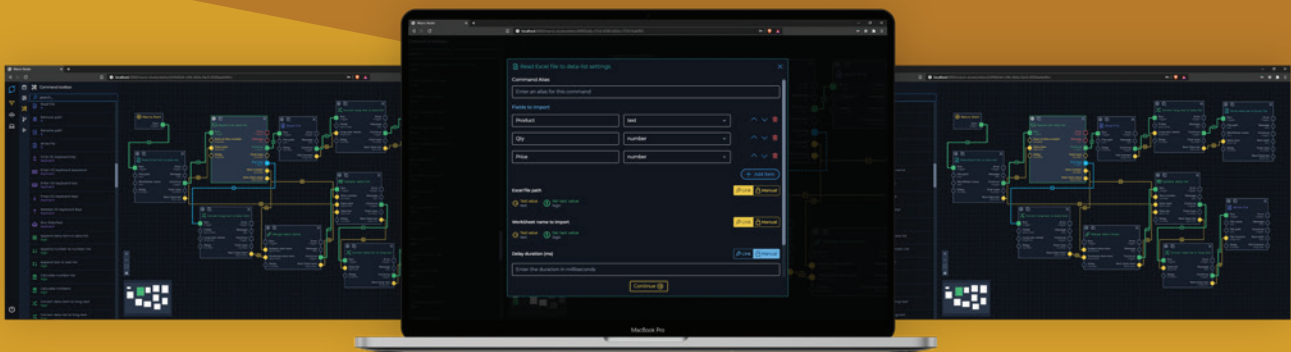
126k working hours optimised

Increased customer satisfaction and improved service delivery

***“Customers can now via an automated self-service channel get access to various bank-initiated documentation with a decrease in processing time by***

**70%**

***and associated cost reduction”***



Contact us at [management@spacepencil.co.uk](mailto:management@spacepencil.co.uk) for a conversation, for a demonstration – we will demonstrate a build of a simple bot – for a quotation, for an evaluation, for free access to the Development Sandbox.

*T&C's apply*

# Predictions

According to Accenture, "a successful RPA implementation can yield a 40 to 80 percent reduction in processing costs and up to an 80 percent reduction in processing time."

## 2020

According to Gartner, the growth of RPA could exceed **40%** from one year to the next by 2020.

## 2024

Transparency Market Research states that at a global level, the RPA market will reach up to **\$16 billion** by 2024.

## 2030

A 2017 McKinsey Global Institute report estimated that by 2030, automation will drive **75** to **375 million** people to reskill and even change occupations.

## 2027

**GLOBAL MARKET RPA**  
The global process automation market was valued at USD 2.90 billion in 2019 to reach **USD 27.78 billion** by 2027 and is anticipated to witness a CAGR of 32.5% from 2020 to 2027

## 2025

**30%** of white collar jobs may be replaced by automation by the year 2025.

## The key factors to RPA success

Alignment of RPA strategy to overall digital initiative

Buy-in of all stakeholders (leaders, employees) and adoption of technology

A clear operating and governance model in relation to roles and responsibilities

An early engagement with all role-players involved (IT, HR etc)

The selection of the right processes to automate (POC or pilot)

Building up a library or reusable RPA macros and processes

# COVID-19 implications

Accelerated focus on process automation



Paper-based processes



High touch



## RPA evolved rapidly in last three years

### What customers are demanding

A tactical alternative form of integration

Enable citizen developers

Intelligent document ingestion with AI-ML



Citizen developer friendly



Multipersona experience



Complex orchestration



Auto ML, NLP



Process discovery and mining



Intelligent document ingestion



Composable services



Cloud delivery



# Roboteur by SpacePencil

## Technology, Automation and Integration

RPA is 100% agnostic to technology. One single platform works with EVERY technology from the presentation layer OR from back end integrations, databases and APIs.

## Fast

RPA does not require you to learn a language. It can automate in minutes and can be done by anyone who knows how to apply basic logic. Add this to the 100% agnostic technology and you have a very powerful process automation platform. From mainframe green screens to the latest cloud apps – automated straight through process by the same platform.

## RPA Anywhere for Anyone

One solution for any technology with no language to learn? RPA enables you to democratize Enterprise Class automation - you can attack ANY line of business, front, middle and back office with one solution.

## RPA Scales

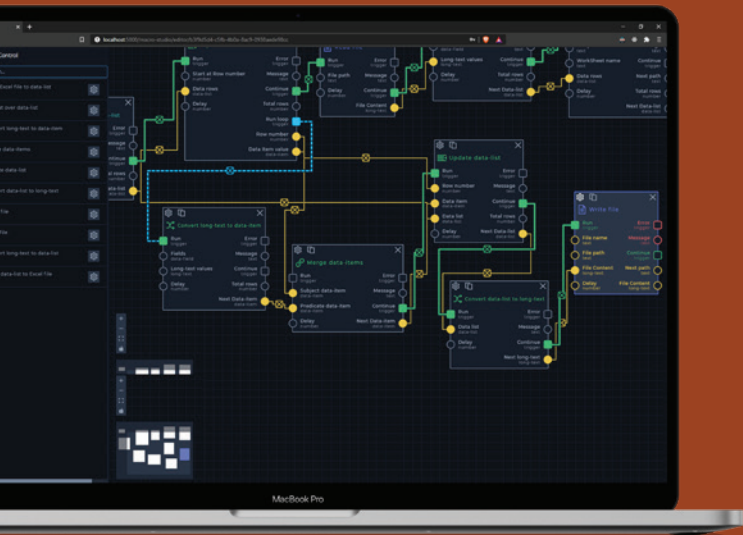
Process steps or modules can be reused, shared and maintained across the enterprise. Versions are managed and processes are triggered based on business events.

## Governance, Risk and Compliance

Macros are invisible, unknown and unmanaged. They are a serious security risk and a business disabler. RPA is managed, visible and controlled. You know exactly what runs where and every single step is visually recorded to provide the ultimate audit trail.

## RPA becomes Cognitive

The latest RPA solutions are starting to learn how to handle variable inputs. And soon they will self-analyze to improve processes. This is possible because RPA holds more information about a given process than any human ever could.



# How does i.d.i and Roboteur from SpacePencil RPA toolset differ?

Open technology offer (Lowcode and Z1 framework)

Built in the financial enterprise environment (Top 5 Commercial Bank in SA)

Built to address solutions across all tiers including the consumer market (Server, Desktop, Cloud)

Low bar of entry (cost, ease of use, rapid deployment, open system integration)

Method to market (channel mode leveraging distribution and Value Add Reseller infrastructure, skills and customer relationships)

# Z1 + Roboteur from SpacePencil, an unreal engine for the business world

Over 6 years ago we started working on an open-source project to standardize common features in full stack applications and wrap them in a way that makes it easy to plug in and re-use across multiple platforms and projects.

Roboteur by SpacePencil, the low code platform with an RPA focus is built entirely on the Z1 framework. From the core outwards Roboteur by SpacePencil has been developed to be the modular, dynamic low-code programming platform Z1 aspires to accelerate.

Our vision is to drive delivery, quality and developer productivity to heights not thought possible in non-gaming industries with a product and platform developers love to use, and a community motivated to innovate and grow.

## Roboteur by SpacePencil and Z1 roadmap

### V 7.0 features to Roboteur by SpacePencil, including:

- **Reactive job engine**
  - Orchestration focused programming
  - Reactive flow with active triggers from sources
    - Schedule
    - File Monitors
    - Service Monitors
    - Mailbox Monitors
    - Web hooks
    - Web sockets
    - RabbitMq
  - Multi skill collaboration
    - Business analyst
    - Process developer
    - DevOps engineer
  - Multi-machine orchestration and queue chunking and delegation features
- **Shape studio**
  - Design data templates with a drag drop interface for field composition
  - Design mappings from various file types to data shape fields
  - Capture and manage collections of data
- **Teams and access controlled sharing and collaboration**
- **Package repository and version control**

The maturity and power of the reactive job engine and shape studio will feed down into the Z1 framework to accelerate development of revolutionary features including:

- **Database model UI designer**
  - Existing Database seamless integration
- **API service UI designer**
  - Hook middleware function flowchart designer powered by Roboteur by SpacePencil components
  - Managed code integration
- **Front end Routing and security designer**
- **Form schema designer inspired by Roboteur by SpacePencil shape studio with managed code extensions**
- **UI View designer with managed code and custom component extensions for rapid UI layout and logic development**
- **UI Reactive state flowchart designer with managed code and for rapid state management logic development**
- **DevOps studio to accelerate setting up and shipping your solution**

# RPA is still the fastest growing software market

63% ↑

YoY growth in 2019<sup>1</sup>

70% ↑

inquiry growth within Gartner

## Manage the operating model (TOM)

### 1. Service delivery model

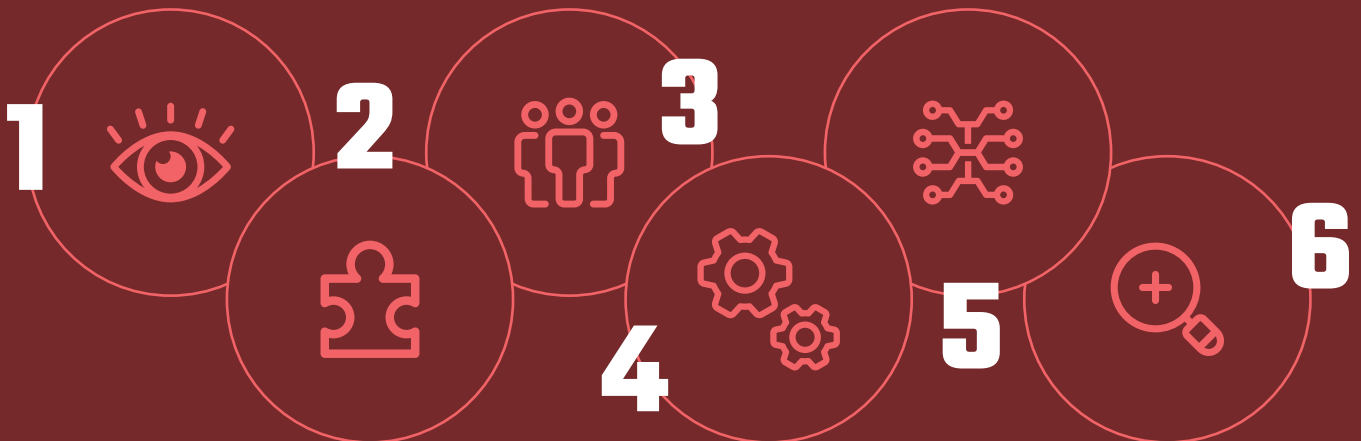
- What is the target operating model?
- How does RPA link to our strategy?
- Why RPA?
- RPA journey

### 2. Organisational design

- Operating model
- Roles and responsibilities
- Role performance measures and KPIs
- RACI

### 3. People

- Skills and knowledge
- Ways of working
- Communication and change
- Supplier relationship management



### 4. Processes

- Bot initiation and acceptance
- Bot development and deployment
- Business ownership
- Post-production support
- Risk and issue management

### 5. Technology

- Tracking bots in progress
- Document repository
- RPA technology
- Project tracking

### 6. Governance and reporting

- Progress reporting
- Contracting and financials
- Blockers, risk and issues
- Executive reporting
- Governance and compliance
- Post-production reporting

# Define delivery life cycle model

