

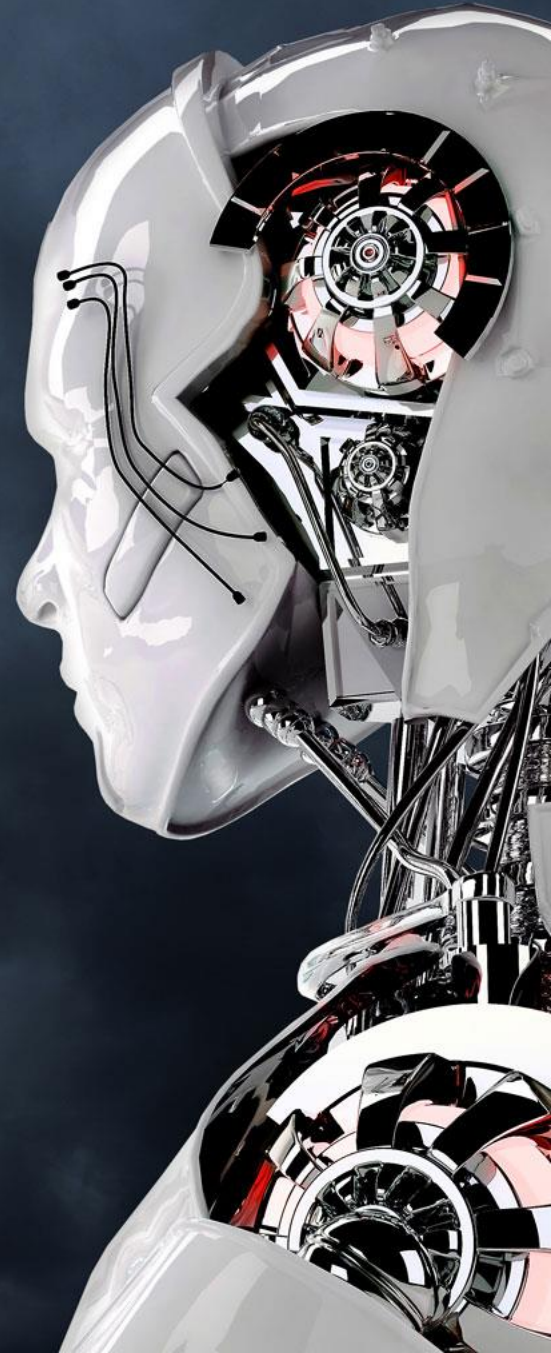


# 금융 IT Innovation 컨퍼런스

## 금융산업을 위한 디지털 전략 : 인공지능 및 챗봇 전략

KPMG Digital & AI  
최성집 파트너

2018.12.13



# 디지털 금융의 변화 방향

디지털 금융은 Channel, Operation, Eco-system의 3개 영역에서 Digital Transformation이 활발하게 이루어지고 있음

## Channel

### Transformation



내부



외부

## Operation

### Transformation

운영시스템



정보시스템



## Eco-system



Fintech



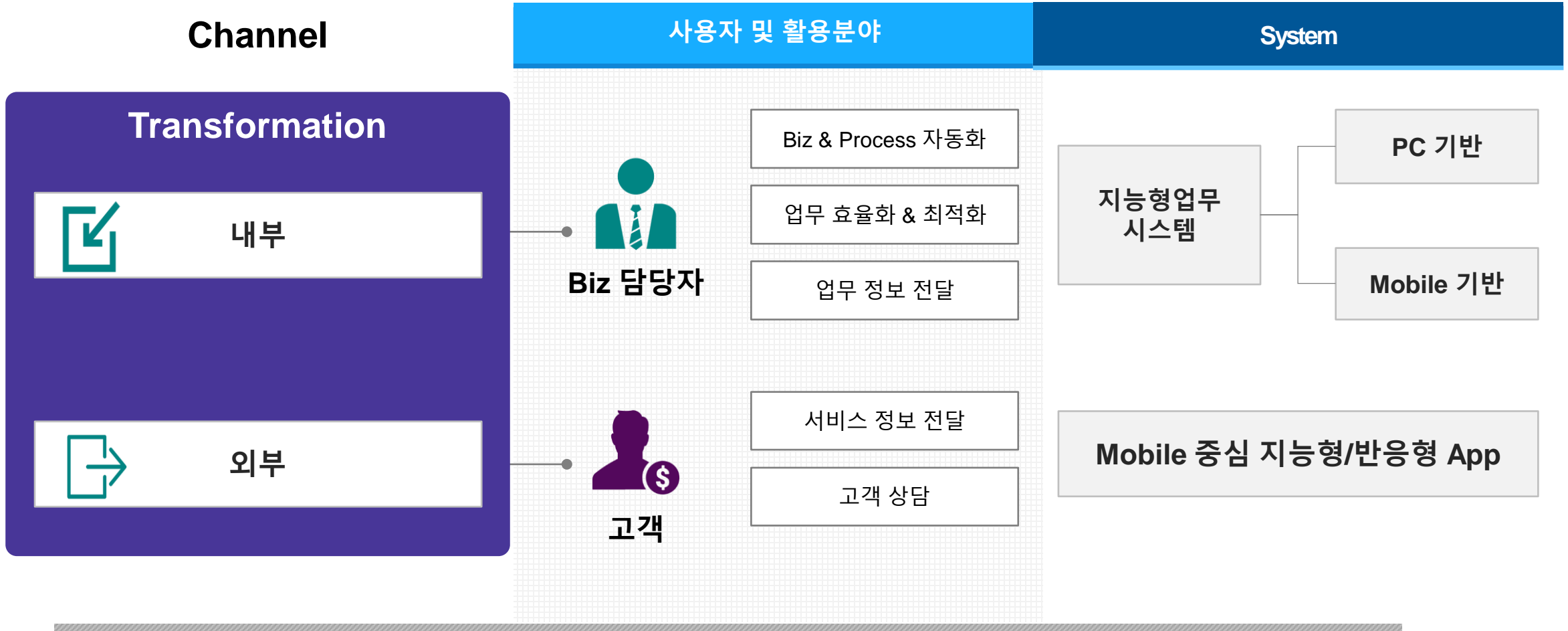
Start-up



기타 제휴

# 디지털 금융의 변화 방향 - Channel

Mobile 중심의 반응/지능형 앱의 비중이 커지고 있으며, 고객경험 기반 직관적 사용성, 대화형 플랫폼 중심의 서비스들이 증가



# 디지털 금융의 변화 방향 - Operation

Open Banking/Insurance 등 금융서비스의 공유를 통한 타 서비스와의 융·복합을 통해 새로운 비즈니스 모델이 나타날 것임

## Operation

### Transformation



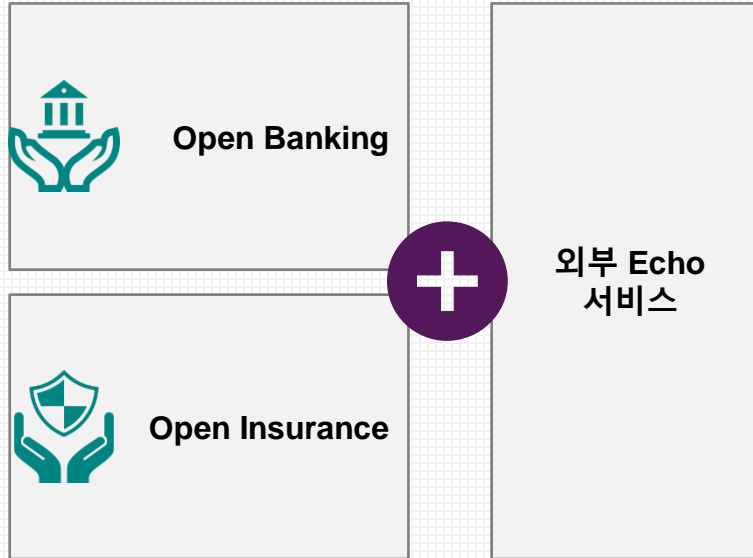
운영시스템



정보시스템

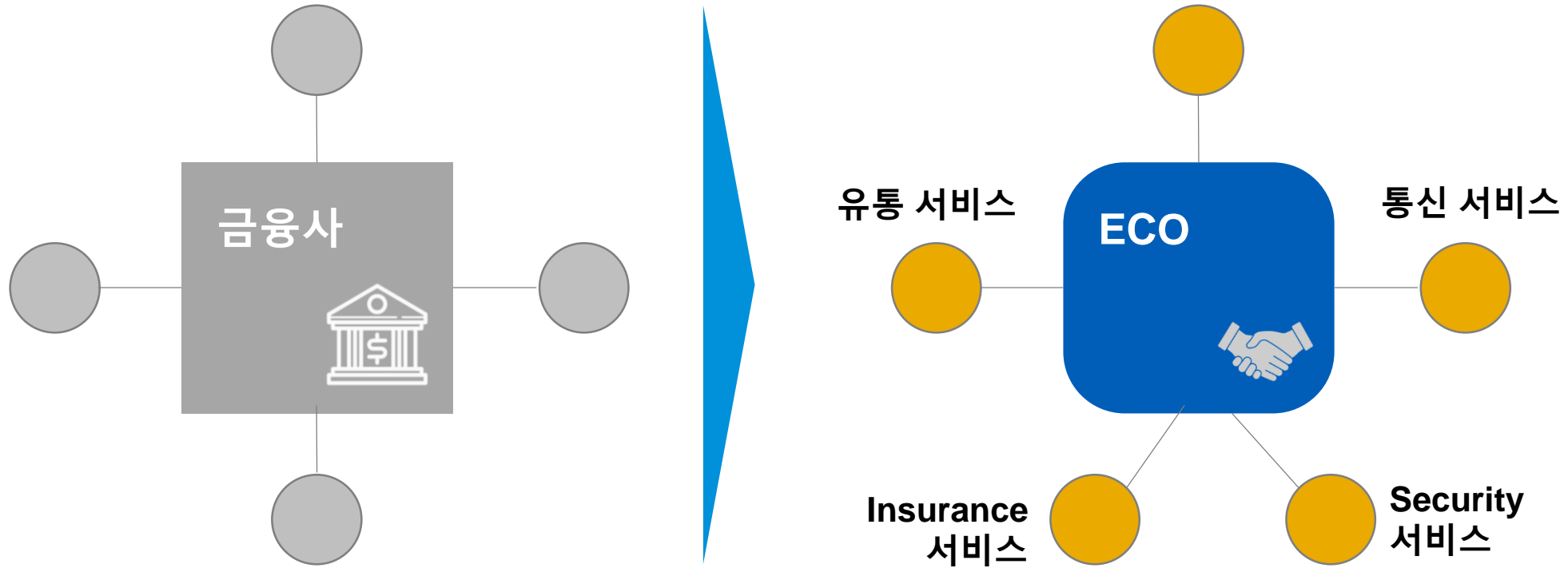
## 서비스 융합

## To-be



# 디지털 금융의 변화 방향 - echo System

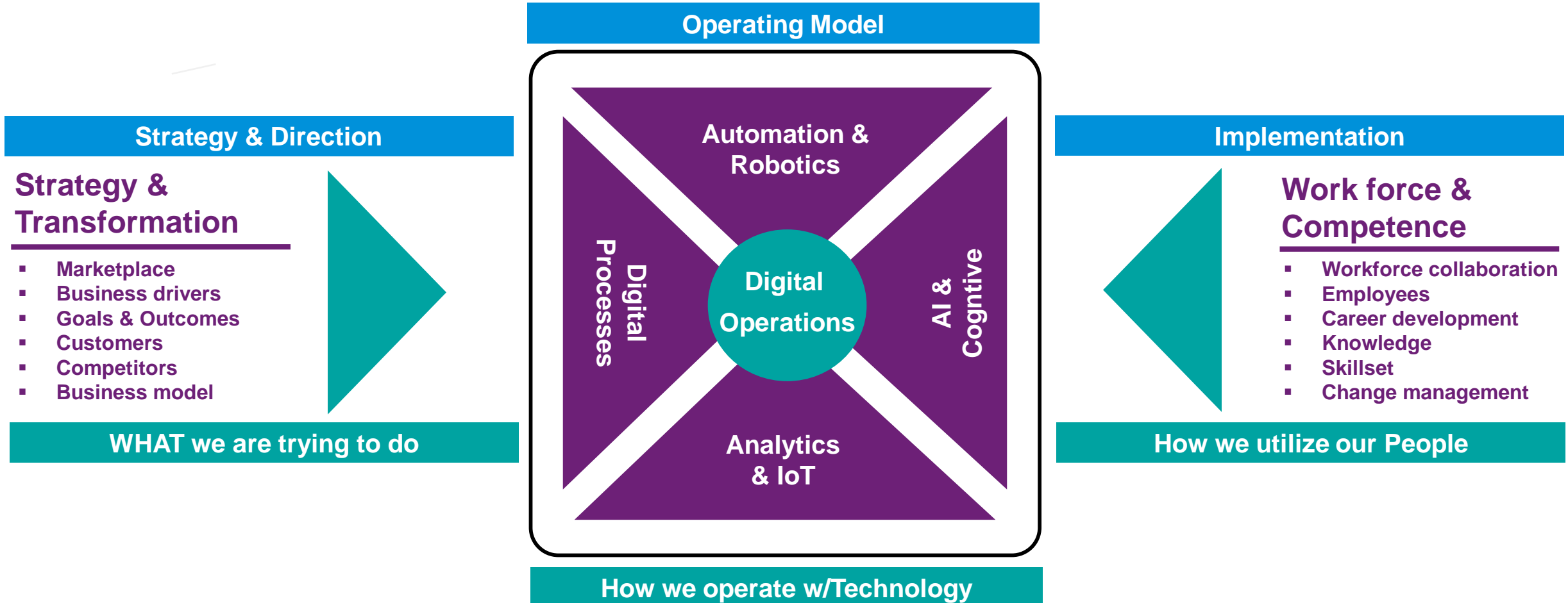
금융사 고유서비스 중심과 더불어 Alliance를 통한 비즈니스 기회를 창출할 수 있음



# 금융산업에서의 디지털 전략 실행

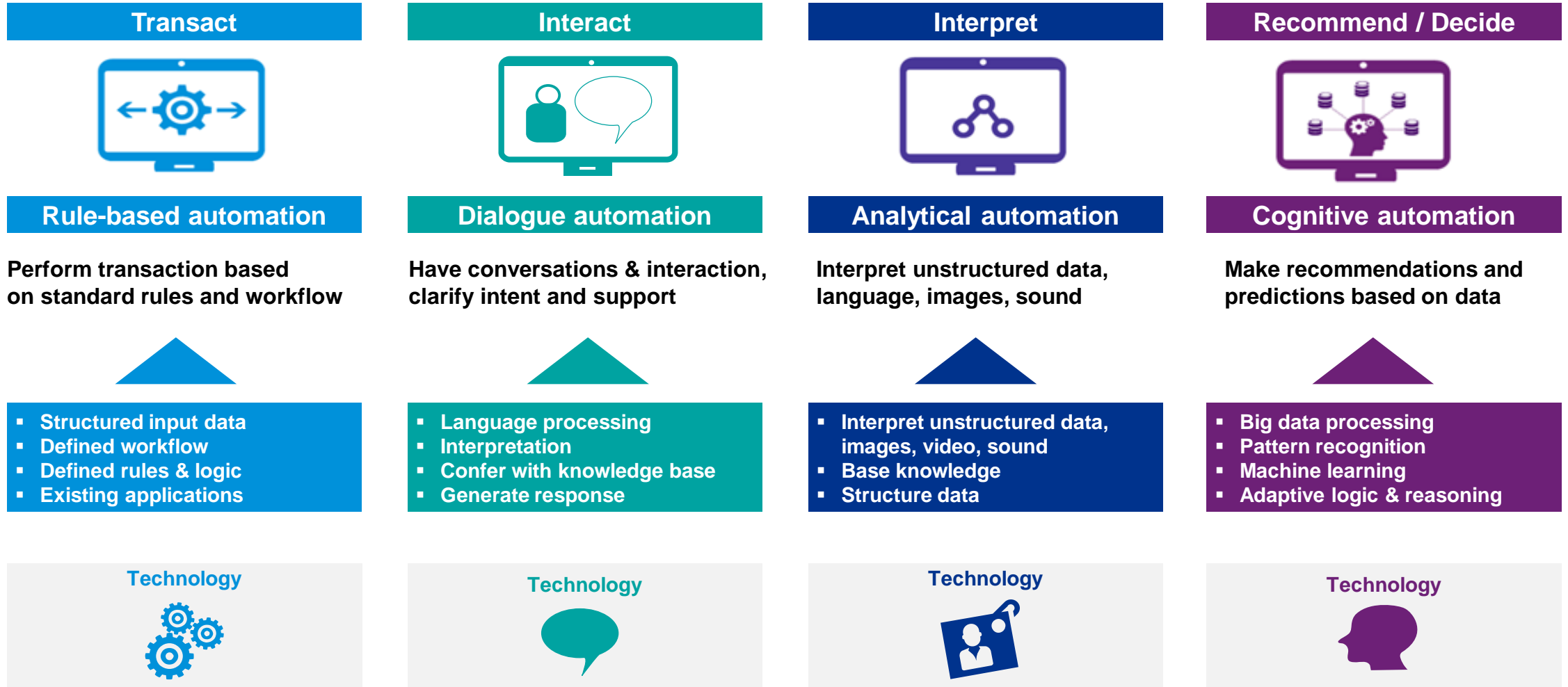
Optimizing and redesigning our processes with modern technological components in order to change how we operate

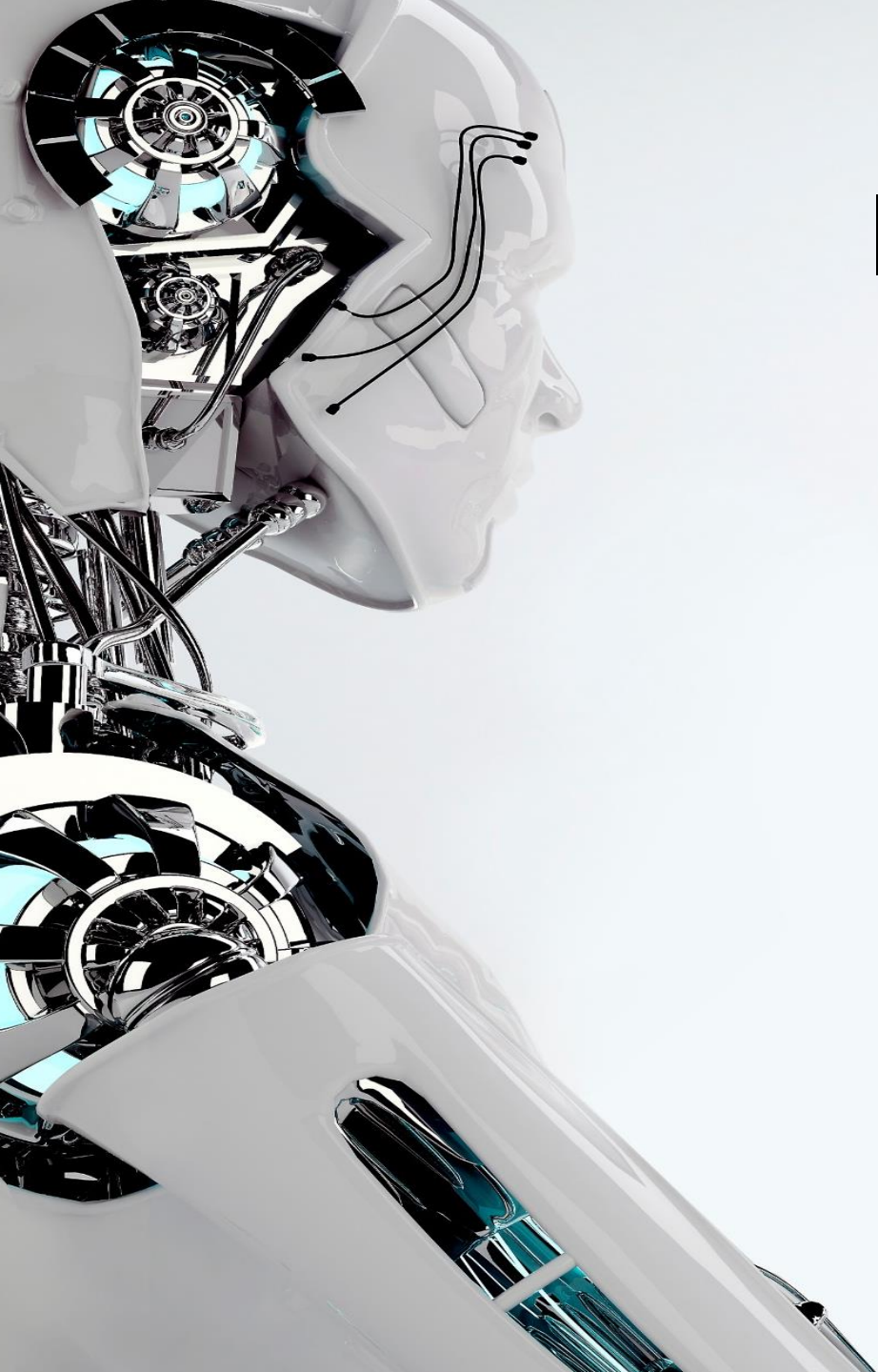
Product- and Service Innovation through renewed Customer Centricity and Digital Transformation requires Strategy, Operations and People



# 디지털 전략 실행을 위한 기술요소

The capabilities of automation technology can be classified into four groups of automation “skillsets”.





# IA(Intelligent Automation)



# 인공지능에 대한 오해

사람을 대체하는 측면이 아닌 지원하는 개념이고, ROI 측면보다는 디지털에 의한 변화를 준비하는 과정임

## 도입 측면(시각)

모든 말 & 표현을 알아들을 것이다

현행 프로세스를 자동화하고 개선할 것이다

인간을 대체할 것이다

ROI를 계산하여 필요한 영역만 도입하면 된다

솔루션처럼 도입하면 된다 (도입비용 最小)

Fast Follower로 추후 도입하면 된다

## 인공지능 도입 측면

인공지능은 전지전능하지 않다 (단, 1명, 연속 투자 不)

인공지능 도입에 따른 Process/Data/Apl. 혁신 필요

人 대체 개념 → 人을 위한 지원 개념

인공지능 ≠ 솔루션, 도입 비용 多(단, 先투입)

늦었다고 생각할 때 시작, 능동적 대처를 위한 투자

# 도입 시 고려요소

인공지능 도입을 위해 잊지 말아야 할 것 들



## Don't underestimate the power of good data

Sufficient volumes of quality data must exist to train models properly. Ensuring accessibility and availability of data can help scientists to build accurate solutions, or equally inhibit their ability to build trustworthy models.



## Produce more with the same number of people

Leverage AI to reduce the administrative task load of employees through automation, freeing them up to perform high-value tactical and strategic work. Equally as important, use AI to drive insights and detect issues and opportunities in data that is too large for traditional approaches to effectively accomplish meaningful results.



## Artificial Intelligence solutions are not plug and play

While many APIs and pre-built platforms are great accelerators, most solutions also require custom programming and training to attain target accuracy and results. Long term efficient models need to be well trained and improved over time.



## Carefully select opportunities for deploying AI

Make sure the cost to implement is being balance with expected ROI from day one. Prioritize back office computer-to-computer interactions use cases, particularly in IT, finance, and accounting as good places to start. These applications are currently driving out high value and do not put your customers at risk while you are developing your AI acumen and early solutions.

# 인공지능 활용 영역

디지털 금융의 변화 방향에 따라 인공지능 기술은 크게 6가지 형태로 적용될 수 있으며, 지속적으로 신규 Case가 발굴되고 있음

- 고객
- PC/ Agency
- 기관
- 기타 외부

## 1 Conversation

- Text
- 음성

## 2 Visualization

- 안면인식/홍체인식 등
- AICR

## 3 Automation

- 자율주행
- 제조로봇

## 4 Optimization

- M/L
- D/L

## 5 Intelligent search

- 지능화 네비게이션
- Biz Advisor

## 6 Detecting

- RDS
- AML
- 마켓센싱
- 소비DNA

# 인공지능 도입 주요요소 및 모델

인공지능 도입은 단순 솔루션이 아닌 전문인력과 기술력을 보유하기 위한 노력이 핵심임

## R&R & Capability

	R&R	Capability
<b>AI Concept Designer</b>	<ul style="list-style-type: none"> <li>보험업무 Value Chain 별 인공지능 도입이 필요한 영역 발굴 및 Usecase 정의</li> </ul>	Biz / AI Expert & Consultancy
<b>Information Architecture</b>	<ul style="list-style-type: none"> <li>인공지능 도입 시 필요한 데이터에 대한 수집/가공, 기존 Data Model Restructuring</li> <li>알고리즘 적용을 위한 Data Pre-Processing</li> </ul>	BI / Modeling & AI Expert
<b>AI Architecture</b>	<ul style="list-style-type: none"> <li>Value Chain, Process(AI Based) 별 APIs 및 Solutions/Tools 연계 아키텍처 설계</li> </ul>	TA/AA & AI Expert
<b>Algorithm Modeler</b>	<ul style="list-style-type: none"> <li>Value Chain, Process 별 APIs에 필요한 Library 및 핵심 Logic 설계, 既 제공 Lib 커스터마이징 등</li> </ul>	AI Producer
<b>Algorithm Builder</b>	<ul style="list-style-type: none"> <li>APIs 및 Library, 업무에 필요한 핵심 Logic Building 및 Tuning (학습 Iteration 진행)</li> </ul>	Data Scientist
<b>Algorithm Instructor</b>	<ul style="list-style-type: none"> <li>APIs 및 알고리즘 연계 학습 결과 확인 및 검증, Re-Training 방향성 설계</li> </ul>	AI Producer & Expert

## 도입 모델

**Internal**

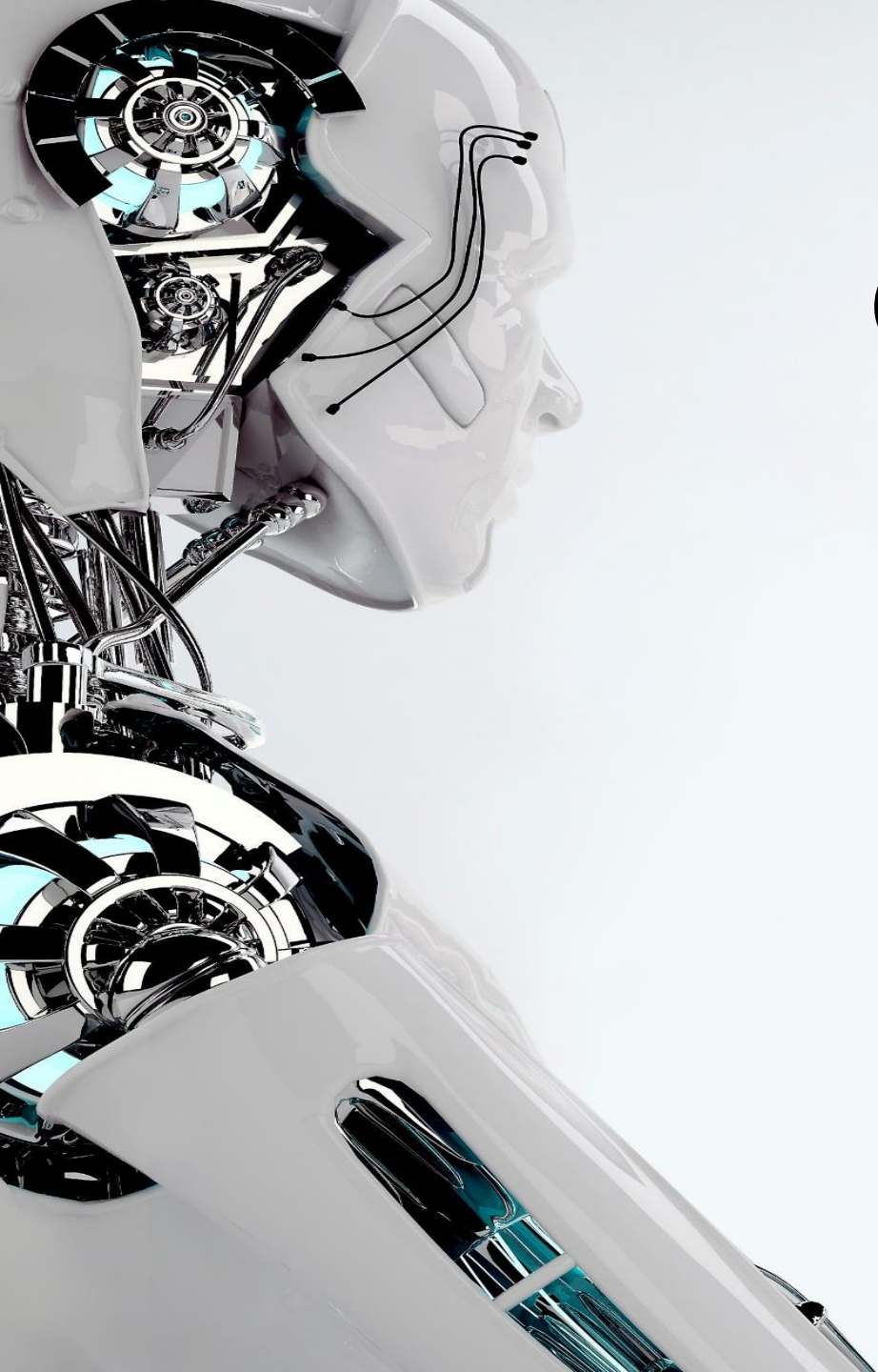
- 인공지능 도입 내재화 모델, **투입비용 小**
- AI 및 디지털 신기술 도입을 위한 내부인력의 역량 내재화를 통한 도입 모델
- 관련 인력 및 조직 Setting & **長期** 도입 모델

**External**

- 인공지능 도입을 위한 외부인력 Sourcing 모델
- 내부 인력에 대한 학습 및 내재화 기간 최소화
- 외부 Sourcing에 따른 **투입비용 多**
- 관련 인력 및 조직 Setting & **短期** 도입 모델

**Hybrid**

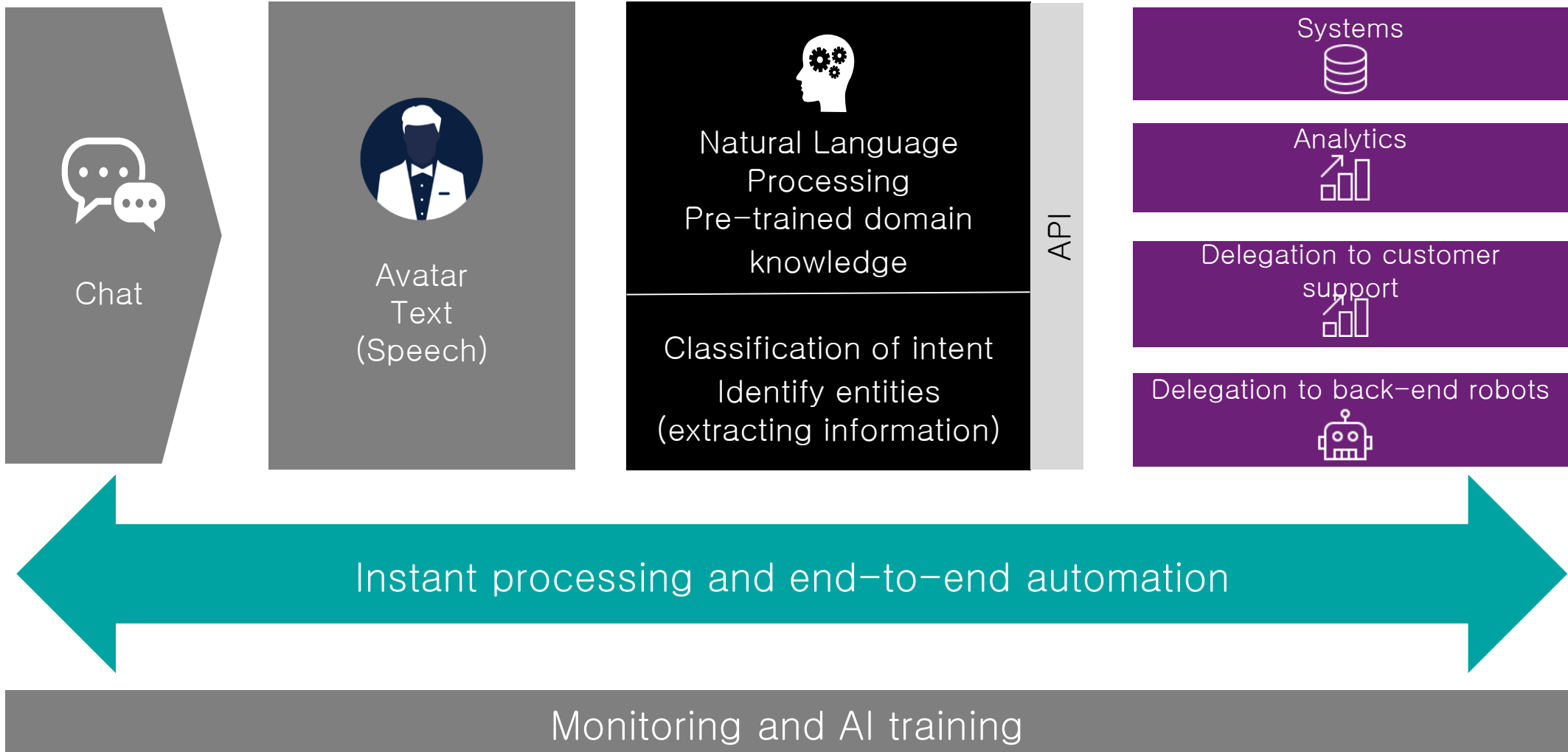
- 역량 내재화 및 외부 Sourcing 병행
- 현실적 대안으로 **투입비용 및 기간 中**
- 관련 인력 및 조직에 대한 장기적인 안목의 투자 및 협업 필요, 스타트업 등과의 **AI eco-System**



# Chatbot

# 챗봇 구성

일반적인 챗봇은 다음과 같은 구성을 가짐



# 챗봇의 지식을 구성하기 위한 요소

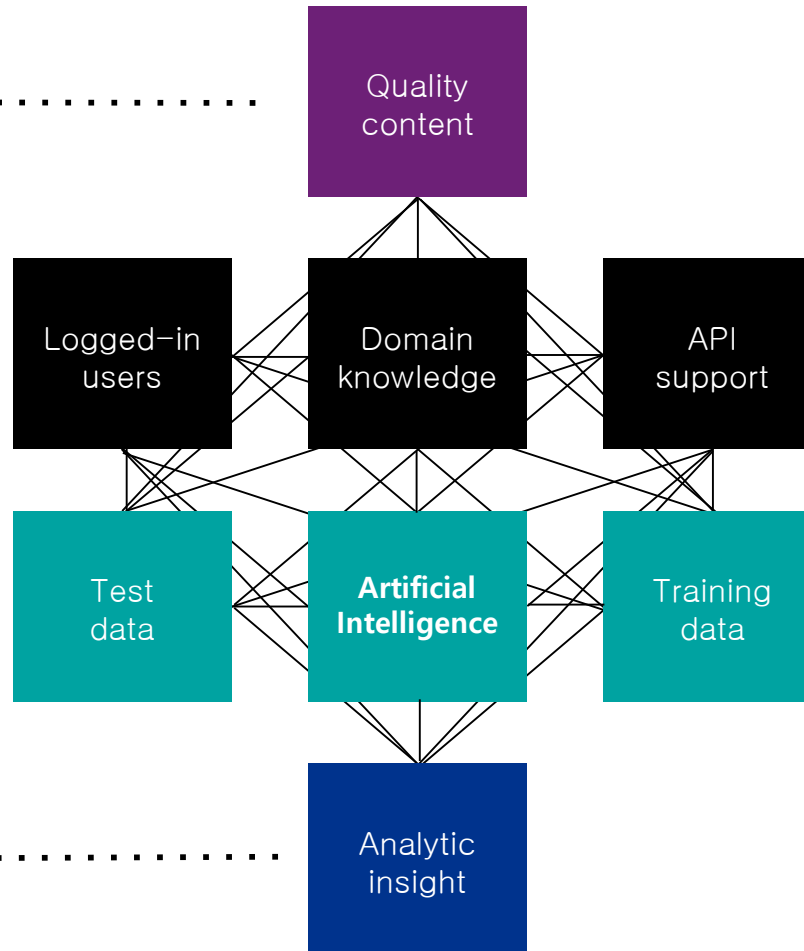
There are several modules that need to be linked in order for the virtual agents to ensure a good user experience

High quality content ensures that our virtual assistants predict correctly - with responses that satisfy the users

The features of the virtual assistant provide a robust tool belt and extensive capabilities

Every employee needs training and feedback at work. Digital assistants developed with artificial intelligence are nothing different.

The platform's included analytics dashboard is comprehensive and user-friendly. The platform can also be integrated with existing CRM systems



## The platform is made up of several building blocks

The platform consists of several building blocks. To break it down further, it consists of five main components:

GUI / Admin panel

The interface itself and the administration panel where the content is developed and the model is tested

Analytics studio

The studio where responsible can follow up calls and other statistics and history

Database

Prediction engine (machine learning)

The engine developed using machine learning that predicts what answers users will get based on their questions.

Front-end chat

The interface that the user addresses when it will take advantage of the chat

The platform further focuses on easy integration with external platforms when it comes to:

Front-end chat & Human Chat

API / RPA platforms

user Authentication

Alternative hosting (On-Prem / Cloud)

Text-to-Speech and Speech-to-Text

# 챗봇 기술요소

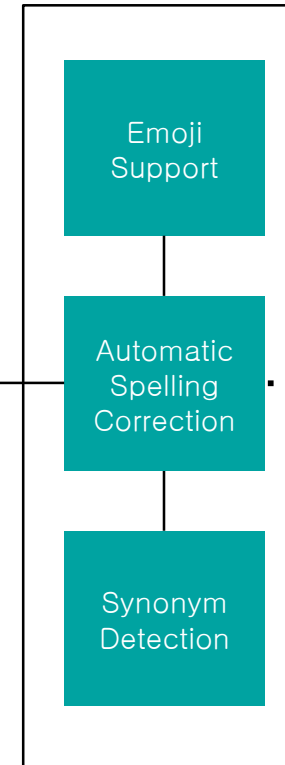
The technical components complement each other and form a robust solution built on technology

Deep learning with state-of-the-art neural networks train on multiple GPUs at the same time, reducing time spent training and testing.

The model learns online with new data - getting continuously smarter.

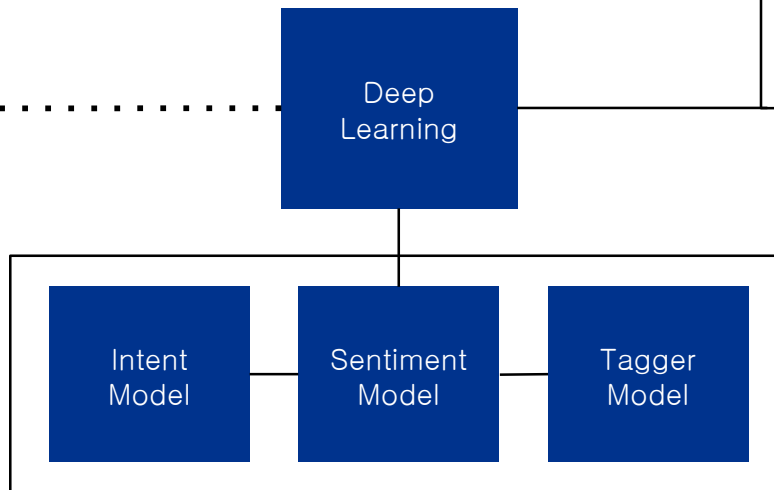


Natural Language Processing algorithms.



In-house automated spelling correction, emoji support and synonym detection makes it capable of understanding users - no matter how they communicate.

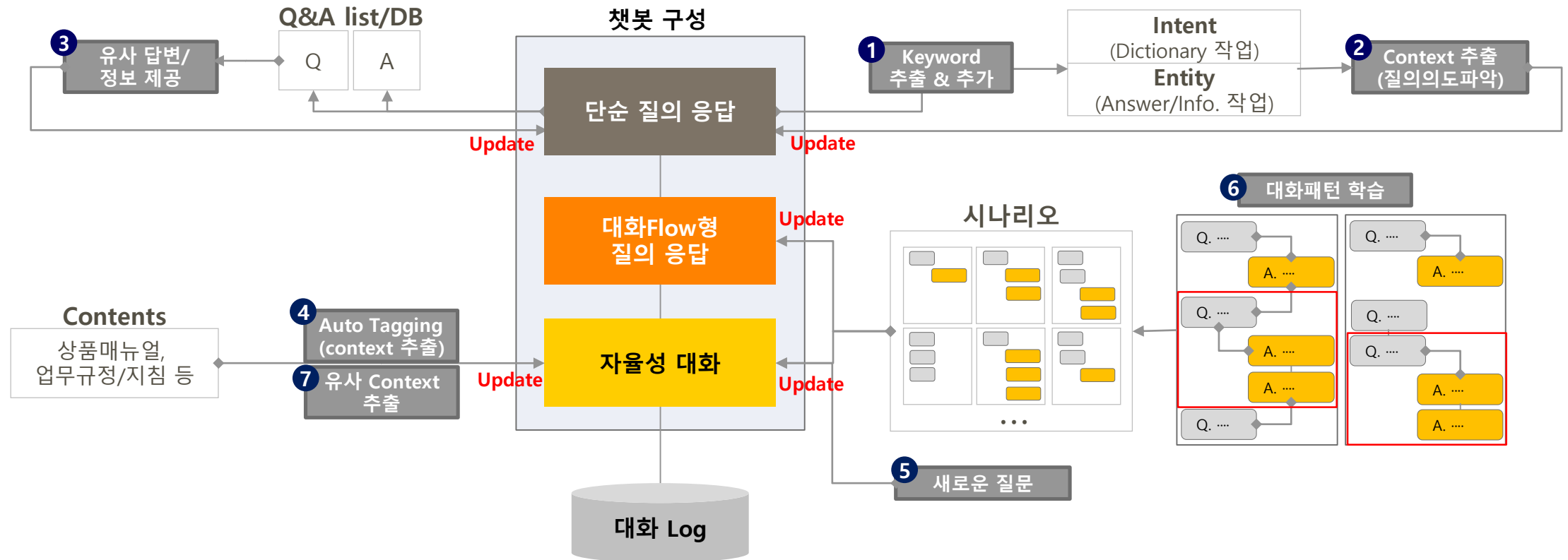
Serves unlimited intents, different kinds of sentiment and unlimited tags.





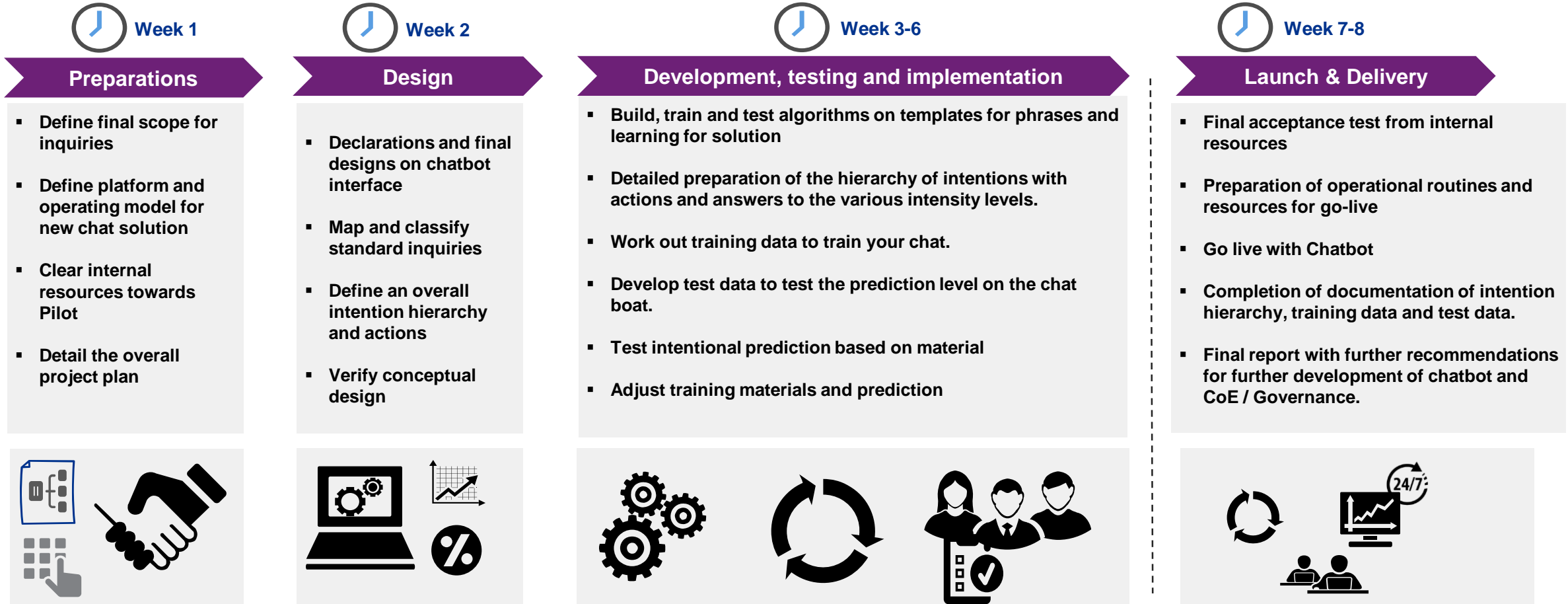
# 챗봇서비스 고도화를 위한 학습/운영방안

챗봇은 다양한 학습기능을 구현해야 하며, 각 업무에 맞는 학습 방법으로 진행되어야 함



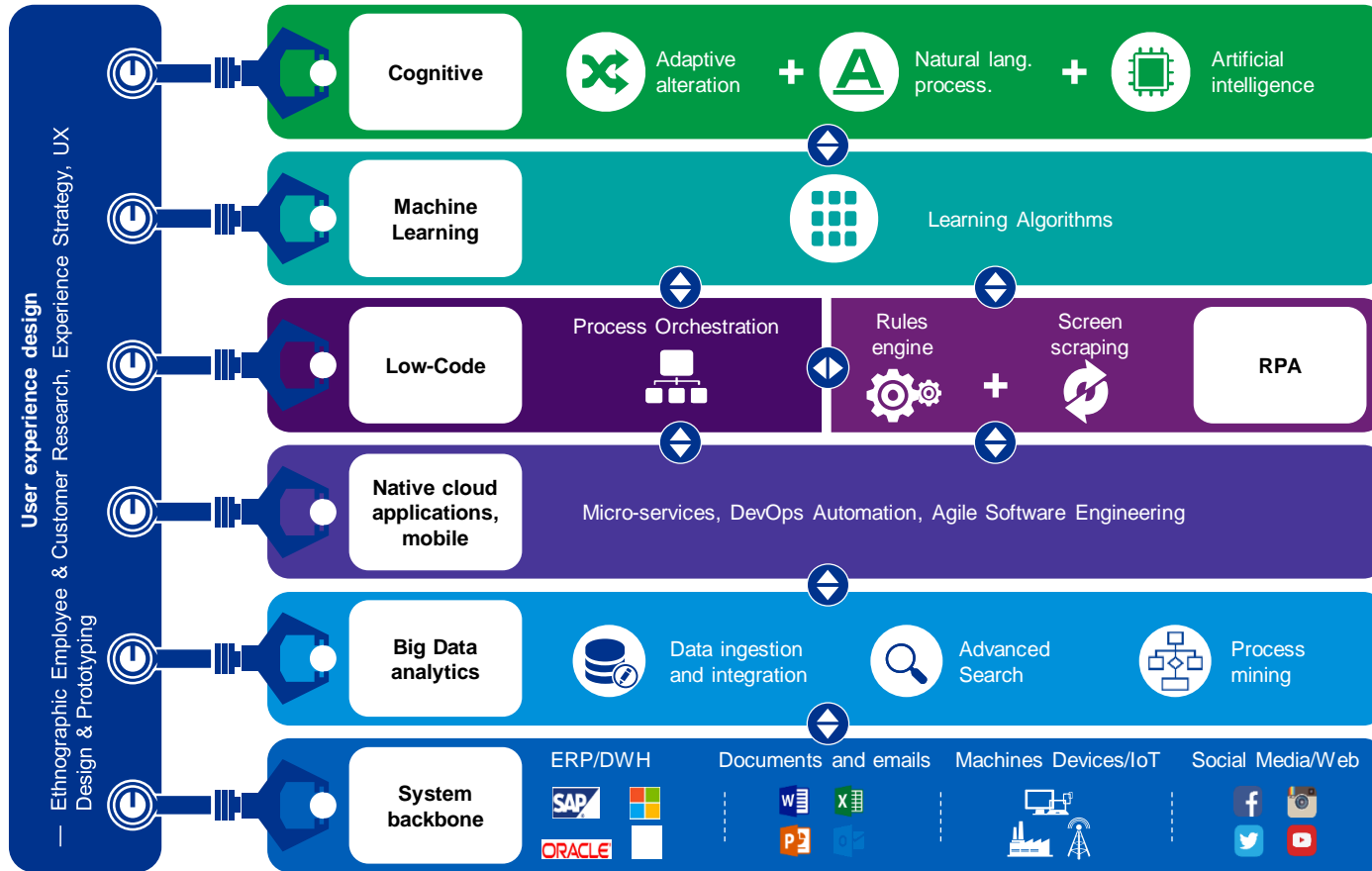
# 챗봇 구축 과정

In a typical implementation model, you begin to handle standard customer requests



# Conclusion

각 영역별 업무 적용을 위해서는 챗봇과 인공지능 기술만이 아닌 다른 디지털 新기술과 접목되어야 함



## 디지털 新기술 접목

### Key Highlights:

- Double-down on application development business based on established investment (RPA, BPM)
- Build leading capabilities in intelligent interactions (chat) and intelligence solutions
- Enable MC solution portfolio with differentiated technology solutions
- Identify “next” digital disruptors and quickly scale consulting business based on constant market insight
- Build world class 3-tiered delivery model



고맙습니다.

최성집 파트너

[seongjipchoi@kr.kpmg.com](mailto:seongjipchoi@kr.kpmg.com)

010-3202-7886

KPMG Financial Digital & AI

