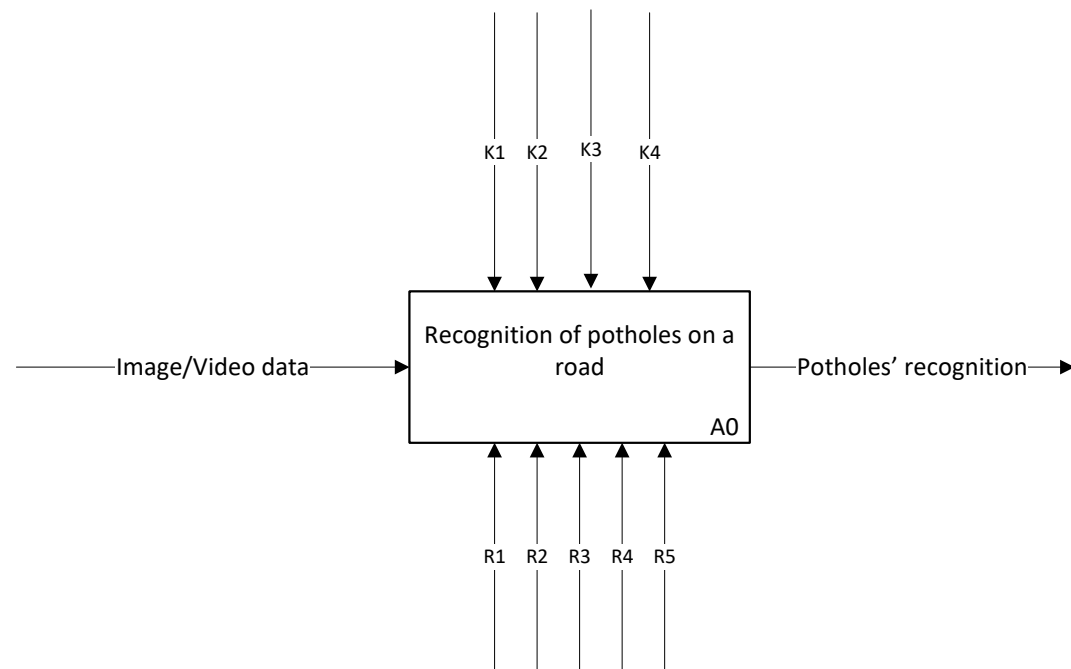K1 – Pothholes parameters: 0.09 sq.m.
K2 – Performance KPI (processing time, GPU/CPU)
K3 – Accuracy score
K4 – Requirements for data labling

K1 K2 K3 K4

Image/Video data →

Recognition of potholes on a road

A0

→ Potholes' recognition

R1 R2 R3 R4 R5

R1 – Client
R2 – Server
R3 – NN Algorithm
R4 – Dataset for NN training
R5 – Software for NN training
R6 – KB

NODE:	A0	TITLE:	Recognition of potholes on a road	NO.:

K1 – Pothholes parameters: 0.09 sq.m.
K2 – Performance KPI (processing time, GPU/CPU)
K3 – Accuracy score
K4 – Requirements for data labling

K1 K4

Image/Video data → Data preparation

A1

Labeled data

R4

K2 K3

Intelligent System
Architecture

A2

Trained Intelligent
System

R3 R5 R6

R1 – Client
R2 – Server
R3 – NN Algorithm
R4 – Dataset for NN training
R5 – Tools & Technologies for NN preparation
R6 – KB

Data Recognition

A3

Potholes' recognition

R1 R2

| NODE: | A0 | TITLE: | Recognition of potholes on a road | NO.: |

Data selecting
A1.1

Image/Video data

Collected data

K1 – Pothholes parameters: 0.09 sq.m.
K4 – Requirements for data labling

K1

K4

R4

Data labeling
A1.2

Labeled data

R5

R4 – Dataset for NN training
R5 – Tools & Technologies for NN preparation

NODE: A1   TITLE: Data preparation   NO.:

K2 – Performance KPI (processing time, GPU/CPU)
K3 – Accuracy score

K3

Labeled data

NN Architecture

A2.1

Trained NN

K2

Client-Server
Architecture

A2.2

Prepared Client-
Server System

R6

Modules
Integration

A2.3

Trained Intelligent System

R1 R2

R1   R2   R3

R1 – Client
R2 – Server
R3 – NN Algorithm
R4 – Dataset for NN training
R5 – Tools & Technologies for NN preparation
R6 – KB

| NODE: | A2 | TITLE: | Intelligent System Architecture | NO.: |