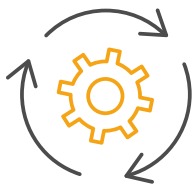```
conclude cl
;;
action:
  write bmi |
  return clas
;;
urgency: 90
```

# THE ARDENSUITE

## Arden-Syntax-based technology platform for creating customized clinical decision support
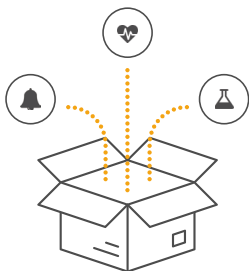
The ArdenSuite CDS technology platform is a unique and versatile solution for creating customized clinical decision support. Add our ready-to-use medical content modules or create your own, tailor-made CDS solution yourself (or with our help). Integrate the ArdenSuite easily into your existing IT infrastructure, e.g., in hospitals, laboratories, doctor's offices, or research and teaching facilities.

We support you every step of the way in creating a custom-built CDS solution that fits your unique tasks and requirements. Initially without specific clinical content, the ArdenSuite can be applied in every medical discipline or can even be used for administrative and QM tasks.

### THE ENGINE

*Installed without specific clinical content, the ArdenSuite is applicable in every medical discipline. The software provides tools for knowledge processing and management, content development, and interfacing.*

### THE CONTENT

*Clinically proven knowledge packages written in Arden Syntax (rules, tables, guidelines, alerts, scores, adverse events ...). Meeting your needs. Developed in-house, custom-ordered, or bought application-ready.*

### THE INTEGRATION

*Connect to any data source or integrate the ArdenSuite into existing infrastructure. Use it as stand-alone application or let the results be displayed in areas of your EMR or other information system.*

## Set up the ArdenSuite *STEP 1*

**Arden Syntax.** The ArdenSuite technology platform is a highly innovative and unique CDS solution: It has been developed for clinical contexts and is thus specifically tailored to meet the requirements needed to support doctors and medical staff in their daily work. Its clinical knowledge components are written in Arden Syntax, an established medical knowledge representation and processing language that is an up-to-date HL7 International industry standard and approved by the American National Standards Institute (ANSI).

**How it works.** The software based on this standardized syntax is applicable in every medical discipline. Initially without specific clinical content, it represents a highly flexible and versatile platform, waiting to be applied to medical tasks or to solve specific clinical problems, when endowed with proper clinical knowledge.

**Component-based.** Use our ArdenSuite IDE for content development and testing, the ArdenSuite Server for content management and processing, and our ArdenSuite APIs, connectors, transformers, and extensions for interfacing.
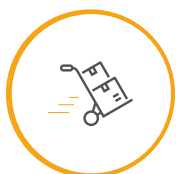
## Add your Content *STEP 2*

Add medical content modules to your ArdenSuite, creating your own, tailor-made CDS solution. Depending on the knowledge packages you use, the ArdenSuite will answer specific clinical questions, calculate scores, send alerts, implement guidelines, or carry out other clinical tasks you may require.

Our content is written in HL7's Arden Syntax standard. Due to the integration of fuzzy concepts in Arden Syntax version 2.10, linguistic as well as propositional uncertainty can be taken into account. This fuzzy logic feature is globally unrivaled. We offer three kinds of medical content options for you to use along with your ArdenSuite:

### On-Site Customized Content Development

*Our ArdenSuite IDE represents an excellent and easy-to-use tool for you to write and test MLMs. In-house MLM development may have the benefit of a close cooperation between your skilled hospital IT department and the clinical staff for whose patient care routine MLMs are written. This setup works excellently in many of our ArdenSuite installations. For those who choose this option, we offer an introductory training session for MLM development as well as support by Medexter's development team.*

### Customized Medical Content by Medexter

*Medexter's team of knowledge engineers works in close cooperation with experienced clinicians. We offer development of custom-built MLMs suited for your hospital's unique medical tasks and requirements with full support every step of the way.*

### Application-Ready Content Packages

*We offer several application-ready medical content packages that can be used with the ArdenSuite Server. They target different issues in clinical routine and can be—for example—connected to the hospital's EMR system. Results can be displayed in an area of the EMR's user interface. At the moment, available packages are Clinical Alerts, Clinical Building Blocks, and Microbiological Building Blocks (for details please inquire).*

## *Perfect Integration* STEP 3

The ArdenSuite can be integrated in or connected with electronic medical record (EMR) systems like Cerner's i.s.h.med, Epic, Philips' ICCA, Dräger's ICM, or others. Convenient integration into external systems, communication with data sources, as well as access to external resources is made possible through our ArdenSuite APIs, connectors, transformers, and extensions:

### ARDENSUITE COMPONENTS:

#### *ArdenSuite IDE*

Use the ArdenSuite integrated development and test environment (IDE) to create your own customized medical content packages in Arden Syntax. Compile these so-called medical logic modules (MLMs) and upload and deploy them on the ArdenSuite Server.

#### *ArdenSuite Server*

After writing, compiling, and testing your knowledge packages in the ArdenSuite IDE, the MLMs can be uploaded to the ArdenSuite Server. In the ArdenSuite Server you can manage your MLMs, users, and user permissions. Connections to external data sources like databases or FHIR resources can be configured in the server's user interface.

| | | |
|---|---|---|
| **REST API**<br>Allows communication with the ArdenSuite Server using REST. | **SOAP API**<br>Allows communication with the ArdenSuite Server using SOAP. | **Database Connector**<br>Enables the ArdenSuite Server to access SQL databases. |
| **FHIR Connector**<br>Enables the ArdenSuite Server to access FHIR resources. | **CSD Hooks API**<br>Allows communication with the ArdenSuite Server using CDS Hooks. | **openEHR Connector**<br>Enables the ArdenSuite Server to access openEHR resources. |
| **ArdenML Transformer**<br>Allows the ArdenSuite IDE to transform Arden Syntax MLMs into ArdenML. | **PMML Transformer**<br>Allows the ArdenSuite IDE to transform PMML into Arden Syntax MLMs | **Activiti Extension**<br>This extension allows the BPMN software Activiti to call the ArdenSuite Server. |

Due to its component-based design, the ArdenSuite can serve as local stand-alone application, integrated into a hospital information system as their CDS component, or even as cloud-based service using our SaaS option.

CDS results provided by the ArdenSuite are either displayed in the ArdenSuite Server's user interface or sent to the connected EMR system. In most EMRs' user interfaces, the results can be displayed in areas intended for clinical alerts and reminders, risk factors, work lists, or similar. These areas are either already available or can be adjusted. Your EMR vendor and/or your hospital's IT staff may also develop user interfaces for your ArdenSuite CDS solution in-house.

## ENJOY FULL SERVICE

With the ArdenSuite you get a tool for building unique, innovative CDS that fits exactly your requirements. Create the CDS you need … or let us create it for you. Either way, you can count on our support every step of the way. We offer support and training for setting up the ArdenSuite, creating medical content, or integrating your results into your user interfaces. If desired, we can develop custom-built MLMs suited for your hospital's unique medical tasks and requirements in close cooperation with experieced clinicians.

*We offer licenses for educational and research facilities, B2B or vendor integration, as well as patient care.*

## FURTHER RESOURCES

The following additional ArdenSuite material is available on our website:

- *Architecture*
- *Licensing Options*
- *Online Support Pages*
- *HL7's Arden Syntax Standard*
- *Scientific Publications*

*Just visit* **www.medexter.com/products-and-services/ardensuite#resources**

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