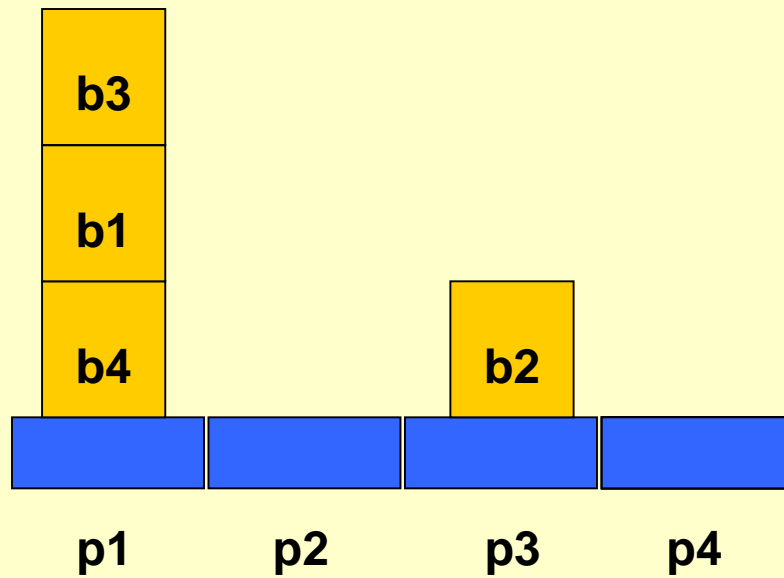


***Przykład wykonania  
algorytmu planowania sekwencji akcji  
opartego na metodzie „środki-cele”***

***--przebieg omówiony  
na zajęciach wprowadzających***

## ***Przebieg wykonania***

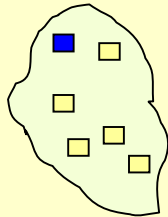
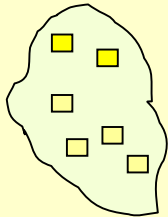
***Stan początkowy***



***Cel:***

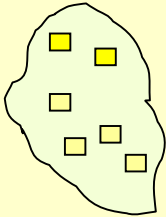
***on(b4,b2)***

**STAN POCZ**

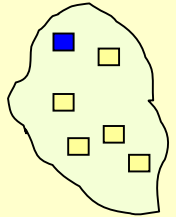


**CELE:**  
**on(b4,b2)**

**STAN POCZ**

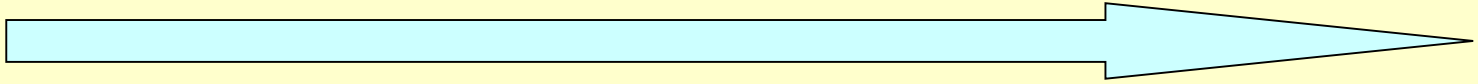


*rozpoczyna się  
konstruowanie planu*

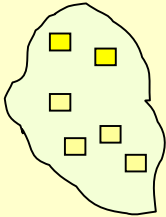


**CELE:  
on(b4,b2)**

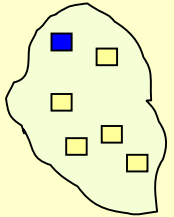
**PLAN 1**



**STAN POCZ**

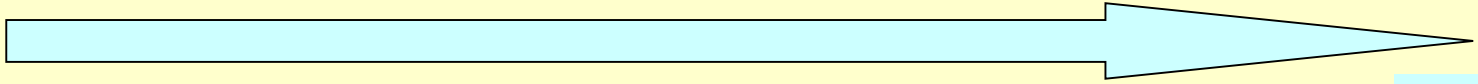


*rozpoczyna się  
konstruowanie planu*

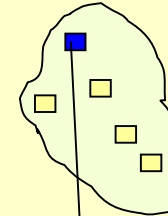
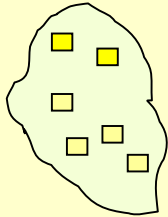


**CELE:  
on(b4,b2)**

# PLAN 1



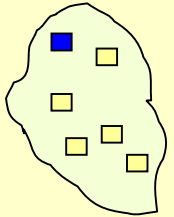
STAN POCZ



on(b4,b2)



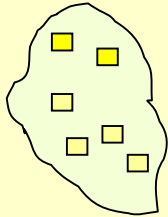
*tu będzie  
postplan*



CELE:  
on(b4,b2)

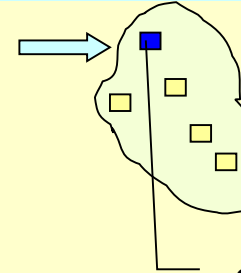
# PLAN 1

STAN POCZ



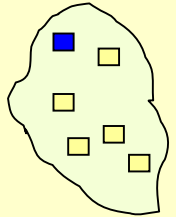
AKCJA

$\text{move}(b4, Y_1 / \text{on}(b4, Y_1), b2)$



$\text{on}(b4, b2)$

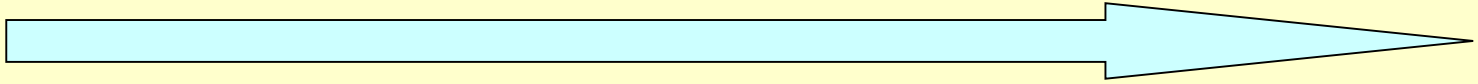
*tu będzie  
postplan*



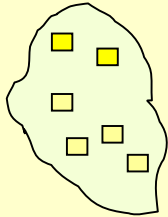
CELE:  
 $\text{on}(b4, b2)$



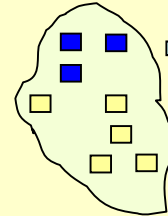
# PLAN 1



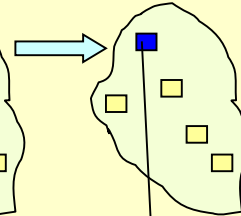
STAN POCZ



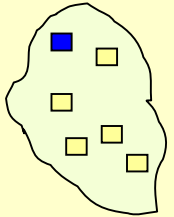
AKCJA  
move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)



CELE:  
clear(b4)  
clear(b2)

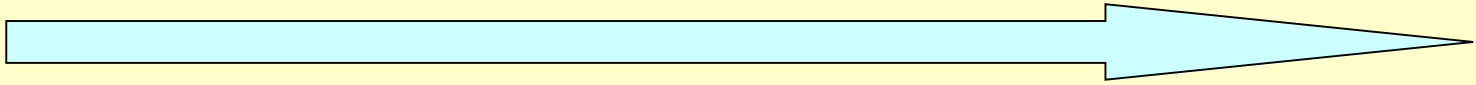


on(b4,b2)

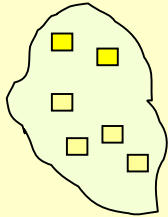


CELE:  
on(b4,b2)

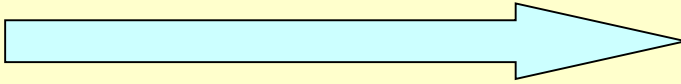
## PLAN 1



STAN POCZ

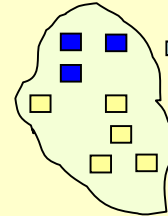


1-PRE

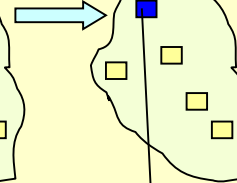


AKCJA  
move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

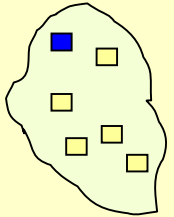
*rozpoczyna się  
konstruowanie preplanu*



CELE:  
clear(b4)  
clear(b2)

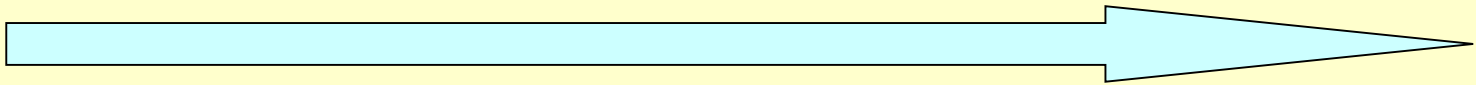


on(b4,b2)

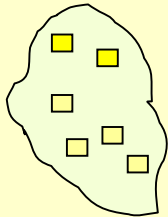


CELE:  
on(b4,b2)

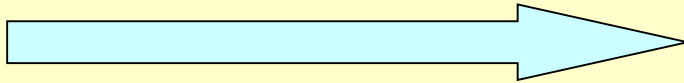
# PLAN 1



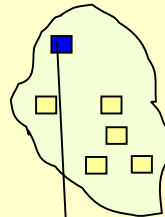
STAN POCZ



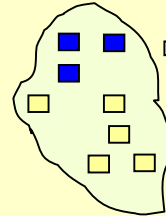
1-PRE



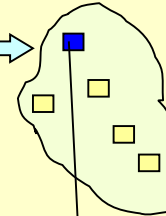
AKCJA  
move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)



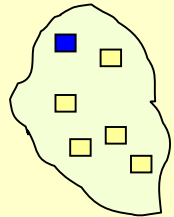
clear(b4)



CELE:  
clear(b4)  
clear(b2)



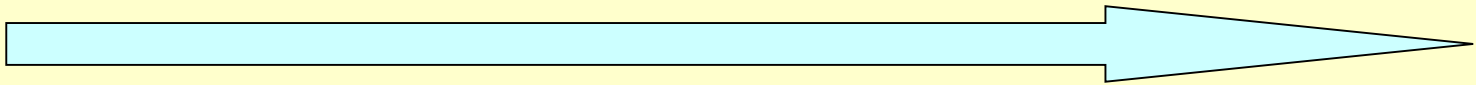
on(b4,b2)



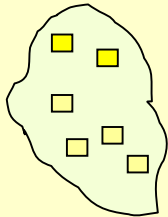
CELE:  
on(b4,b2)

*tu będzie  
postplan*

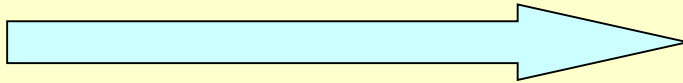
# PLAN 1



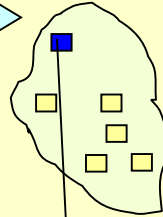
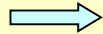
STAN POCZ



1-PRE

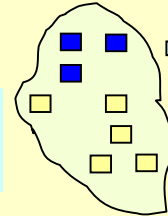


AKCJA  
move( $X_2$ /on ( $X_2$ ,b4), b4,  $Z_2$ /clear( $Z_2$ ))

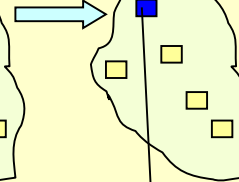


clear(b4)

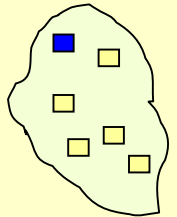
AKCJA  
move(b4,  $Y_1$ /on (b4,  $Y_1$ ), b2)



CELE:  
clear(b4)  
clear(b2)



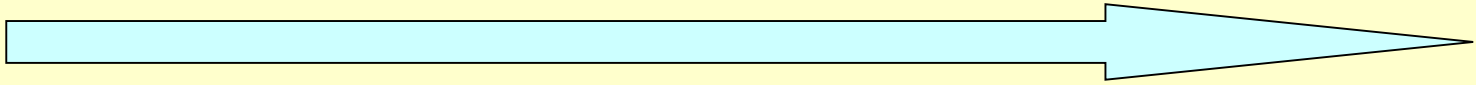
on(b4,b2)



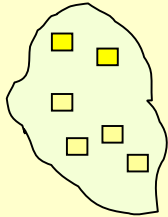
CELE:  
on(b4,b2)

*tu będzie  
postplan*

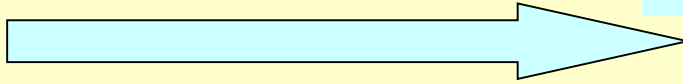
# PLAN 1



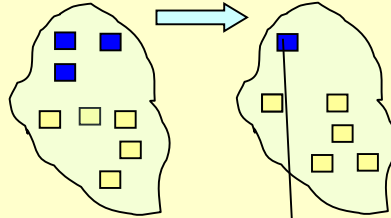
STAN POCZ



1-PRE



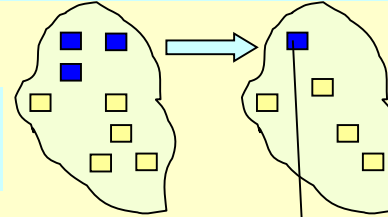
AKCJA  
move( $X_2$ /on ( $X_2, b_4$ ),  $b_4$ ,  $Z_2$ /clear( $Z_2$ ))



CELE:  
clear( $X_2$ /on ( $X_2, b_4$ ))

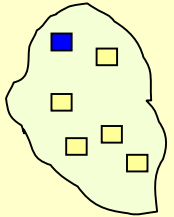
clear( $b_4$ )

AKCJA  
move( $b_4$ ,  $Y_1$ /on ( $b_4$ ,  $Y_1$ ),  $b_2$ )



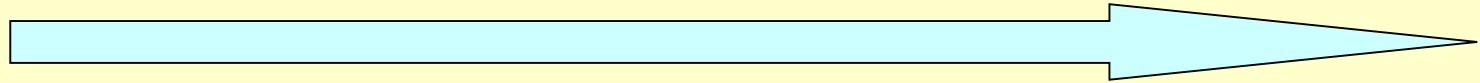
CELE:  
clear( $b_4$ )  
clear( $b_2$ )

on( $b_4, b_2$ )



CELE:  
on( $b_4, b_2$ )

# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:

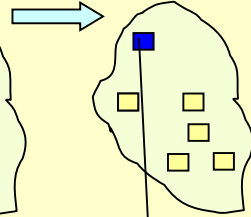
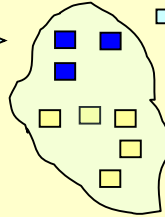
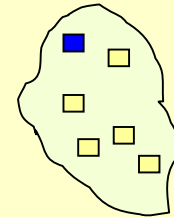
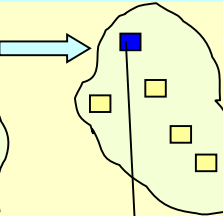
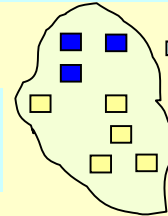
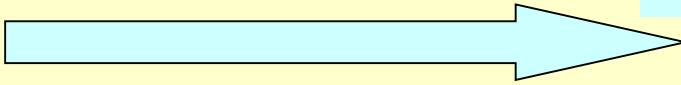
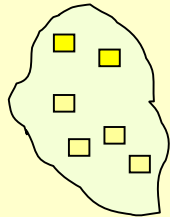
on(b4,b2)

*rozpoczyna się  
konstruowanie preplanu  
dla 1-PRE*

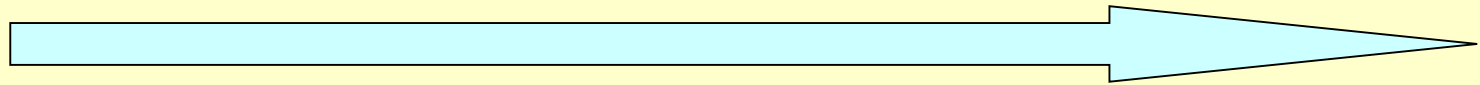
CELE:

clear(X<sub>2</sub>/on (X<sub>2</sub>,b4) )

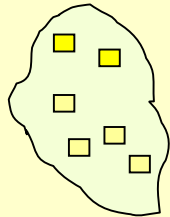
clear(b4)



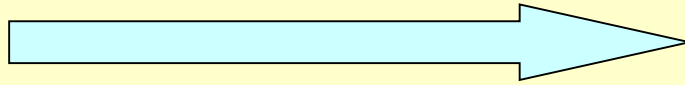
# PLAN 1



STAN POCZ

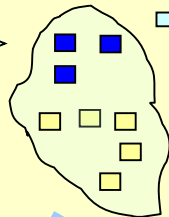


1-PRE

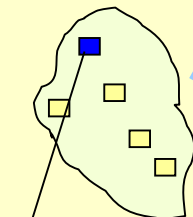


1-PRE  
. 2-PRE

AKCJA  
 $\text{move}(X_2/\text{on}(X_2, b_4), b_4, Z_2/\text{clear}(Z_2))$



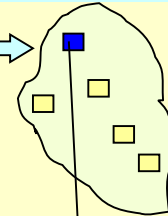
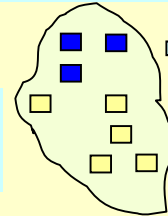
CELE:  
 $\text{clear}(X_2/\text{on}(X_2, b_4))$     $\text{clear}(b_4)$



$\text{clear}(X_2/\text{on}(X_2, b_4))$

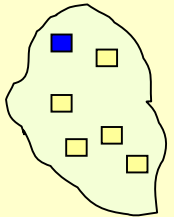
*tu będzie  
postplan*

AKCJA  
 $\text{move}(b_4, Y_1/\text{on}(b_4, Y_1), b_2)$



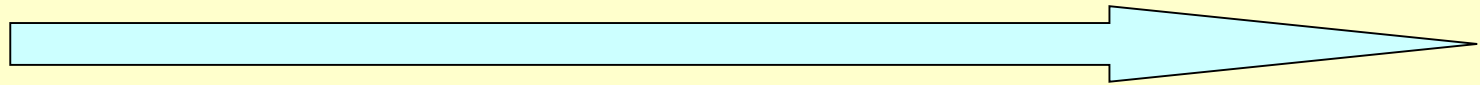
CELE:  
 $\text{clear}(b_4)$   
 $\text{clear}(b_2)$

$\text{on}(b_4, b_2)$

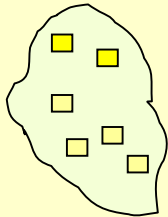


CELE:  
 $\text{on}(b_4, b_2)$

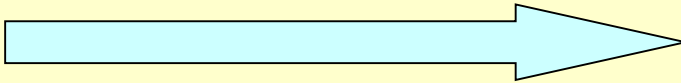
# PLAN 1



STAN POCZ

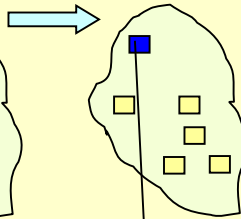
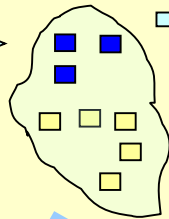


1-PRE

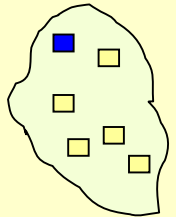
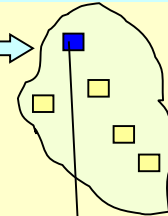
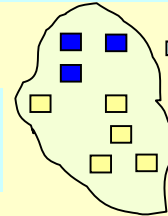


1-PRE  
. 2-PRE

AKCJA  
move( $X_2$ /on ( $X_2, b_4$ ),  $b_4$ ,  $Z_2$ /clear( $Z_2$ ))



AKCJA  
move( $b_4$ ,  $Y_1$ /on ( $b_4$ ,  $Y_1$ ),  $b_2$ )

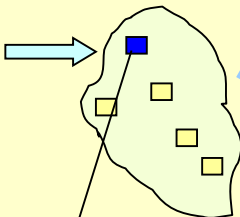


CELE:  
clear( $b_4$ )  
clear( $b_2$ )

on( $b_4, b_2$ )

CELE:  
on( $b_4, b_2$ )

AKCJA  
move( $X_3$ /on ( $X_3$ ,  $X_2$ /on ( $X_2, b_4$ )),  
 $X_2$ /on ( $X_2, b_4$ ),  $Z_3$ /clear( $Z_3$ ))



CELE:

clear( $X_2$ /on ( $X_2, b_4$ ))

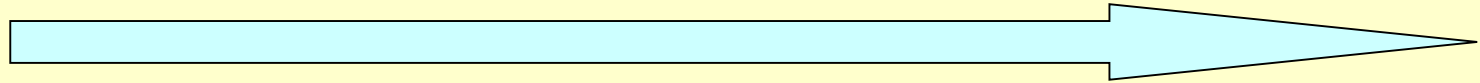
clear( $b_4$ )

*tu będzie  
postplan*

clear( $X_2$ /on ( $X_2, b_4$ ))



# PLAN 1



STAN POCZ

1-PRE

1-PRE  
. 2-PRE

AKCJA  
move( $X_2$ /on ( $X_2, b_4$ ),  $b_4, Z_2$ /clear( $Z_2$ ))

AKCJA  
move( $b_4, Y_1$ /on ( $b_4, Y_1$ ),  $b_2$ )

CELE:  
clear( $b_4$ )  
clear( $b_2$ )

on( $b_4, b_2$ )

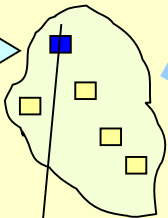
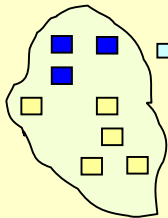
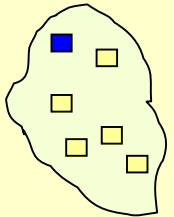
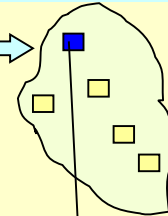
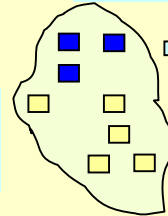
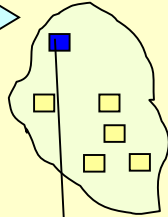
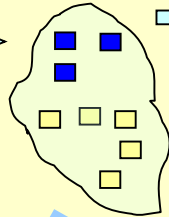
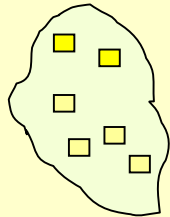
CELE:  
on( $b_4, b_2$ )

AKCJA  
move( $X_3$ /on ( $X_3, X_2$ /on ( $X_2, b_4$ )),  
 $X_2$ /on ( $X_2, b_4$ ),  $Z_3$ /clear( $Z_3$ ))

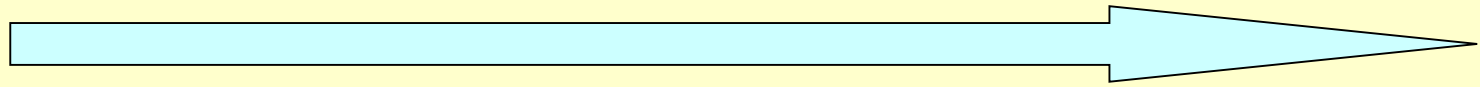
CELE:  
clear( $X_2$ /on ( $X_2, b_4$ ))  
clear( $b_4$ )

clear( $X_2$ /on ( $X_2, b_4$ ))

CELE:  
clear( $X_3$ /on ( $X_3, X_2$ /on ( $X_2, b_4$ )))



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

1-PRE  
. 2-PRE  
. 3-PRE

AKCJA

move(X<sub>3</sub>/on (X<sub>3</sub>, X<sub>2</sub>/on (X<sub>2</sub>,b4)),  
X<sub>2</sub>/on (X<sub>2</sub>,b4), Z<sub>3</sub>/clear(Z<sub>3</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:

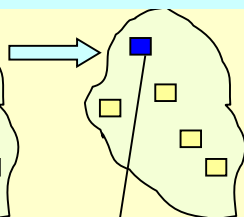
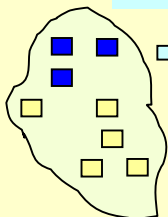
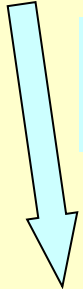
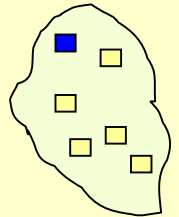
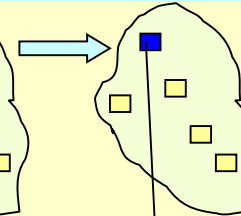
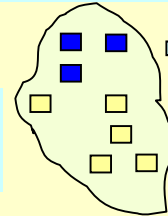
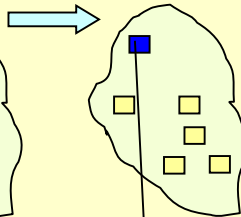
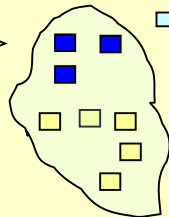
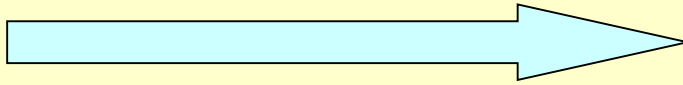
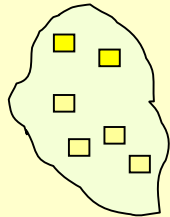
on(b4,b2)

clear(b4)

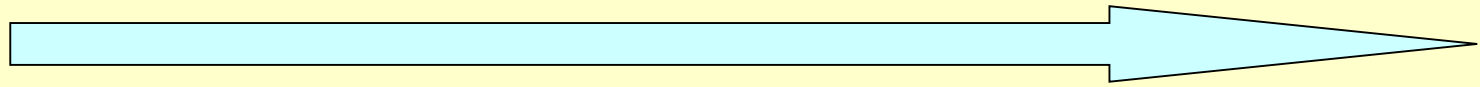
clear(X<sub>2</sub>/on (X<sub>2</sub>,b4) )

CELE:

clear(X<sub>3</sub>/on (X<sub>3</sub>, X<sub>2</sub>/on (X<sub>2</sub>,b4)))



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

1-PRE  
. 2-PRE  
. 3-PRE

AKCJA

move(X<sub>3</sub>/on (X<sub>3</sub>, X<sub>2</sub>/on (X<sub>2</sub>,b4)),  
X<sub>2</sub>/on (X<sub>2</sub>,b4), Z<sub>3</sub>/clear(Z<sub>3</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:

on(b4,b2)

clear(b4)

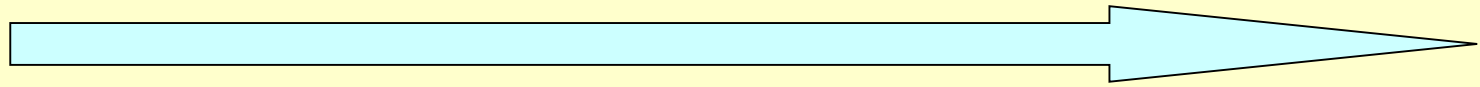
clear(X<sub>2</sub>/on (X<sub>2</sub>,b4) )

CELE:

clear(X<sub>3</sub>/on (X<sub>3</sub>, X<sub>2</sub>/on (X<sub>2</sub>,b4)))

cel spełniony w stanie pocz

# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

1-PRE  
. 2-PRE  
. 3-PRE

AKCJA

move(X<sub>3</sub>/on (X<sub>3</sub>, X<sub>2</sub>/on (X<sub>2</sub>,b4)),  
X<sub>2</sub>/on (X<sub>2</sub>,b4), Z<sub>3</sub>/clear(Z<sub>3</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:

on(b4,b2)

clear(b4)

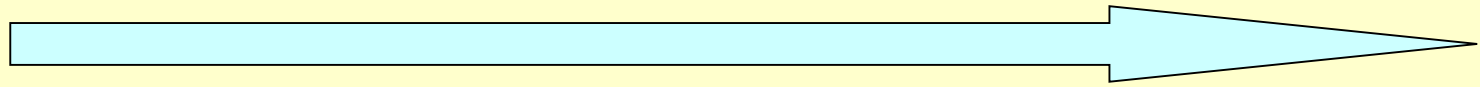
clear(X<sub>2</sub>/on (X<sub>2</sub>,b4) )

CELE:

clear(X<sub>3</sub>/on (X<sub>3</sub>, X<sub>2</sub>/on (X<sub>2</sub>,b4)))

....więc preplan dla 1-PRE.2-PRE  
jest pusty

# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

*plan  
pusty*

AKCJA

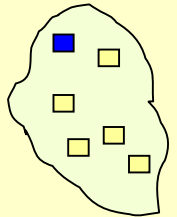
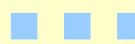
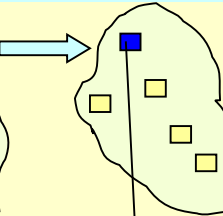
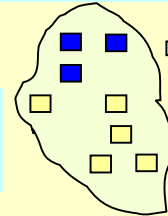
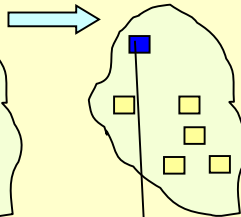
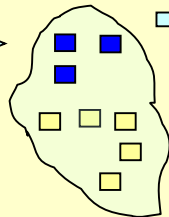
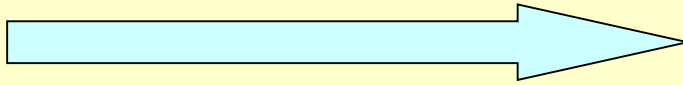
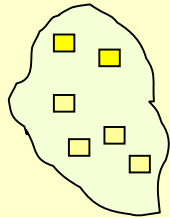
move(X<sub>3</sub>/on (X<sub>3</sub>, X<sub>2</sub>/on (X<sub>2</sub>,b4)),  
X<sub>2</sub>/on (X<sub>2</sub>,b4), Z<sub>3</sub>/clear(Z<sub>3</sub>))

clear(b4)

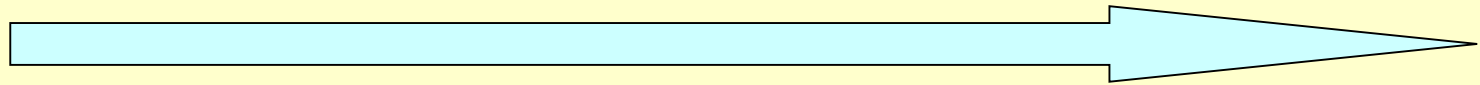
clear(X<sub>2</sub>/on (X<sub>2</sub>,b4) )

CELE:

clear(X<sub>3</sub>/on (X<sub>3</sub>, X<sub>2</sub>/on (X<sub>2</sub>,b4)))



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

*plan  
pusty*

AKCJA

move(b3,b1,p2)

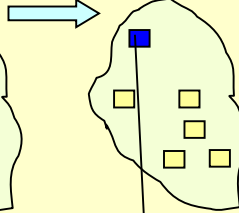
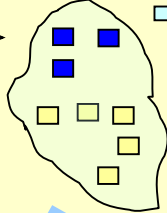
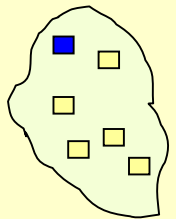
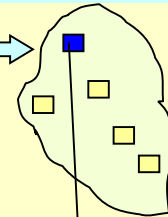
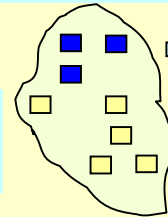
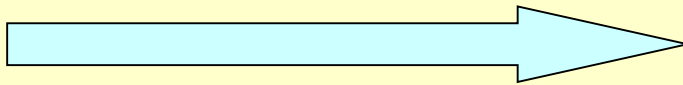
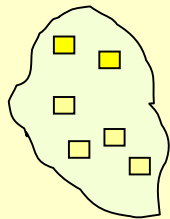
CELE:

clear(b1)

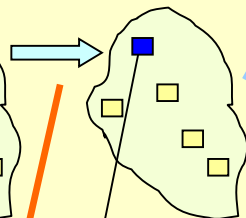
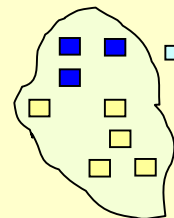
clear(b4)

clear(b1)

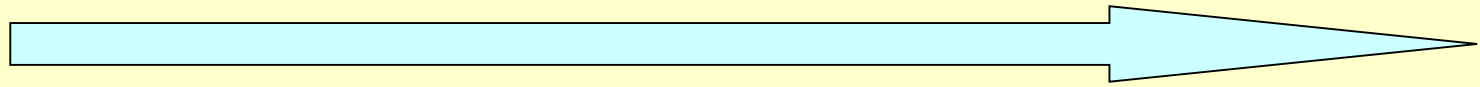
**ukonkretnienie  
i wykonanie akcji**



on(b4,b2)



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

plan  
pusty

AKCJA

move(b3,b1,p2)

CELE:

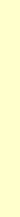
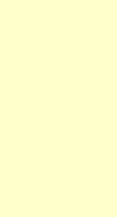
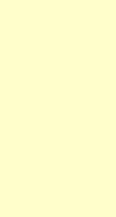
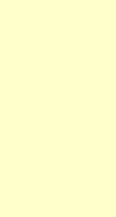
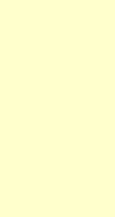
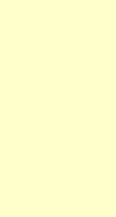
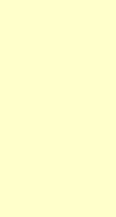
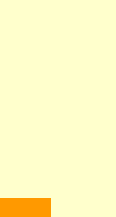
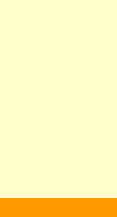
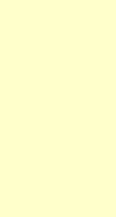
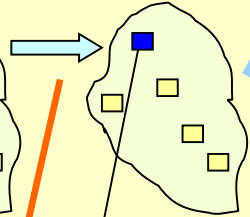
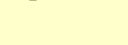
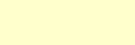
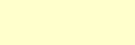
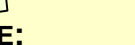
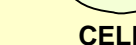
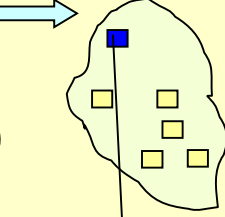
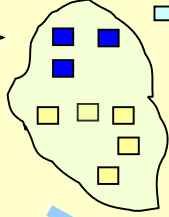
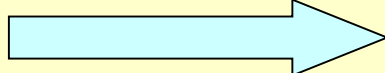
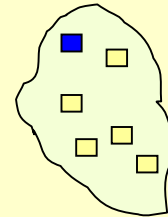
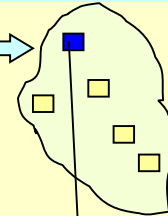
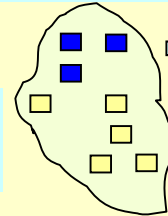
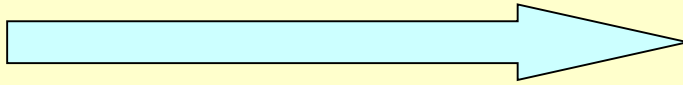
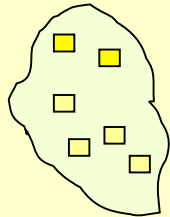
clear(b1)

clear(b4)

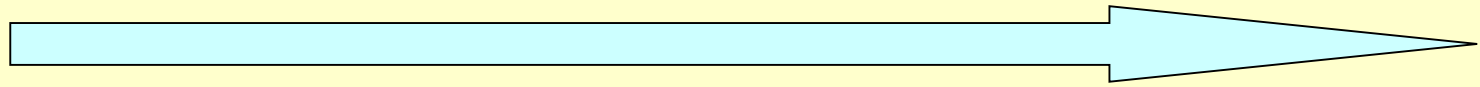
clear(b1)

ukonkretnienie  
i wykonanie akcji

osiągnięty  
(ukonkretniony) cel



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:

on(b4,b2)

*plan  
pusty*

AKCJA

move(b3,b1,p2)

CELE:

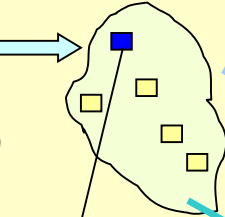
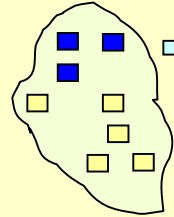
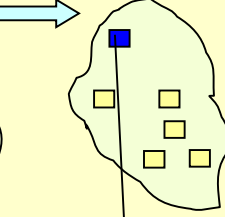
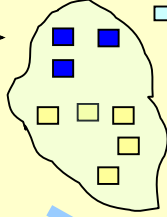
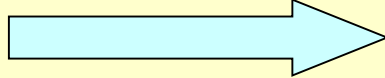
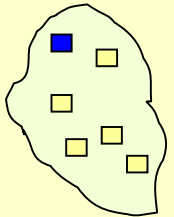
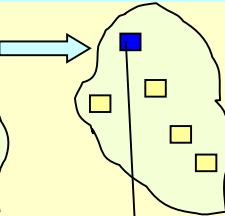
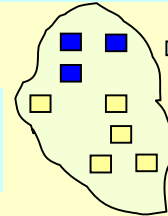
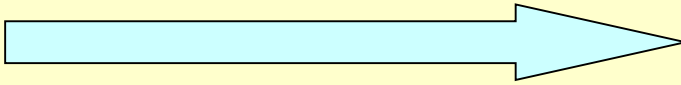
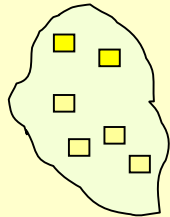
clear(b1 )

clear(b4)

clear(b1)

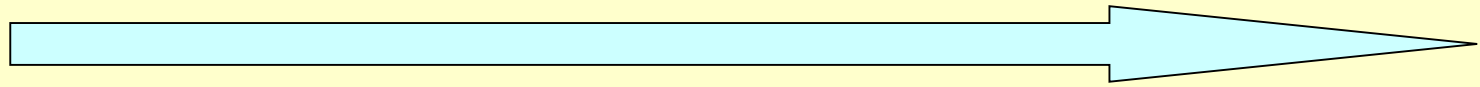
STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE





# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

*plan  
pusty*

1-PRE  
.2-PRE  
.3-POST

CELE:

clear(b1)

clear(b4)

AKCJA

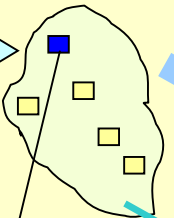
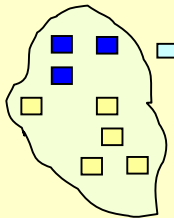
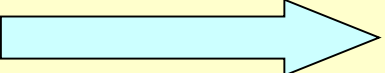
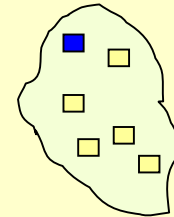
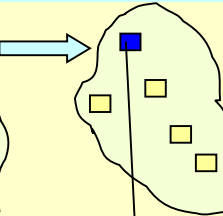
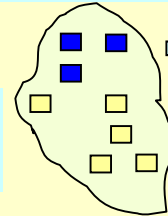
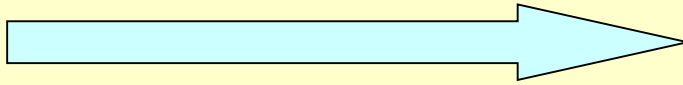
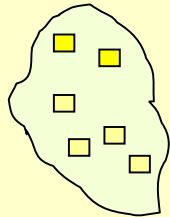
move(b3,b1,p2)

*teraz postplan  
dla 1-PRE.2-PRE*

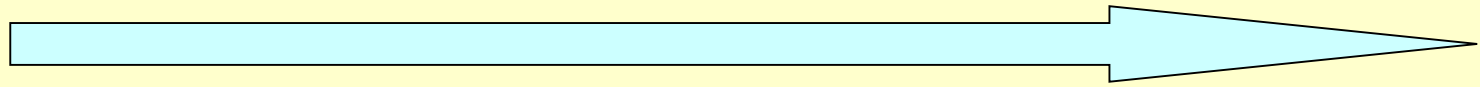
clear(b1)

STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

plan  
pusty

1-PRE  
.2-PRE  
.3-POST

CELE:

clear(b1)

clear(b4)

nie ma dalszych celów

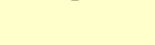
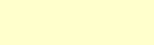
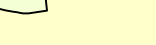
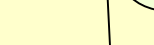
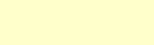
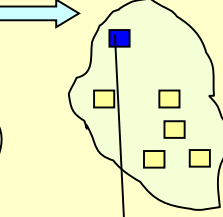
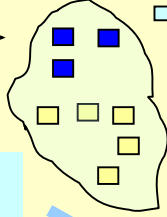
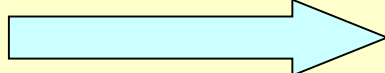
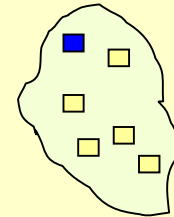
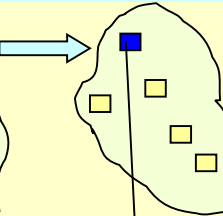
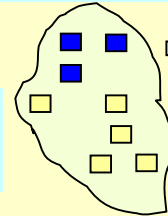
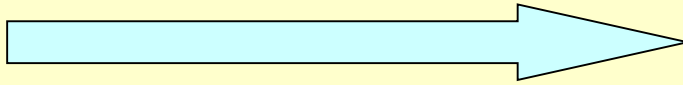
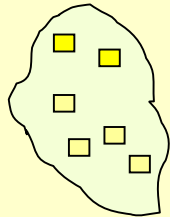
AKCJA

move(b3,b1,p2)

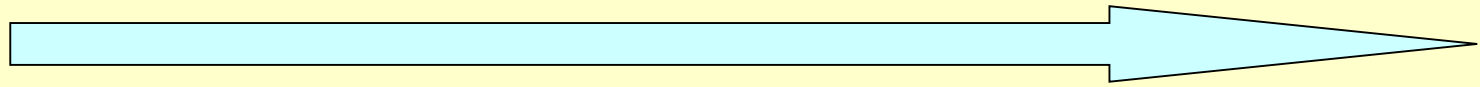
clear(b1)

STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:

on(b4,b2)

*plan  
pusty*

1-PRE  
.2-PRE  
.3-POST

CELE:

clear(b1)

clear(b4)

AKCJA

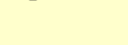
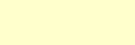
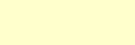
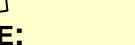
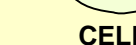
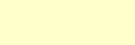
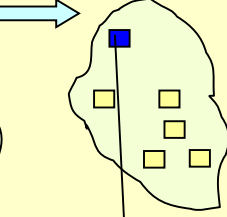
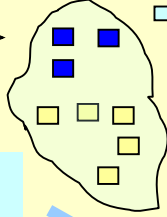
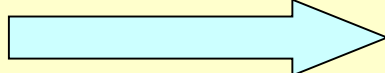
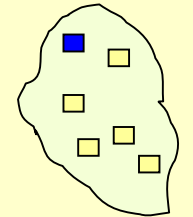
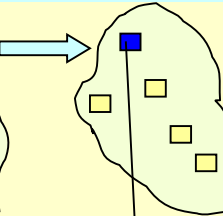
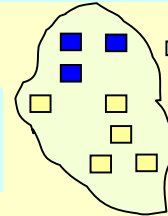
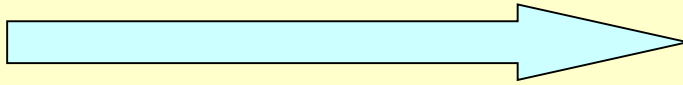
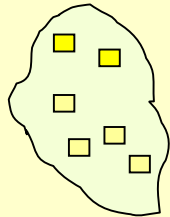
move(b3,b1,p2)

clear(b1)

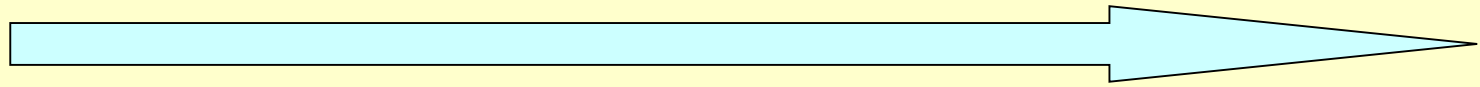
*....więc plan 1-PRE.2-PRE .3-POST  
jest pusty*

STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(X<sub>2</sub>/on (X<sub>2</sub>,b4), b4, Z<sub>2</sub>/clear(Z<sub>2</sub>))

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:

on(b4,b2)

*plan  
pusty*

AKCJA  
move(b3,b1,p2)

*plan  
pusty*

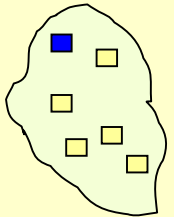
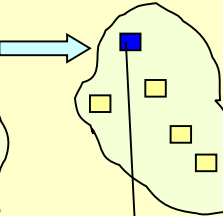
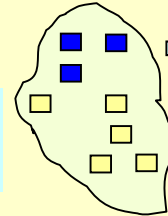
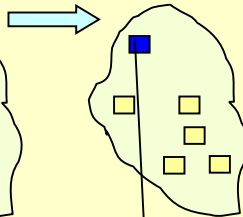
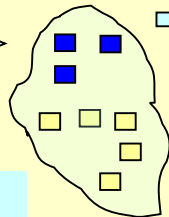
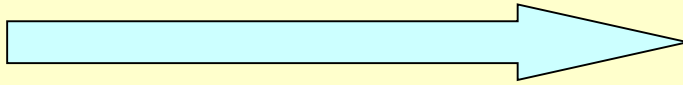
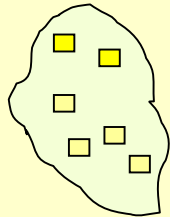
CELE:  
clear(b1)

clear(b4)

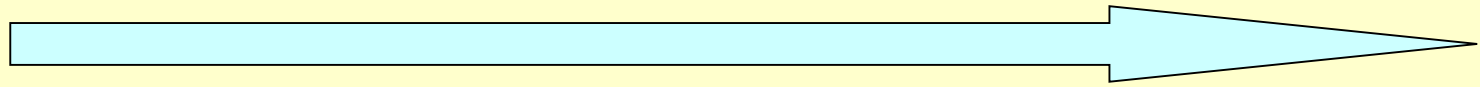
clear(b1)

STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA  
move(b1,b4,p4)

CELE:  
clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

*plan  
pusty*

AKCJA  
move(b3,b1,p2)

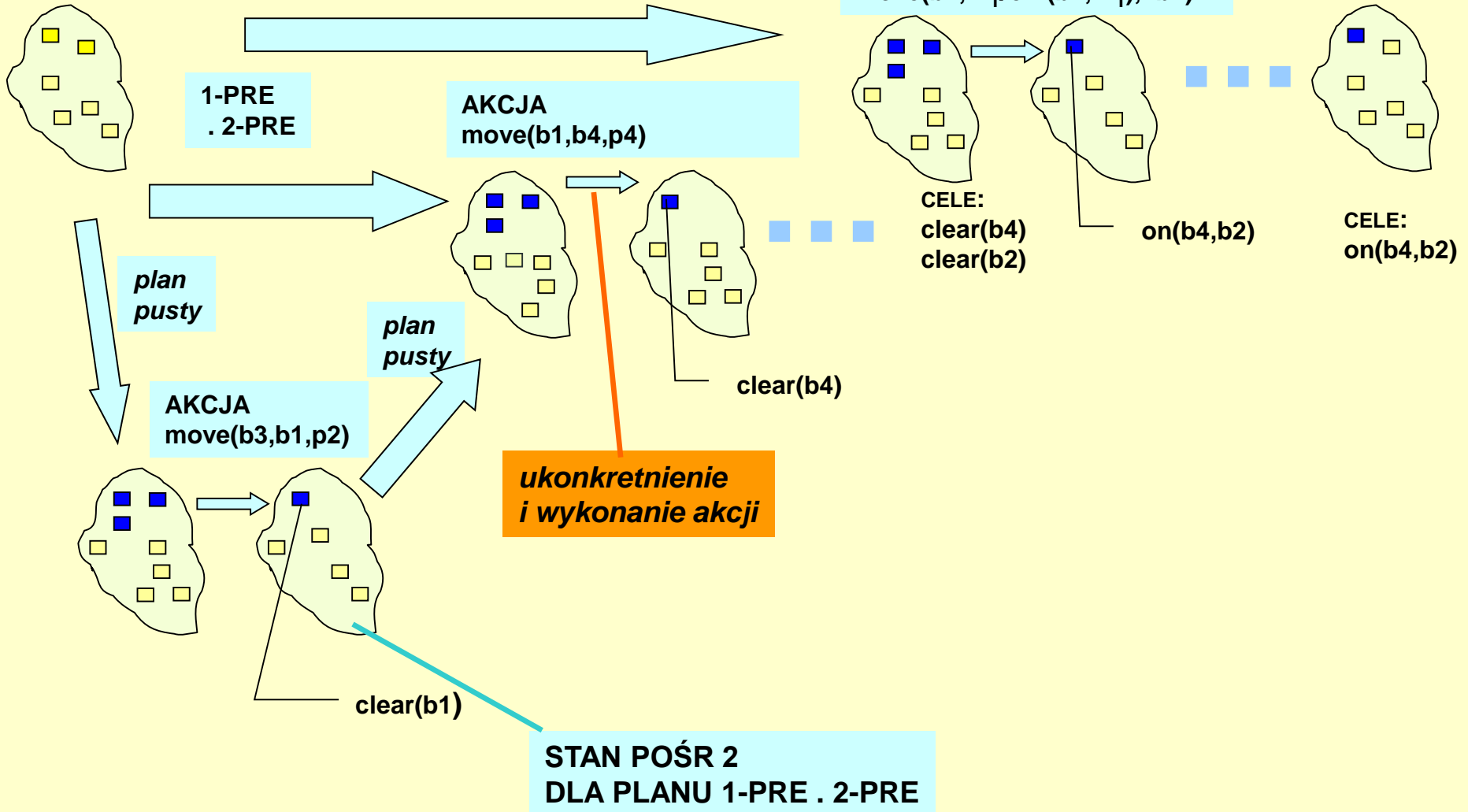
*plan  
pusty*

clear(b4)

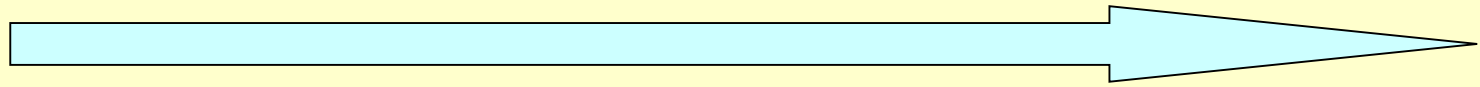
*ukonkretnienie  
i wykonanie akcji*

clear(b1)

STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(b1,b4,p4)

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

plan  
pusty

plan  
pusty

AKCJA

move(b3,b1,p2)

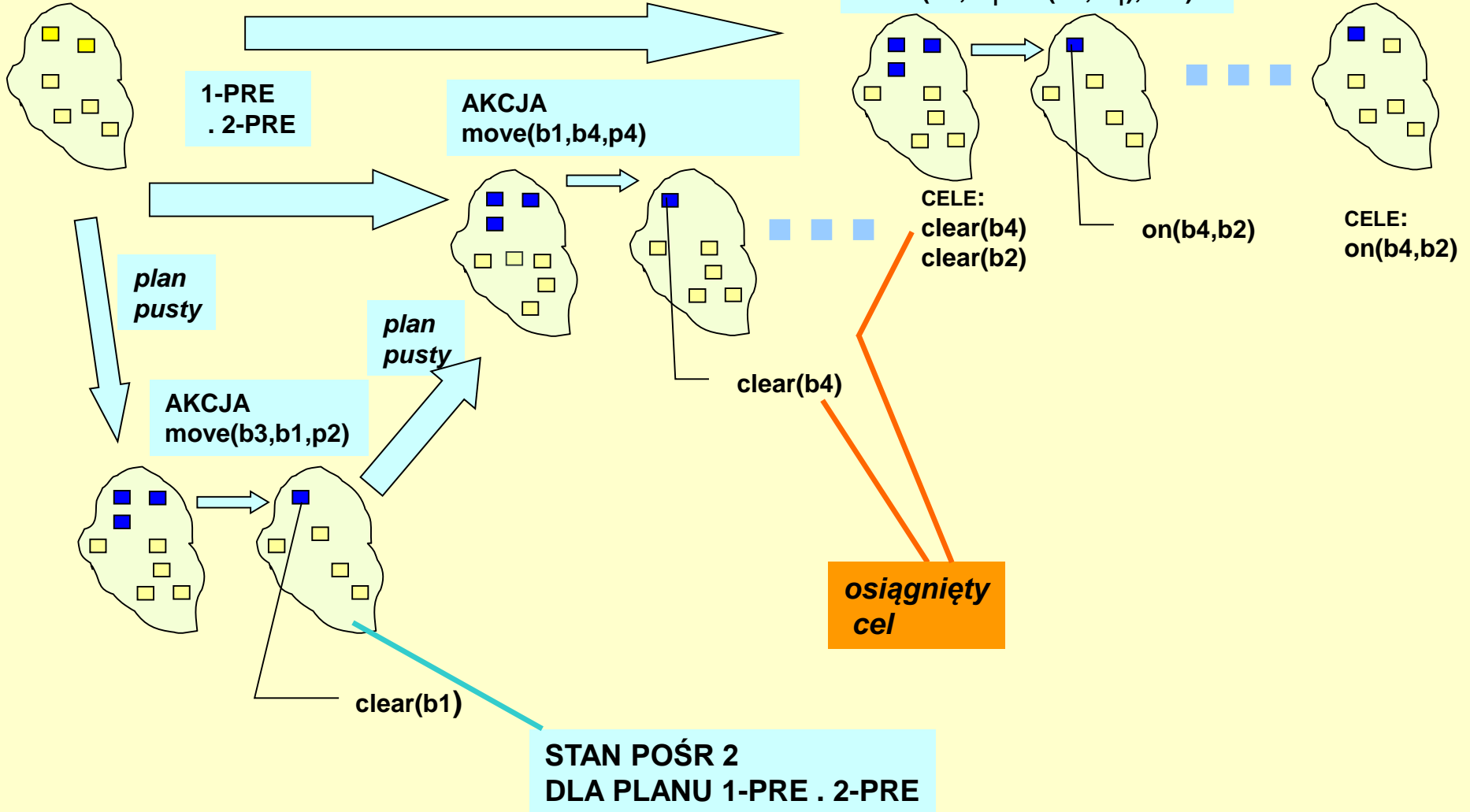
clear(b4)

osiągnięty  
cel

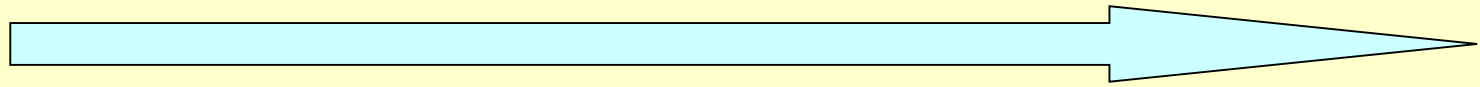
clear(b1)

STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(b1,b4,p4)

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

*plan  
pusty*

AKCJA  
move(b3,b1,p2)

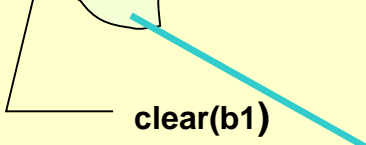
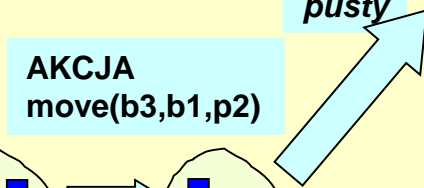
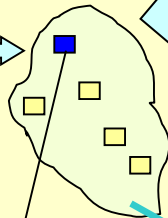
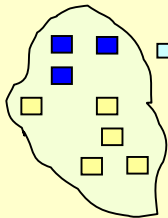
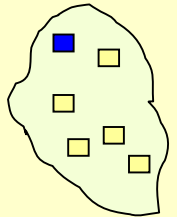
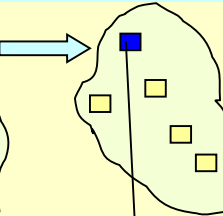
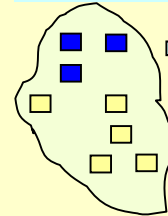
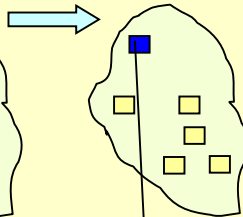
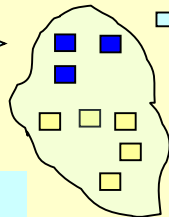
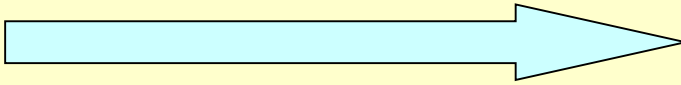
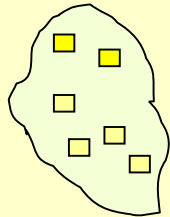
*plan  
pusty*

clear(b4)

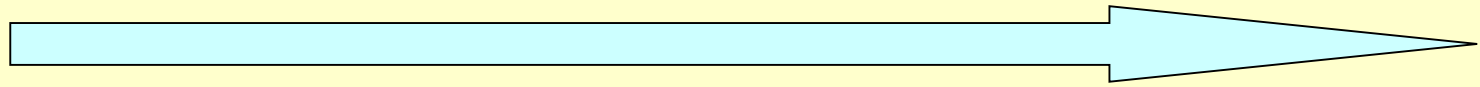
STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

clear(b1)

STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(b1,b4,p4)

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:

on(b4,b2)

1-PRE  
. 2-POST

clear(b4)

teraz postplan dla 1-PRE

STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE

STAN POŚR 2

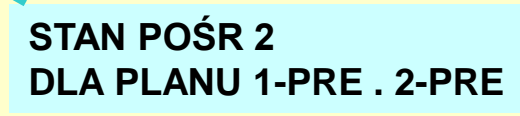
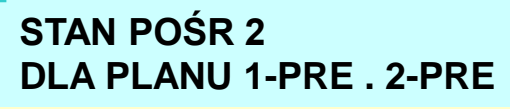
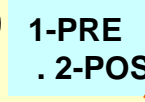
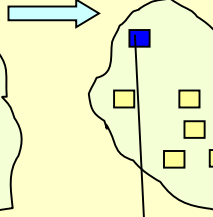
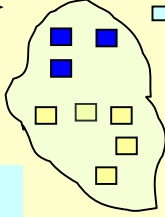
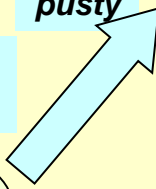
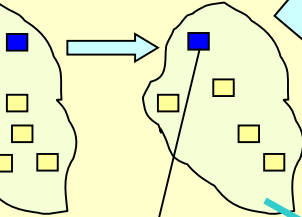
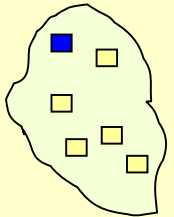
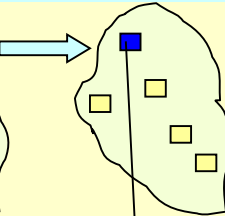
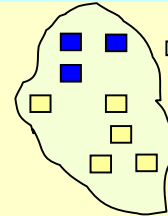
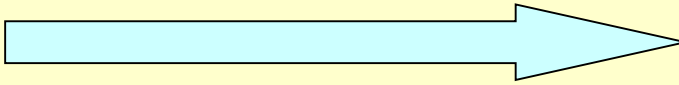
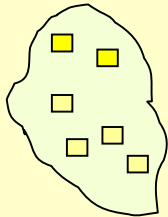
DLA PLANU 1-PRE . 2-PRE

plan  
pusty

AKCJA  
move(b3,b1,p2)

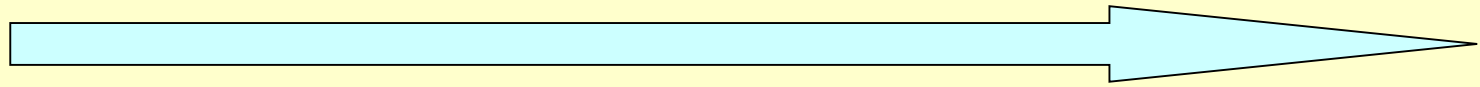
plan  
pusty

clear(b1)





# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA  
move(b1,b4,p4)

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

plan  
pusty

AKCJA  
move(b3,b1,p2)

plan  
pusty

1-PRE  
. 2-POST

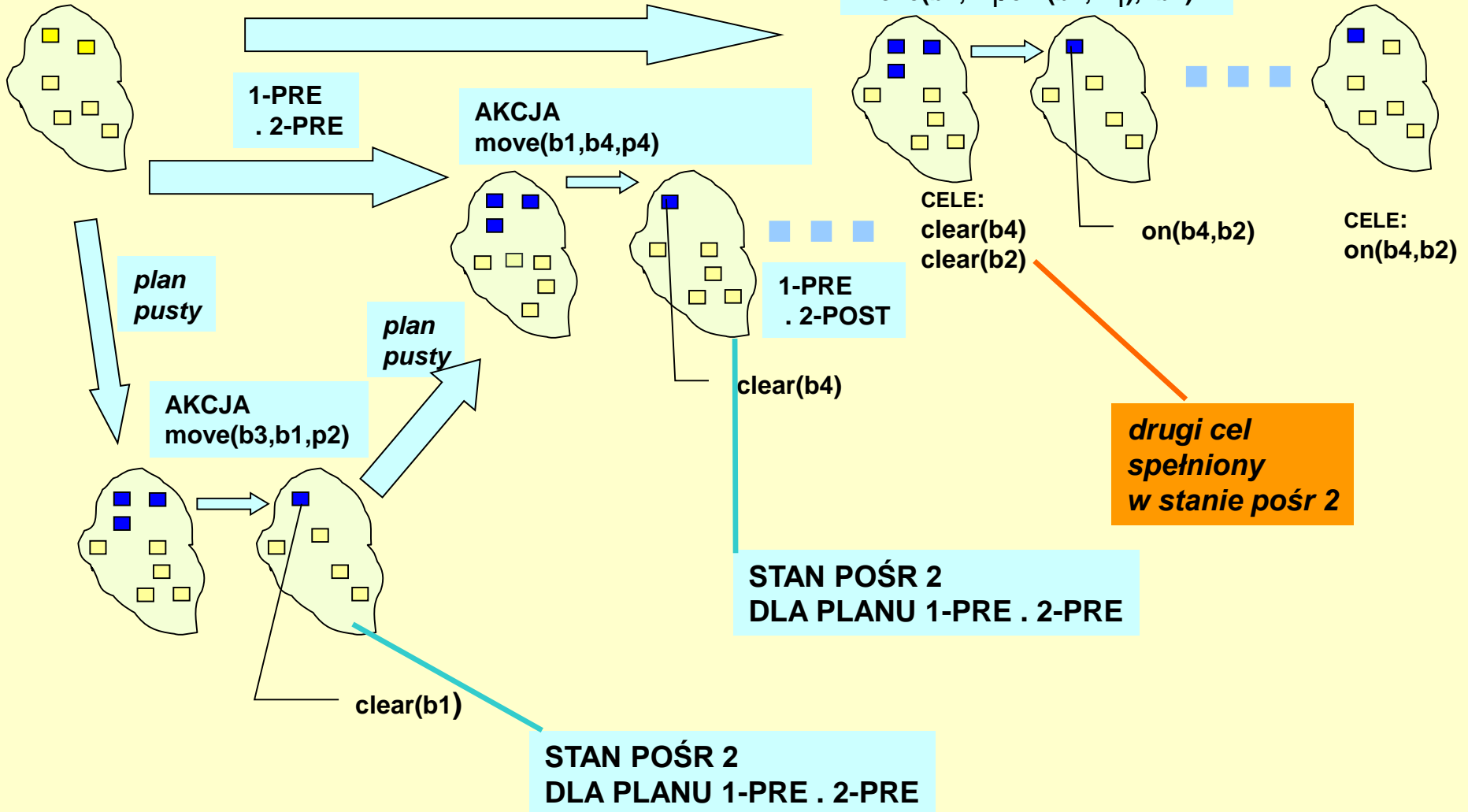
clear(b4)

STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

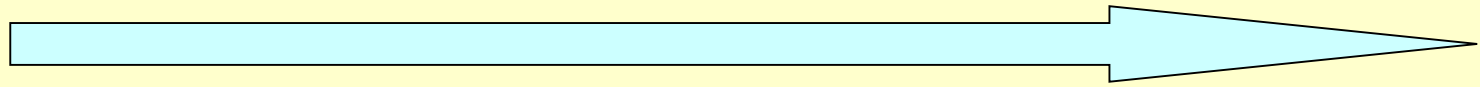
drugi cel  
spełniony  
w stanie pośr 2

clear(b1)

STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(b1,b4,p4)

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

*plan  
pusty*

AKCJA  
move(b3,b1,p2)

*plan  
pusty*

1-PRE  
. 2-POST

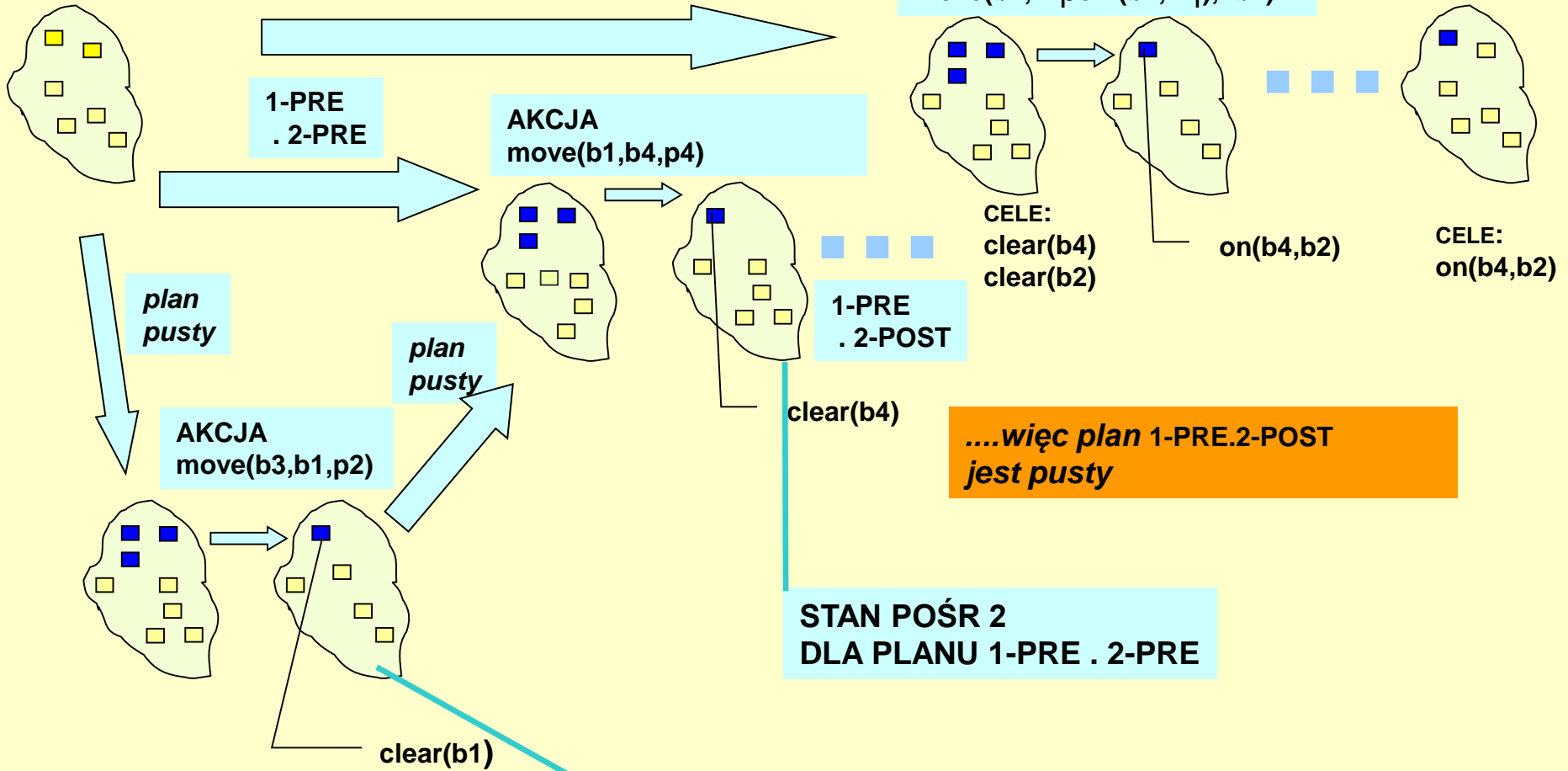
clear(b4)

*....więc plan 1-PRE.2-POST  
jest pusty*

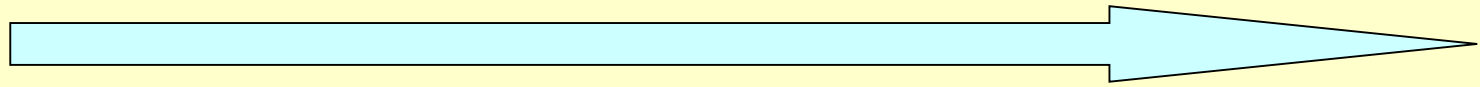
STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

clear(b1)

STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

AKCJA

move(b4, Y<sub>1</sub>/on (b4, Y<sub>1</sub>), b2)

1-PRE  
. 2-PRE

AKCJA

move(b1,b4,p4)

CELE:

clear(b4)  
clear(b2)

on(b4,b2)

CELE:  
on(b4,b2)

plan  
pusty

AKCJA  
move(b3,b1,p2)

plan  
pusty

clear(b4)

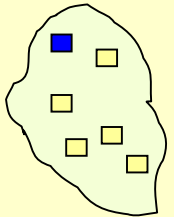
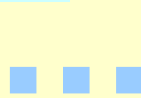
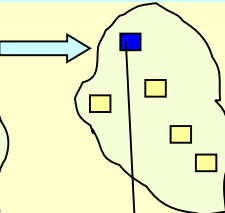
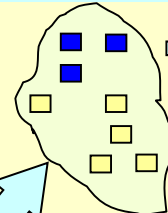
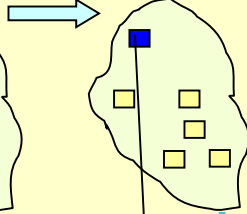
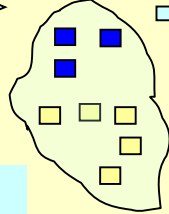
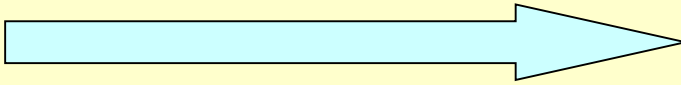
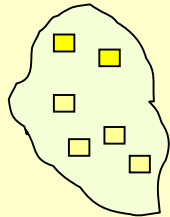
STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE

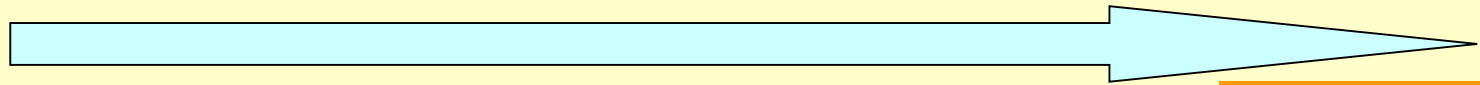
clear(b1)

STAN POŚR 2

DLA PLANU 1-PRE . 2-PRE



# PLAN 1



STAN POCZ

1-PRE

ukonkretnienie  
i wykonanie akcji

1-PRE  
. 2-PRE

AKCJA  
move(b1,b4,p2)

AKCJA  
move(b4, p1,b2)

plan  
pusty

AKCJA  
move(b3,b1,p4)

plan  
pusty

clear(b4)

STAN POŚR 2  
DLA PLANU 1-PRE

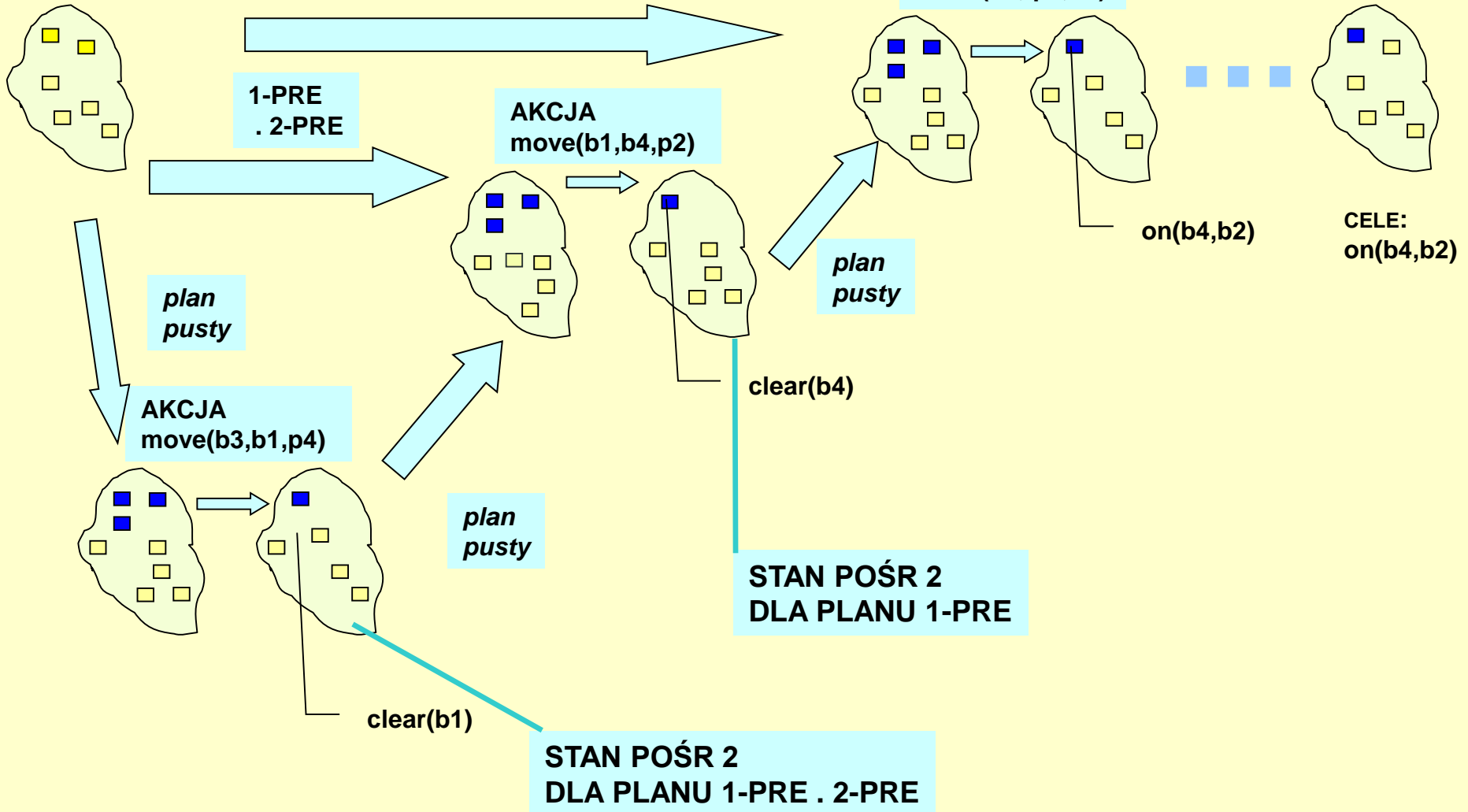
plan  
pusty

clear(b1)

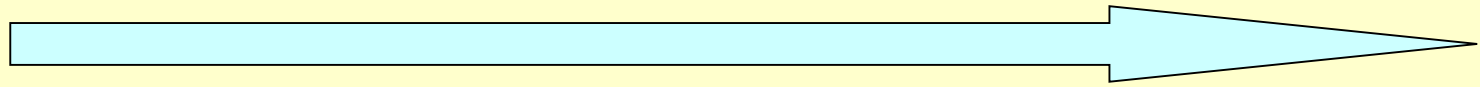
STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

on(b4,b2)

CELE:  
on(b4,b2)



# PLAN 1



STAN POCZ

1-PRE

AKCJA  
move(b4, p1, b2)

1-PRE  
. 2-PRE

AKCJA  
move(b1, b4, p2)

plan  
pusty

plan  
pusty

AKCJA  
move(b3, b1, p4)

plan  
pusty

clear(b4)

STAN POŚR 2  
DLA PLANU 1

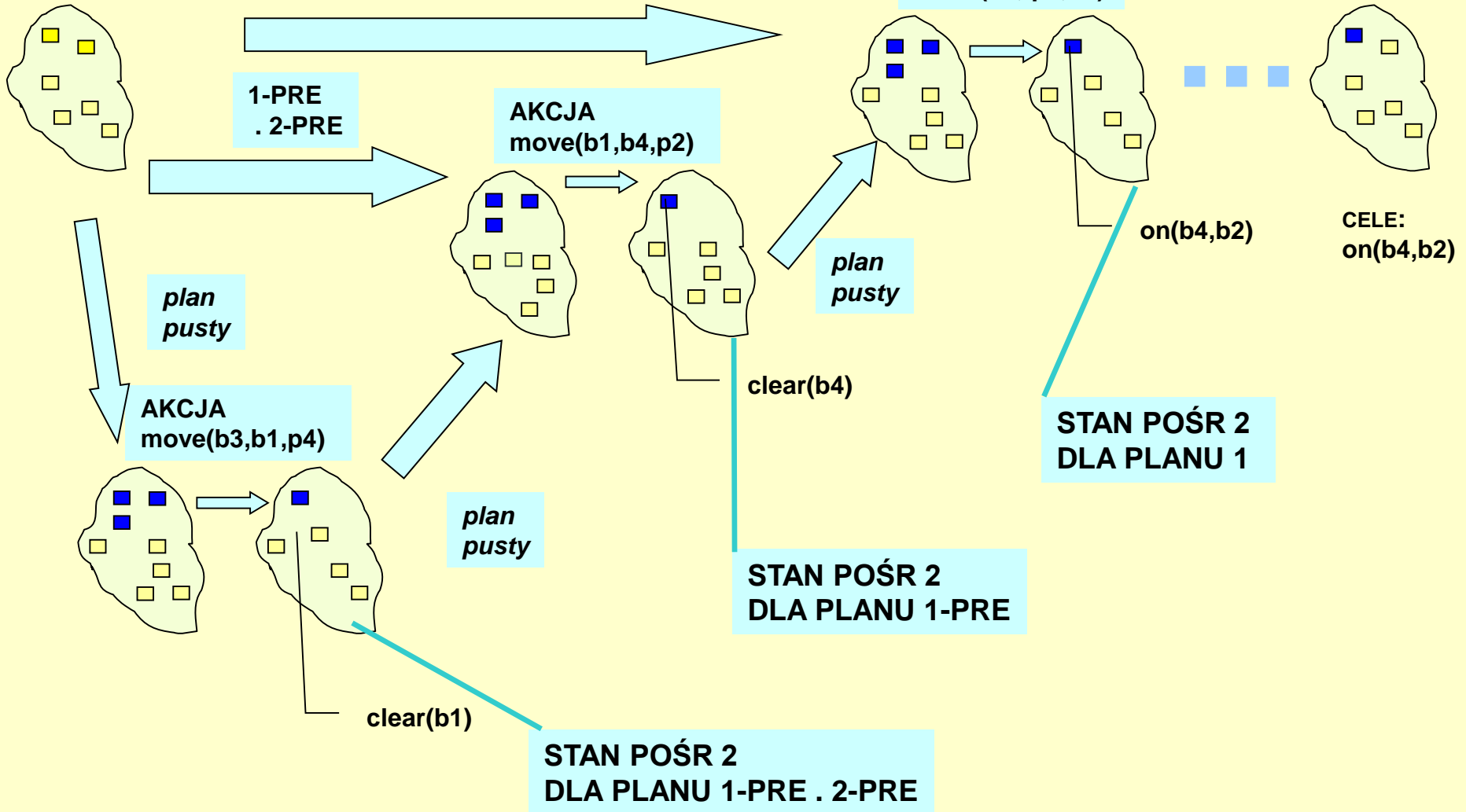
STAN POŚR 2  
DLA PLANU 1-PRE

clear(b1)

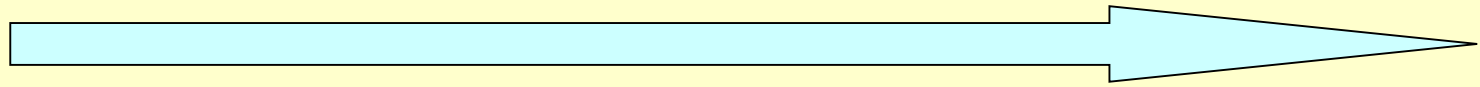
STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

on(b4, b2)

CELE:  
on(b4, b2)



# PLAN 1



STAN POCZ

1-PRE

AKCJA  
move(b4, p1, b2)

teraz postplan  
dla planu 1

1-PRE  
. 2-PRE

AKCJA  
move(b1, b4, p2)

plan  
pusty

plan  
pusty

AKCJA  
move(b3, b1, p4)

plan  
pusty

clear(b4)

STAN POŚR 2  
DLA PLANU 1

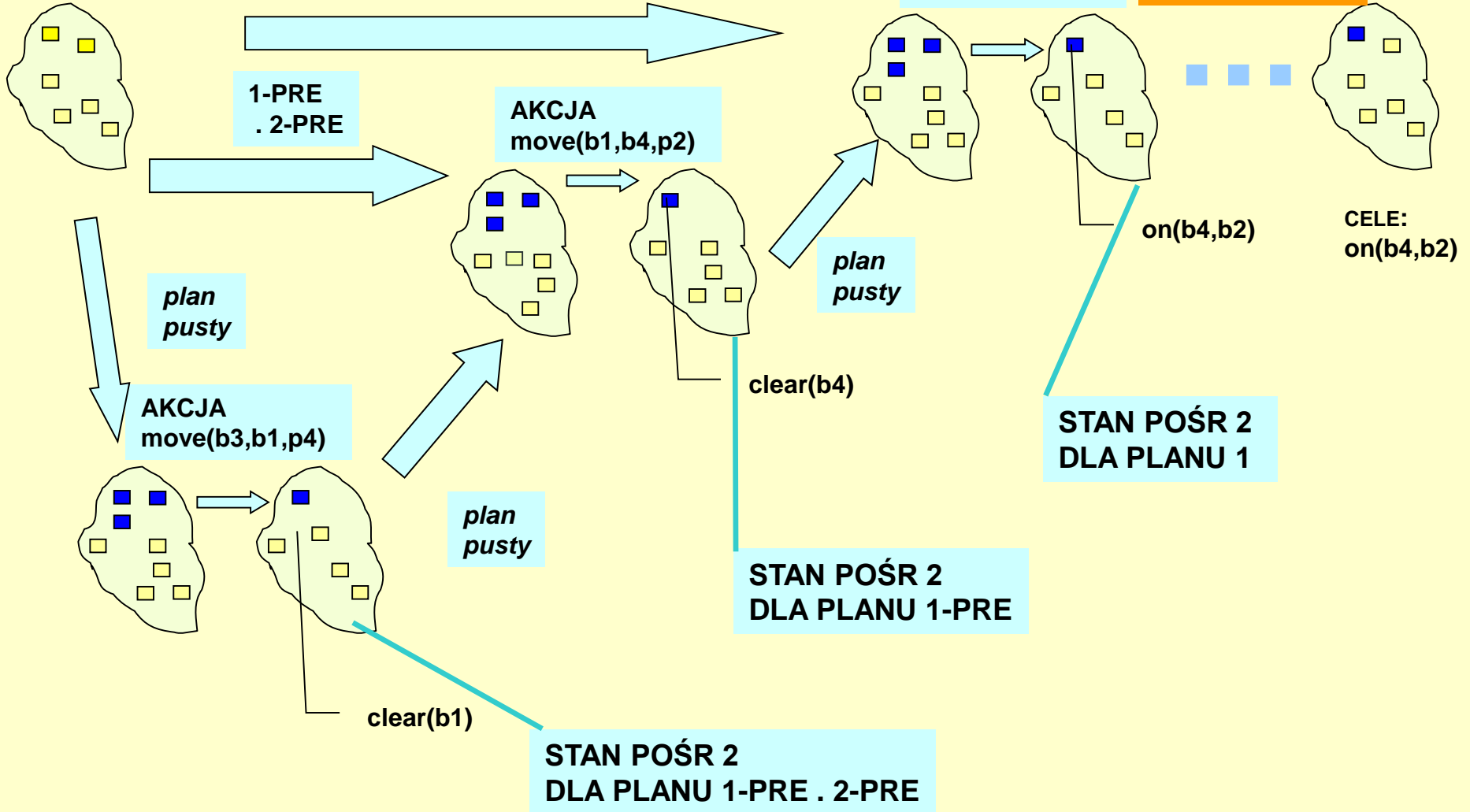
STAN POŚR 2  
DLA PLANU 1-PRE

clear(b1)

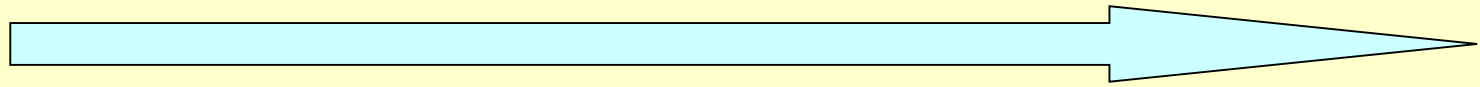
STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

CELE:  
on(b4, b2)

on(b4, b2)



# PLAN 1



STAN POCZ

1-PRE

1-PRE  
. 2-PRE

AKCJA  
move(b4, p1, b2)

teraz postplan  
dla planu 1

AKCJA  
move(b1, b4, p2)

plan  
pusty

plan  
pusty

AKCJA  
move(b3, b1, p4)

plan  
pusty

clear(b4)

STAN POŚR 2  
DLA PLANU 1-PRE

nie ma dalszych celów

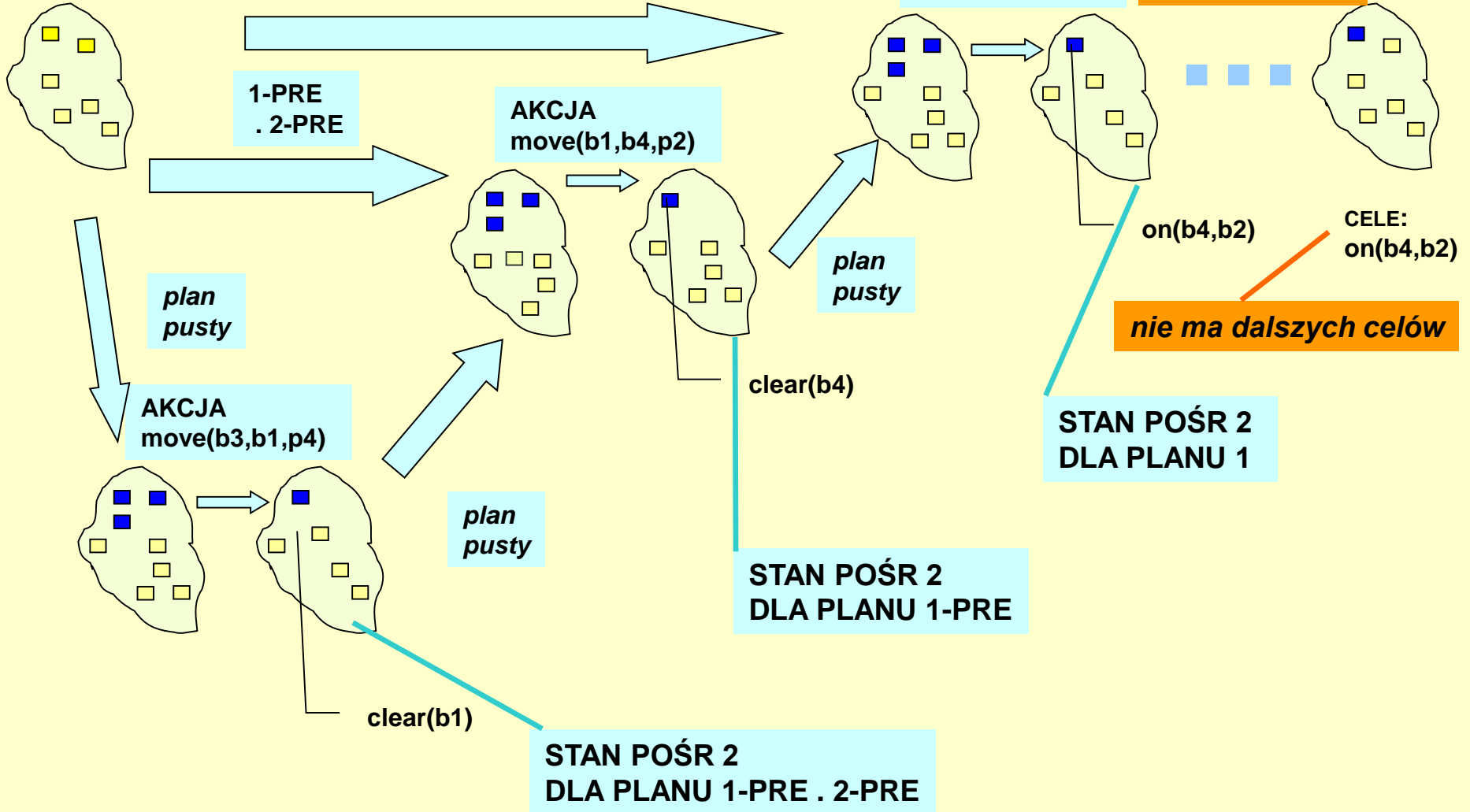
STAN POŚR 2  
DLA PLANU 1

clear(b1)

STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

CELE:  
on(b4, b2)

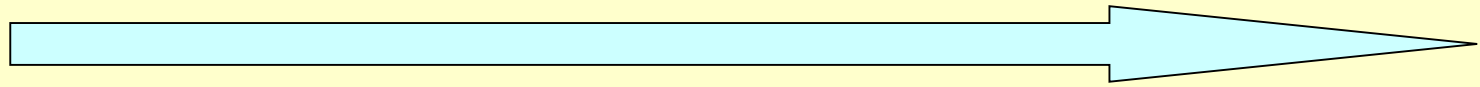
on(b4, b2)







# PLAN 1



STAN POCZ

1-PRE

AKCJA  
move(b4, p1, b2)

*plan  
pusty*

1-PRE  
. 2-PRE

AKCJA  
move(b1, b4, p2)

*plan  
pusty*

*plan  
pusty*

AKCJA  
move(b3, b1, p4)

*plan  
pusty*

clear(b4)

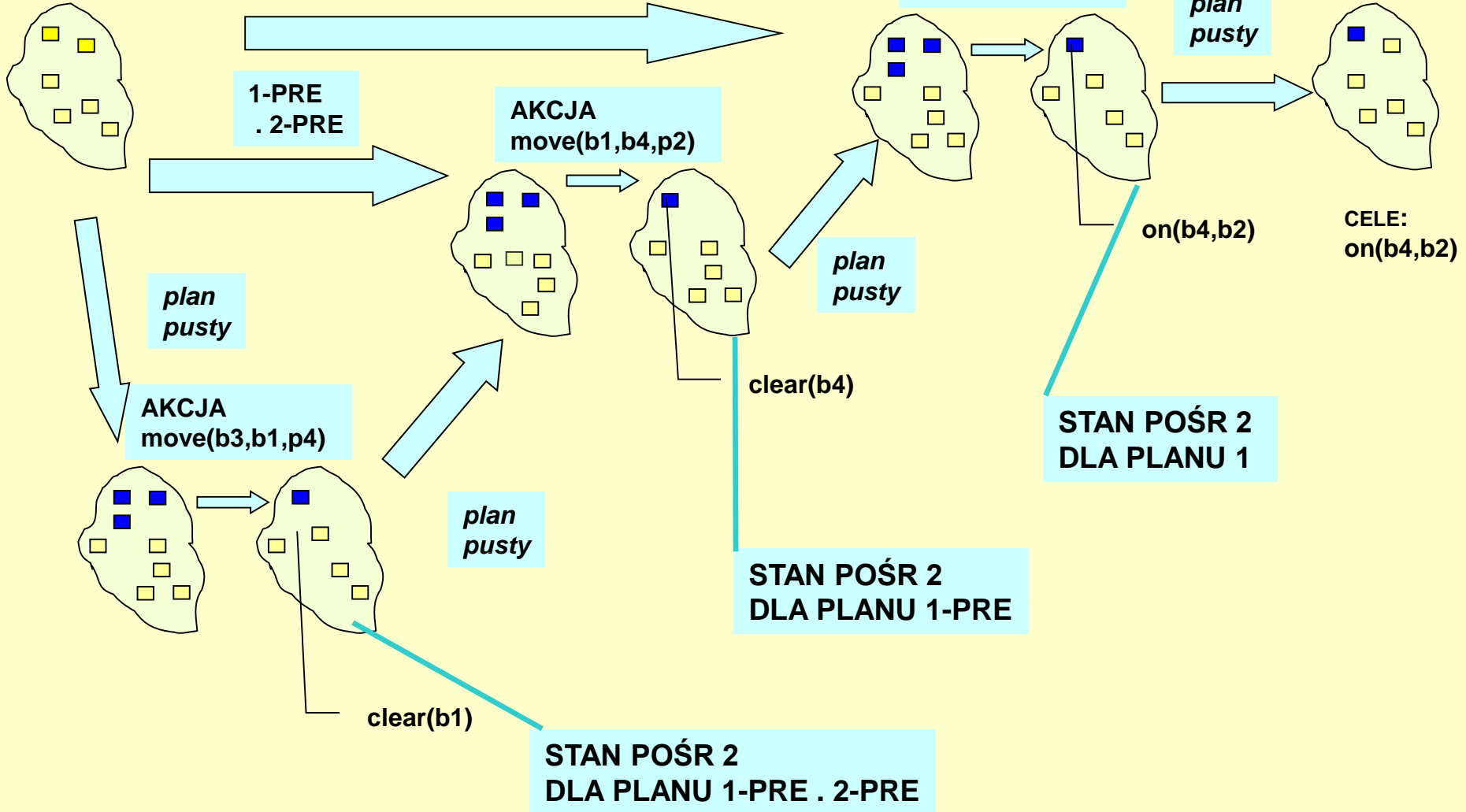
STAN POŚR 2  
DLA PLANU 1

STAN POŚR 2  
DLA PLANU 1-PRE

clear(b1)

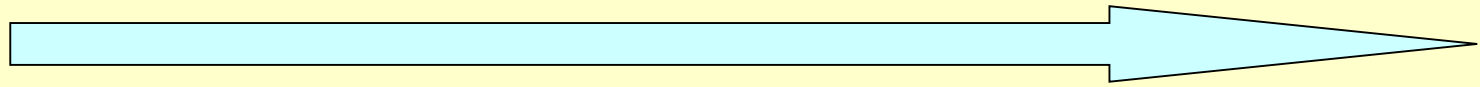
STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

CELE:  
on(b4, b2)



***Plan zbudowany  
--na następnym slajdzie  
pełny schemat***

# PLAN 1



STAN POCZ

1-PRE

1-PRE  
. 2-PRE

AKCJA  
move(b1,b4,p2)

AKCJA  
move(b4, p1,b2)

*plan  
pusty*

*plan  
pusty*

AKCJA  
move(b3,b1,p4)

*plan  
pusty*

clear(b4)

on(b4,b2)

CELE:  
on(b4,b2)

STAN POŚR 2  
DLA PLANU 1

*plan  
pusty*

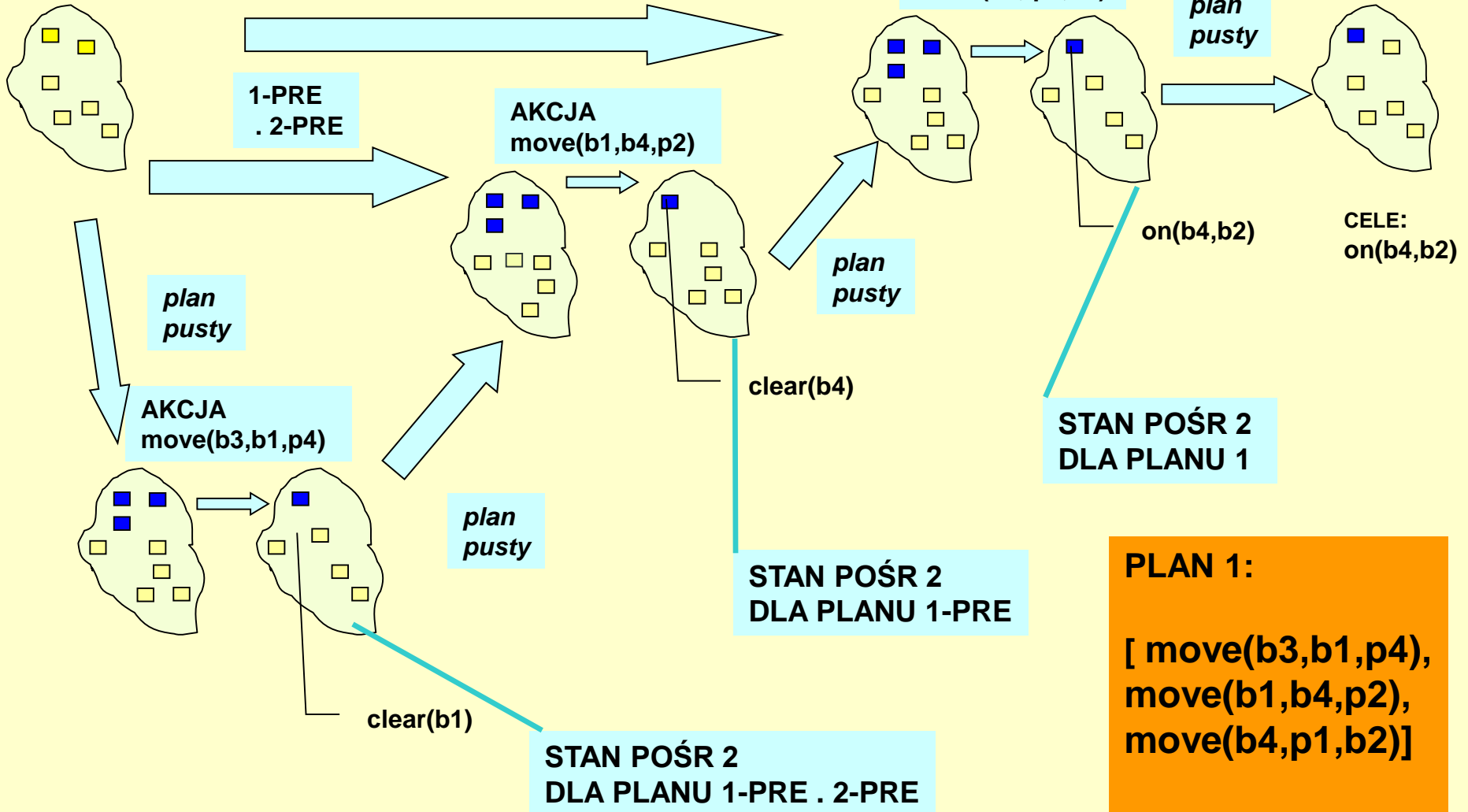
STAN POŚR 2  
DLA PLANU 1-PRE

clear(b1)

STAN POŚR 2  
DLA PLANU 1-PRE . 2-PRE

PLAN 1:

[ move(b3,b1,p4),  
move(b1,b4,p2),  
move(b4,p1,b2)]



***Koniec  
przykładu***